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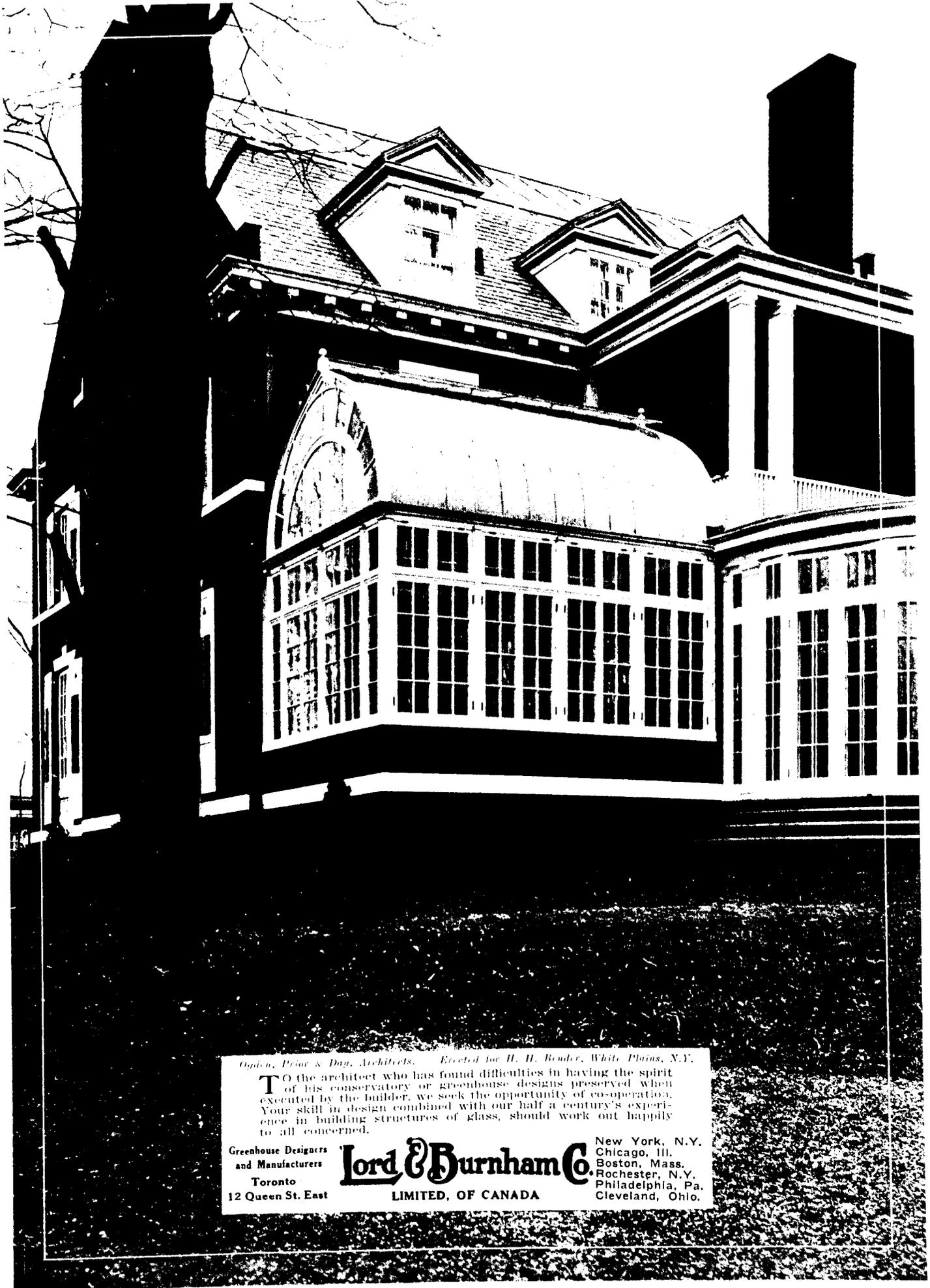
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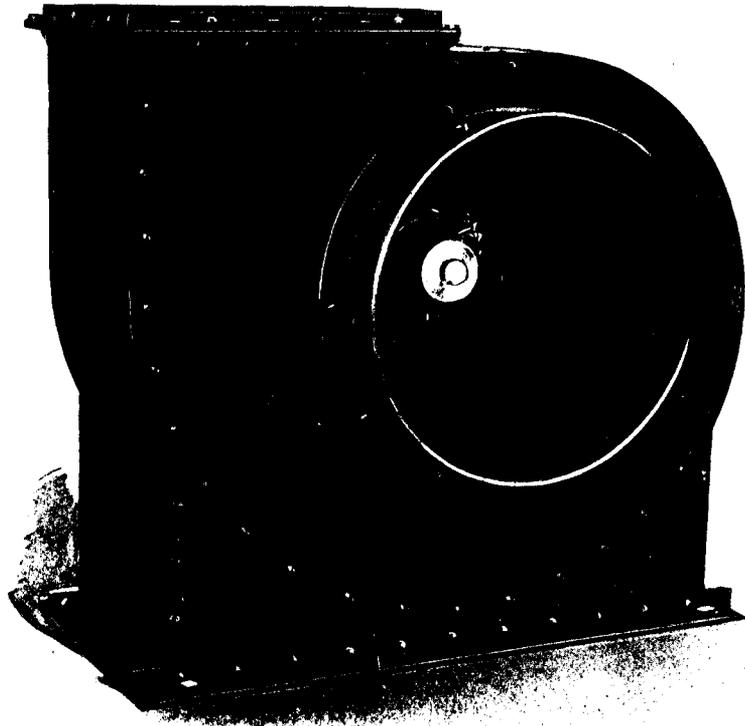
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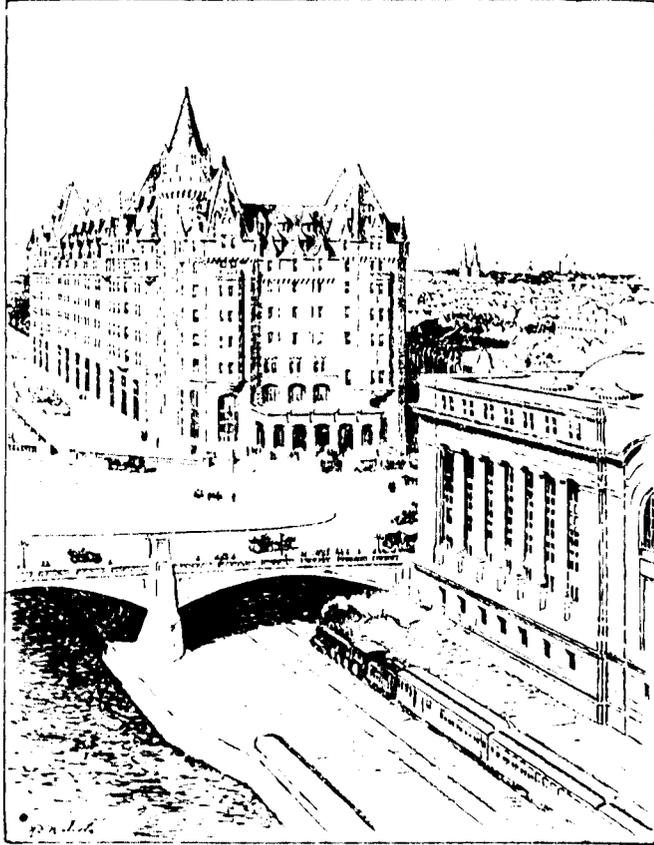
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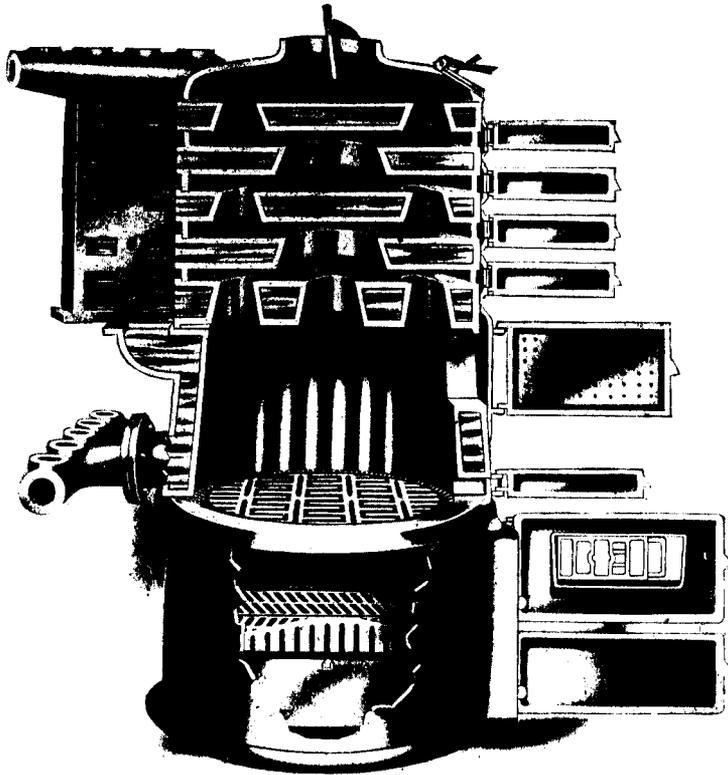
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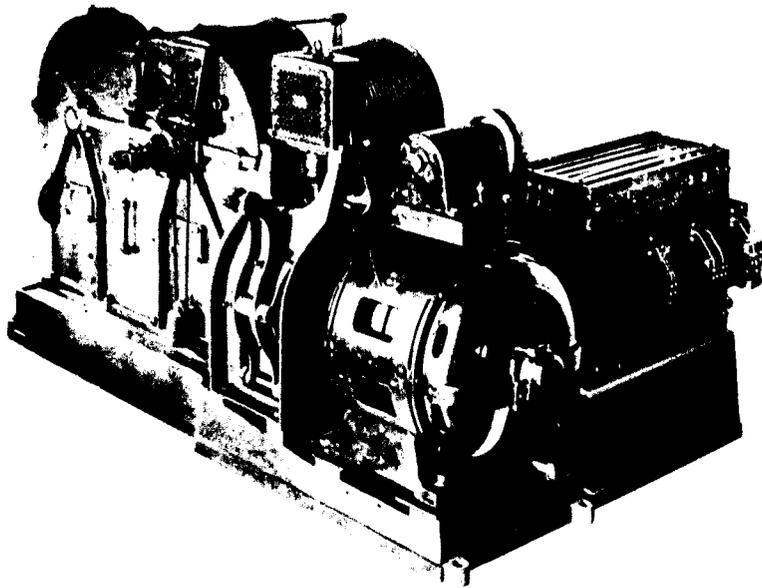
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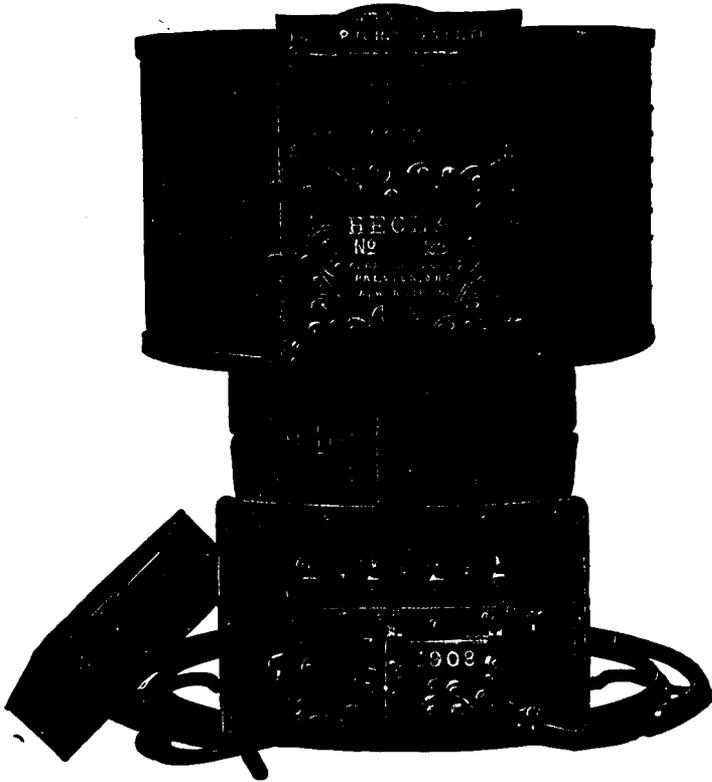
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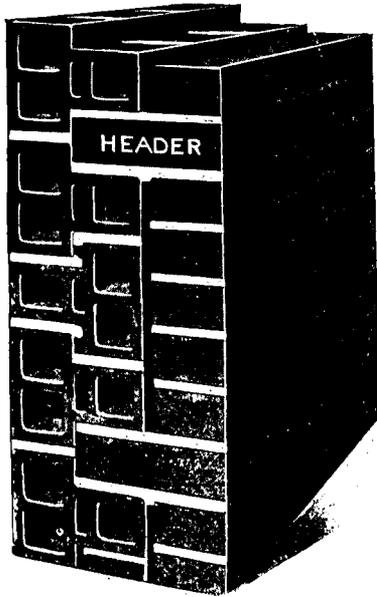
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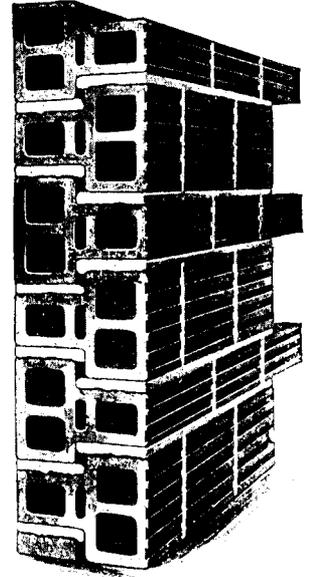
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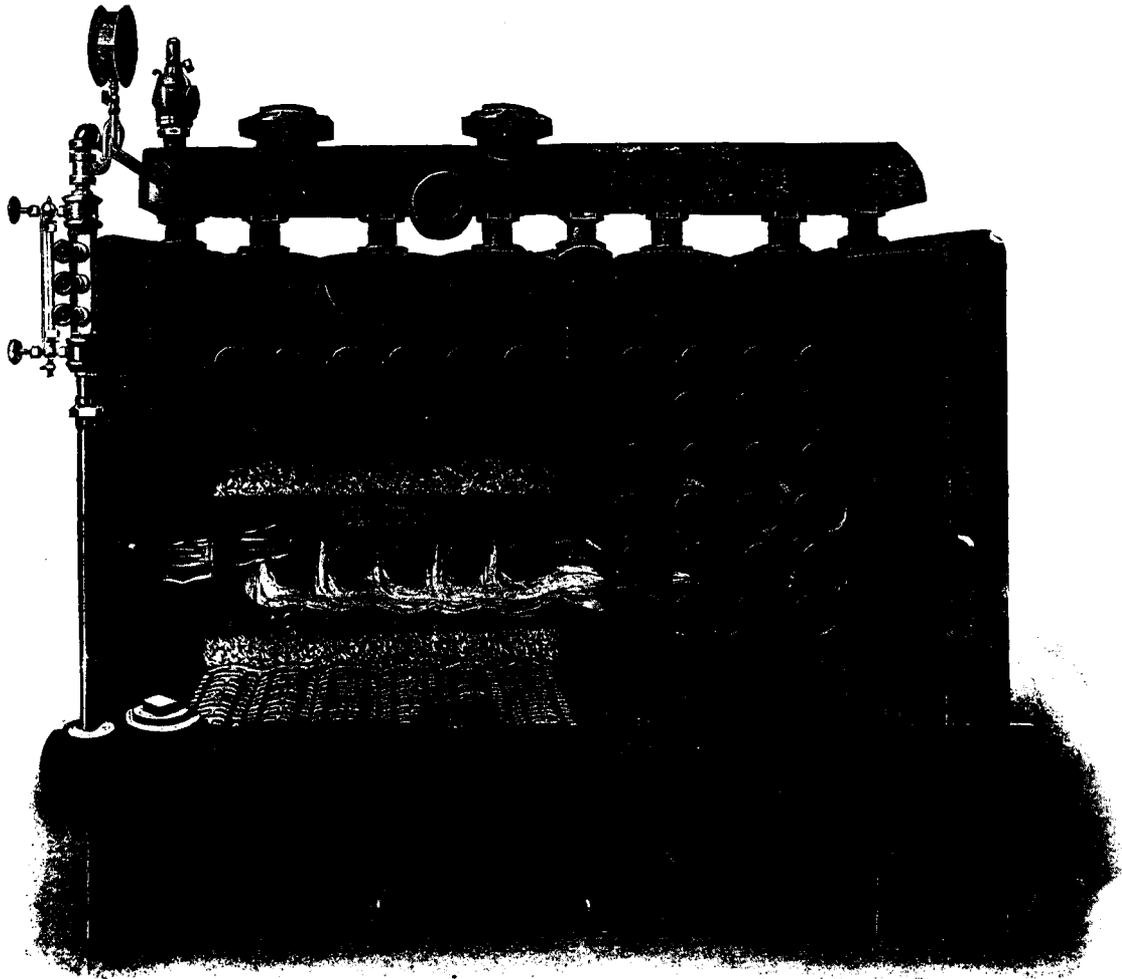


PLAN OF CANBERRA, CAPITAL CITY OF AUSTRALIA.

W. B. GRIFFIN, ARCHITECT.

- | | | | | |
|------------------------|-----------------------|---------------------------|---------------------------|----------------------------------|
| A Local Mountains. | L Triple Basin. | 10. Plaizance. | 22. Descriptive Sciences. | 34. Agriculture. |
| B Ainslie Peak. | M Upper Lake. | 11. Zoo. | 23. Theoretic Sciences. | 35. Society. |
| C Black Mountain Peak. | 1. Executive Capital. | 12. Museum Galleries. | 24. Applied Sciences. | 36. General Residence Districts. |
| D Mugga Mugga Peak. | 2. Premier. | 13. Stadium. | 25. Military Post. | 37. University Terraces. |
| E "Red Hill." | 3. Governor-General. | 14. Theatre, Opera. | 26. City Hall. | 38. Hospital. |
| F "Kurrajong." | 4. Parliament. | 15. Auditoria. | 27. Courts. | 39. Cathedrals. |
| G "Russell." | 5. Departments. | 16. Baths and Gymnasia. | 28. Post Office. | 40. Railway. |
| H "Vernon." | 6. Judiciary. | 17. Casino. | 29. Central Station. | 41. Freight Yards. |
| I "Camp Hill." | 7. Public Gardens. | 18. Water Gate and Forum. | 30. Public Markets. | 42. Passenger Station. |
| J "Shale." | 8. Play Grounds. | 19. Botanic Garden. | 31. Office Centre. | 43. Drives. |
| K Lower Lake. | 9. Parks. | 20. Forest Reserve. | 32. Mercantile Centre. | 44. Main Highways. |
| | | 21. Library and Assembly. | 33. Manufacturing. | 45. Boulevards. |

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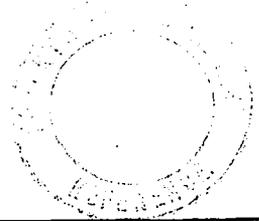
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CONSTRUCTION



August, 1914

Vol. 7, No. 8

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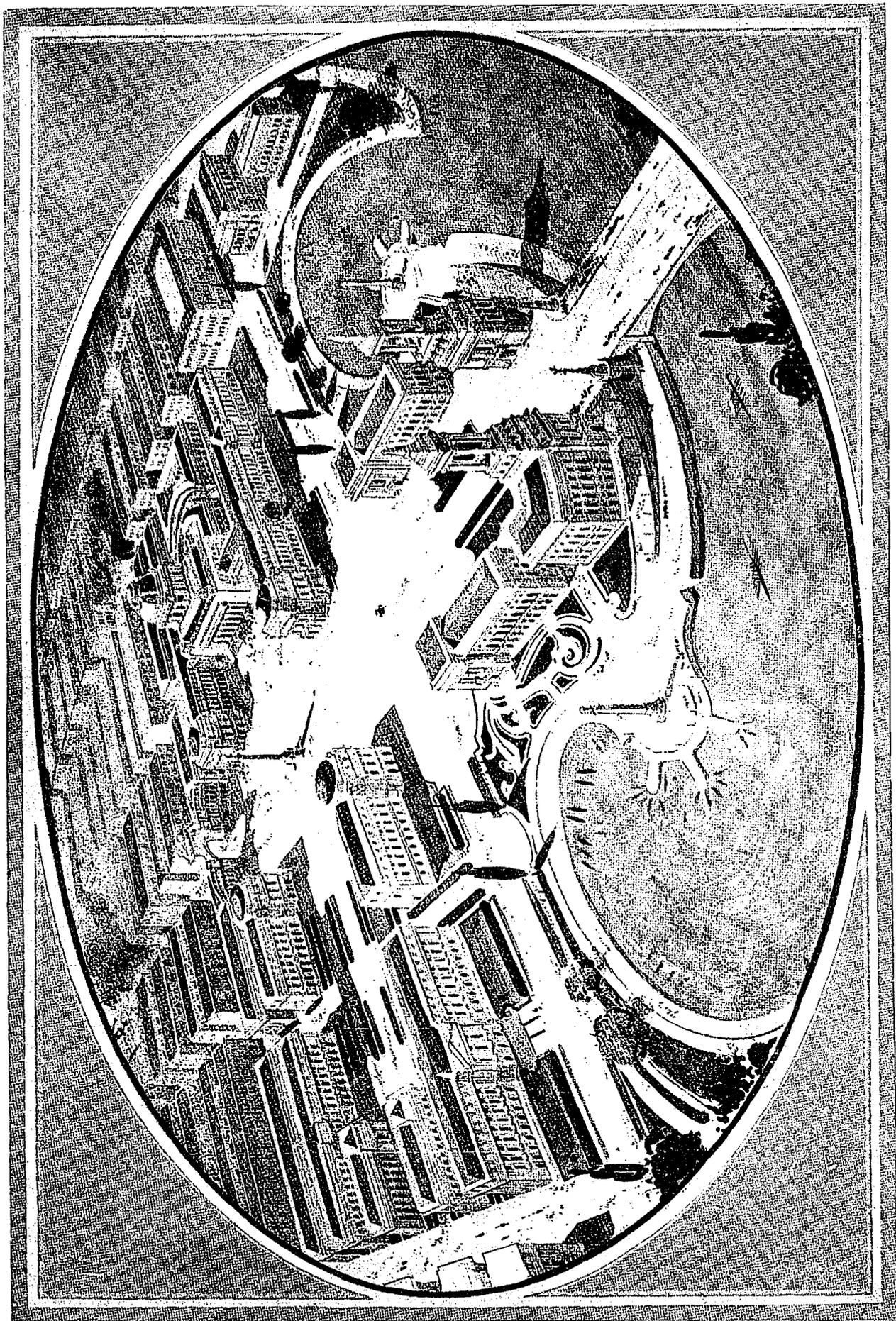
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*Sixth National Conference on City Planning—
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Personnel of the speakers and the bright outlook.*

THE Sixth National Conference on City Planning, held in Toronto May 25-27, has already proven of great value to the various provinces in their effort to grasp the essential principles of civic improvement. The Alberta Town Planning and Housing Association in June drafted a bill for legislative consideration based upon the Town Planning Act as presented by the Commission of Conservation and discussed at the National convention. In July, James White was sent by the government to Europe in order to study conditions abroad and as a result introduce a better system of town planning in Canada. As Mr. White is chairman of the Conservation Commission which is at present assisting the newly formed Town Planning Association of Canada in drafting an act to be presented to all provincial legislatures for approval, surely some adequate and practical scheme will be forthcoming.

This Number of CONSTRUCTION is devoted to town planning, presenting some of the papers read at the convention along with views illustrating all phases of the work. Many of the photos shown were furnished by the Commission of Conservation and the "American City" which is a potent factor in the progress of this work in the States. As it is impossible to cover the entire field in one number a second issue will be used in this connection containing articles relative to certain essential phases touched upon at the conference.

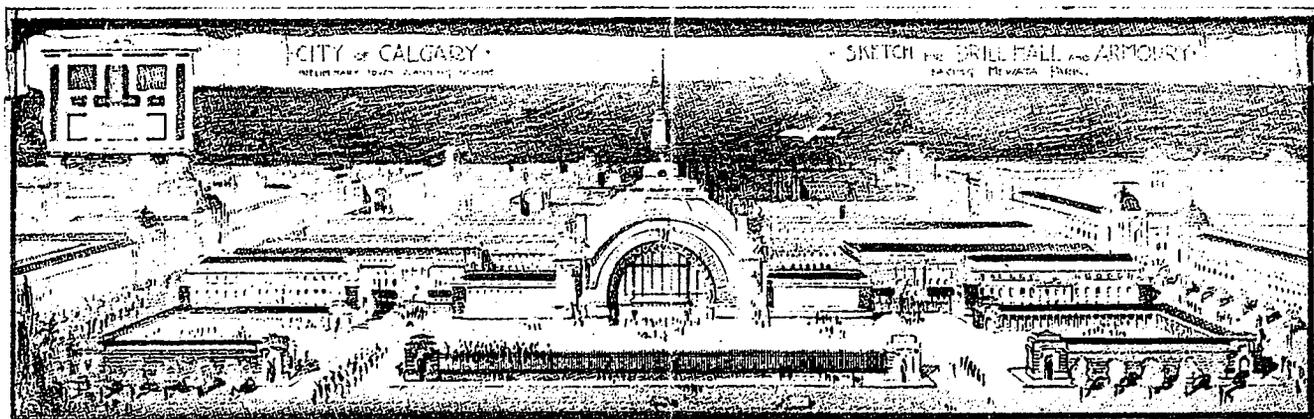
In welcoming the two hundred and seventy-five delegates the Hon. Clifford Sifton, Chairman of the Conservation Commission, impressed upon each one the necessity of enlightening the people with the fact that city planning does not result in wasting money, but rather provides a means of avoiding extravagance. Mr. Sifton in referring to unsanitary and slum conditions which follow increasing wealth and progress, pointed out, that although there are all sorts of remedies suggested, Socialism, single tax, etc., none of these would radically alter the law that poverty follows in the wake of increased prosperity in a nation. It was suggested that

the time had come to call a halt in the expenditure of an extravagant kind on public buildings, wasteful lighting systems and the general ostentation of cities in order that the destitution which is growing up alongside might be faced. Rational city planning he felt would do much to cure the present evil conditions, and the real problem up to the intellect of the twentieth century is whether we are big enough to grapple with these present evils.

His Royal Highness the Duke of Connaught in addressing the convention spoke of city planning as among the most pressing of the many problems which confront the public men of today. He cited the danger of a haphazard growth so prevalent in European cities; and urged the proper handling of housing and sanitary conditions forced upon us by the constant flood of immigrants. He also cited the urban question as one in which prevention is far more effective than cure, since a vicious system firmly established with vested interests growing round it, will be uprooted only through a lengthy controversial and desperately expensive process. His address closed with three suggestions: The need of provision of ample park and playground space, the creation of main arteries of communication in cities, and the securing of proper and adequate housing conditions for the increasing urban population.

One of the most inspiring and memorable occasions during the entire conference was at the closing banquet. The keynote of each toast seemed to be the need of a general awakening of the people to the economical investment in expending money on wholesome city planning. Thomas Adams, head of the Town Planning Department of the Local Government Board in England, said that little progress could be made unless the schemes were founded on the will of the people. He stated that the idea was no illusion, no dream of a few sentimentalists, but was something aimed at the removal of disabilities which bad management had brought about.

The altruistic motives centered in the work of so many men will bring about a condition wherein the unwholesome and unsanitary state of the present cities will be a matter of history. The wild growth of a careless past will be changed at a tremendous cost and the new plans will conform to the fundamental principles of beauty, health and economy.



Certain Aspects of City Financing and City Planning

ANDREW WRIGHT CRAWFORD, ESQ.

THE genius of modern life is to do justice; and yet there is hardly a municipal bond issue by which injustice is not done. Bonds are issued to pay for the construction of things that will not last for the life of the bonds. Thirty-year or fifty year bonds for street paving, which will have to be completely replaced in ten, or, at most, fifteen years, are constantly authorized. The taxpayers for the last fifteen years of the life of the bonds, in cases where they are to run for thirty years; and the taxpayers of the last thirty-five years, where the bonds are to run for fifty years, are thereby compelled to pay interest and sinking fund charges for a thing which they cannot by any possibility enjoy.

This injustice is not confined to things that are completely obliterated before the end of the life of the bonds. The more common, though less glaring, manifestations of it are in the inadequate conception or execution of municipal work to be paid for through bond issues. All kinds of public undertakings are conceived, either with reference only to the needs of the present or of the immediate future—of not more than the next decade. Fifty year bonds are issued to pay for improvements which will be quite inadequate fifty years hence, and which will have to be greatly enlarged in capacity long before they are completely paid for through the amortization of the bonds. While a part of the original construction may be useful in the enlargement, frequently all of it is useless and the cost of its removal makes the total cost greater than if unoccupied ground were available. Thus under-planning entails avoidable expense and is therefore extravagance.

Failure or inability to foresee or want of courage to act in accordance with true vision is responsible for this waste in American municipal expenditures.

It is submitted that no issue of municipal bonds should be sought by city officials, unless the thing to be constructed by those bonds will

last as long as the bonds themselves, and, further, unless it will be measurably adequate for the needs of the community at the end of the life of the bonds as well as at its beginning.

The administration that is not consciously and conscientiously endeavoring to foresee and measurably to provide for the needs of the future should be confined in its expenditures to the income of the present.

I have referred to thirty and fifty year bonds. As it is becoming the fashion to authorize the issue of fifty year bonds I shall hereafter refer to fifty year bonds, noting now that what is said in regard to them is generally applicable to thirty year bonds also, with an obvious reduction in proportion or in emphasis.

American cities double in population in twenty-five years. A city of 100,000 to-day will be 200,000 in 1939. This means that by 1964 it will have doubled again and be 400,000, a population four times that of to-day. This obvious result is not so obvious to the official who is thinking only of the present. I recently saw a computation of the future population of a city made by a newly appointed Secretary of a City Planning Commission, in which he took the total growth of the last fifty years and assumed that the total growth of the next fifty years would be exactly the same. He assumed that the absolute figures would be the same, not the percentage. "Dealing in futures" has heretofore been a little known art in municipal operations. The figures given above show that in fifty years the average American city will quadruple in population. The logical conclusion follows, that if the thing now constructed by the proceeds of the sale of fifty-year bonds, is to be commensurate with the needs of the people who in the latter years of the bonds' life will be making use of that thing, and also paying interest and sinking fund charges thereon, the needs of a population approximately four times the present one must be considered if for

no other reason than to avoid the doing of palpable injustice.

The efficient life of the thing constructed by the proceeds of municipal bonds should measure their term, that efficiency being measured by adequacy of service to the community, and city planning is indispensable to determine that length of efficient life of a municipally constructed thing. Hence the issuance of city bonds calls for city planning as a prerequisite.

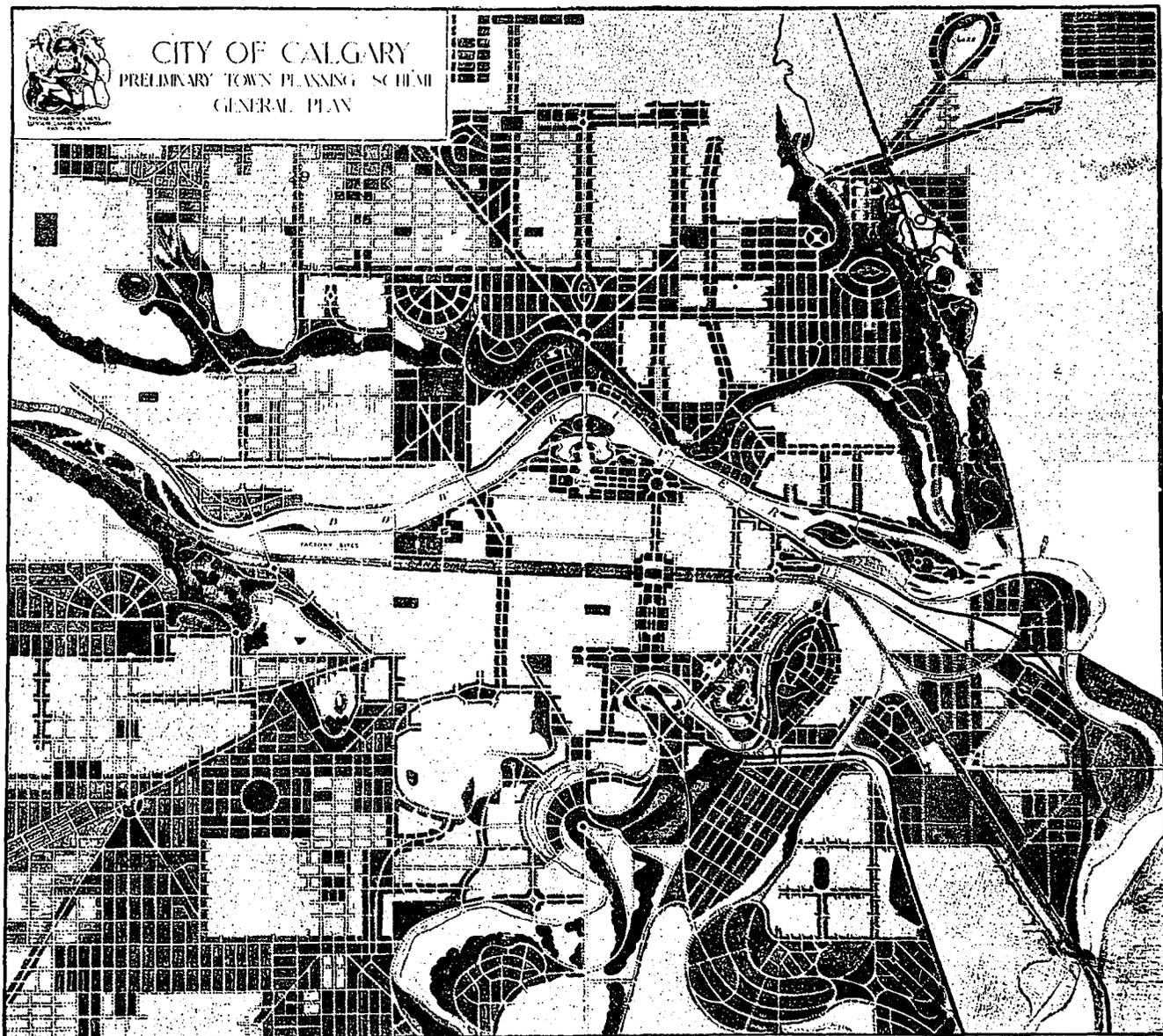
I have purposely qualified the duty of to-day in this regard as being that of providing "measurably" for the needs of fifty years hence. To provide absolutely for such needs would compel us in 1914 to provide, and to pay proportionately for, a thing four times greater in capacity than required by us who have approximately but one-fourth the financial resources of 1964. That would be injustice to ourselves. How shall we adjust this difficulty? How shall we equitably provide payment for things needed now in a measure, which will hereafter be needed in the same, or a greater, or, conceivably a smaller measure? This ques-

tion will find an answer to some degree in a differentiation among the things constructed by the proceeds of municipal bonds—a differentiation of which I give examples, not a catalogue.

In the case of outlying parks, we, who secure them, should pay the minimum. Fifty years hence these parks, now suburban, and now somewhat of a joyous luxury, will be indispensable to their urban neighborhoods. We should be able to issue bonds for such parks with a very small sinking fund charge to-day, graded up to a large charge fifty years hence—more: we should make park bonds run 75 or 100 years and make their present amortization charges negligible.

The term of paving bonds should be in the neighborhood of fifteen years and the immediate amortization charge should be very heavy—the charge fourteen or fifteen years hence very light. We who have the pavement at its finest should pay the highest toll.

Stone and concrete bridges are expected to last for seventy-five years. Bonds issued to

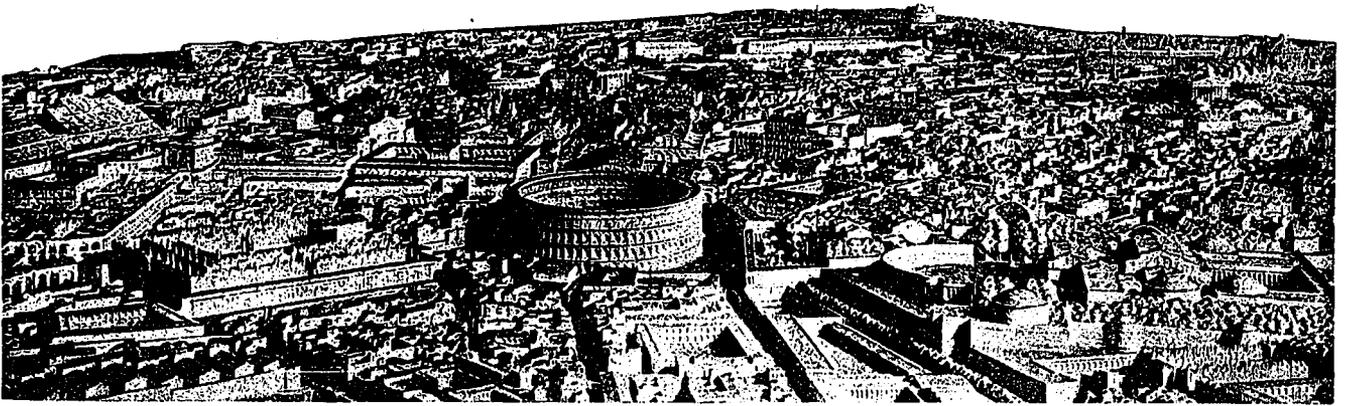


provide the money for them should run as long. It is more difficult to determine whether their amortization charges should be graded up or down, or kept at one figure throughout. In the case of centrally located bridges, perhaps the last course would be advisable. In the case of bridges in suburban territories, their future greater usefulness justifies a heavier future sinking-fund charge.

The system of main sewers may deserve a diminishing amortization charge — of main streets, an increasing one. Public buildings probably deserve a diminishing charge throughout—though possibly the summit of their serviceableness is neither at the end nor at the beginning of the life of the bonds issued for them, but at some period during that life—probably

city planning should contemplate a minimum of fifty years for physical results, a minimum argued for hereafter, a delay of four or five years in order to secure constitutional changes is not of paramount importance. Moreover, while the inquiry as to present legal capacities is obviously an important part of a city survey, city planning must necessarily contemplate changes in organic law from decade to decade; it is a part of city planning to plan future laws as well as future structures. Constitutional provisions and acts of legislatures will change during fifty years anyway; there will be much gain if they are planned to meet city planning requirements *pari passu*.

The desirability of providing for graded amortization charges, though a constitutional



TWO VIEWS OF M. BIGOT'S
MODEL OF ROME.



nearer its beginning than its end;—the deterioration of the physical building must be considered and deterioration begins at once.

On the other hand bonds issued to provide funds for the acquisition of the real estate upon which public buildings are to be erected, clearly deserve an increasing amortization charge throughout. The division for taxation purposes, of land for improvements thereon, will show how markedly the former often increases in value while the latter decreases.

Each other city improvement should be considered likewise.

It is true that some of these suggestions would require changes in State constitutional provisions before they could be carried out. But if

charge is involved, has been recognized. One example of which there are doubtless others, may be found in a proposed Amendment to the Constitution of Pennsylvania, which passed the last Legislature but which will have to pass the next Legislature and then be ratified by the electors. The Amendment is to enable the city of Philadelphia to borrow three per cent. over the existing limitation of seven per cent. "for the construction and improvement of subways, tunnels, railways, elevated railways and other transit facilities; for the construction and improvement of wharves, and docks, and for the reclamation of land to be used in the construction of wharves and docks, owned or to be owned by the city," and it provides, in part: "In in-

curing indebtedness for any one or more of said purposes . . . , the city of Philadelphia may issue its obligations maturing not later than fifty years from the date thereof, with provision for a sinking-fund sufficient to retire said obligation at maturity, *the payments to such sinking fund to be in equal or graded annual installments.*"

It may be noted in passing that this amendment follows the admirable precedent already established in other states of providing that the borrowing capacity of a city at any time is to be ascertained by excluding from the calculation a credit where the work resulting from any previous expenditure of loan moneys is self-supporting.

Obviously, all of these methods of municipal financing and each of these differentiations among its objects require the careful study, forethought and provision that are of the essence of city planning; they necessitate city planning, if they are to be more than guesses.

It will not have escaped you that any consideration of municipal bonds in connection with city planning establishes the minimum for the time that should be contemplated in city planning. It does not necessarily establish the maximum. But the minimum usually is in practice the maximum. In Pennsylvania just before the enactment of the minimum wage law, its opponents sought the support of a manufacturer who was known to pay the lowest of low wages, and they asked him: "Do you believe in the minimum wage?" To which he replied: "Sure I do; I pay it!"

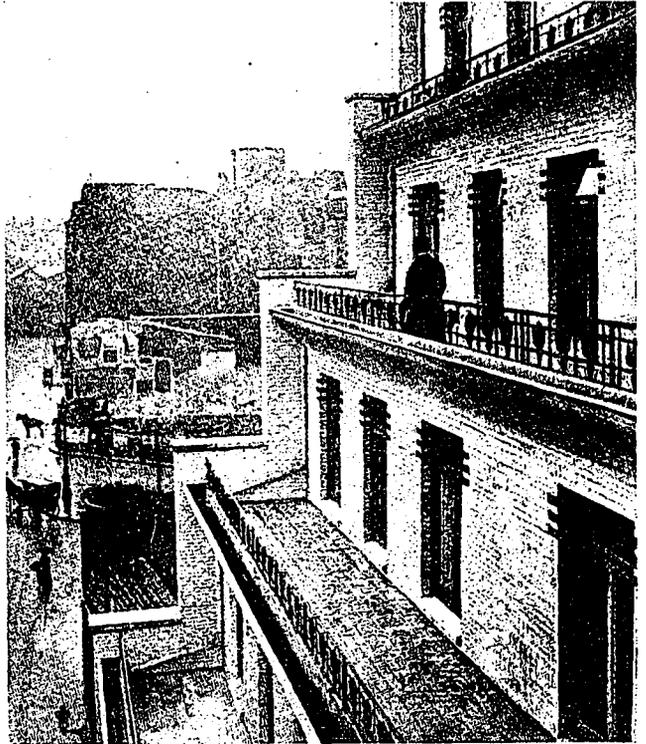
If the needs of the population at the end of the life of bonds, fifty years hence, must be considered as a mere matter of justice, obviously, our city planning must contemplate fifty years as its minimum: if in practice that does become also the maximum, I am not satisfied that any harm will result. Think of the inventions or improvements in inventions made during the last fifty years, especially those affecting communication—the telegraph, the telephone, the electric car, the motor car, the motor truck and the German dirigibles—to suggest a few—and I think you will agree with me that it is enough to attempt to forecast the needs of an urban population four times that of to-day.

A striking example of changes in the problems we have to deal with in city planning was brought out by a report at the meeting of the Third International Road Congress at Ghent in 1913, which Mr. S. D. Adshead thus abstracts:

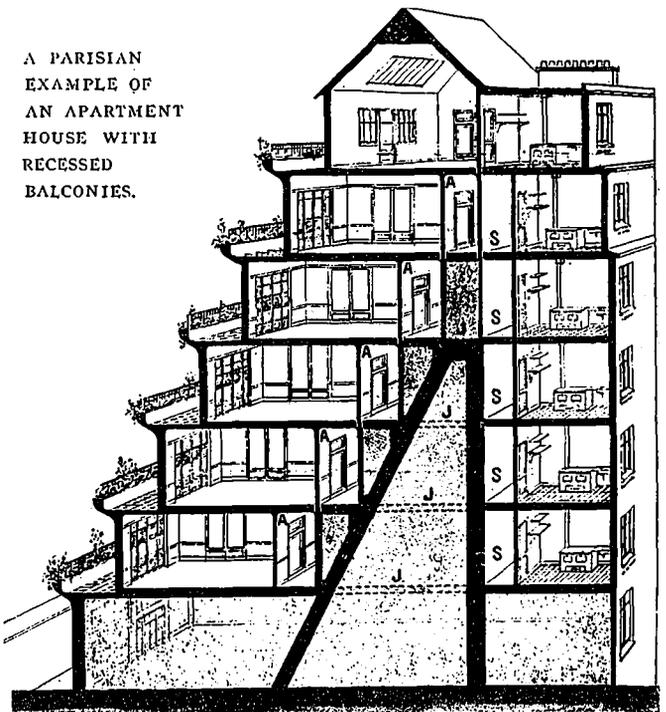
"A census of traffic taken on a fine Sunday afternoon in the spring of the present year on a certain secondary arterial road leading out

of London, showed that the average number of vehicles passing in one hour was: Motor buses 50, motor cars 300, motor bicycles 50, bicycles 100, and horse-drawn vehicles 15. A fair presentation of the Saturday and Sunday crowd.

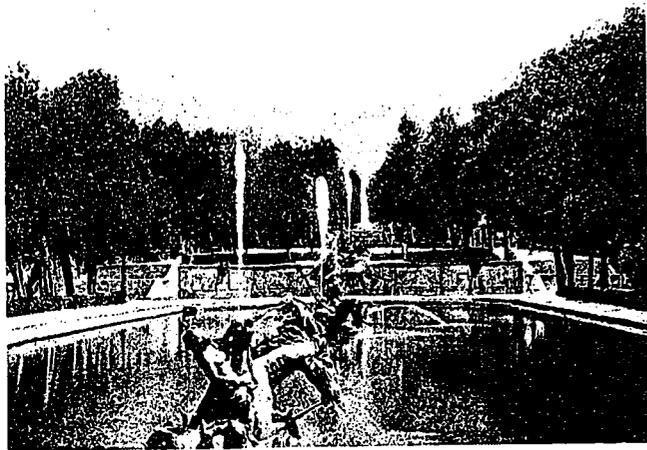
"This particular section of the road chosen



A PARISIAN EXAMPLE OF AN APARTMENT HOUSE WITH RECESSED BALCONIES.



for observation was straight for about one-third of a mile and had no cross roads. Deviations in its alignment at either end prevented excessive speed, but a computation showed that motor buses attained an average pace of



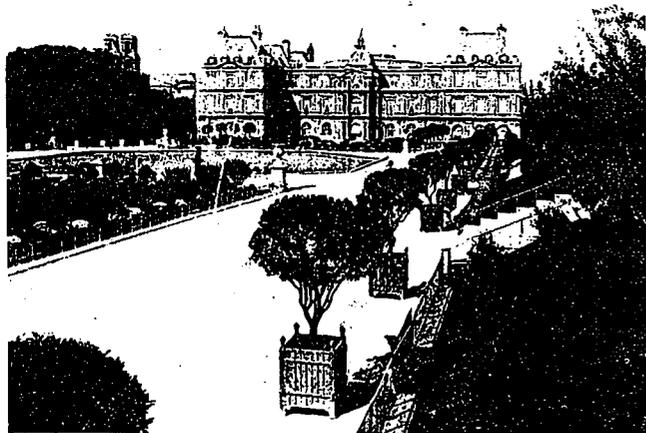
FOUNTAIN IN MADRID.

14 miles per hour and motor cars 25. It was a narrow road, being only 26 feet in width between the curbs, but it has a fine surface of wood block which has been recently laid.

"Ten years ago it was paved with macadam and at the same time of day and on the same day in the year it would have been traversed by a continuous procession of cyclists, a few horse buses and other horse traffic of a lighter kind. Twenty years ago it was a carriage drive, a route for agricultural wagons and light tradesmen's carts, and it also provided a means of access to the metropolis for those possessed of a horse.

"The changes in condition of usage which have overtaken this secondary arterial road leading out of London apply with equal force to road leadings out of every town of importance in Europe and America."

As in the period of twenty-five years the average city doubles in population, and as the terms of administrations of city officials are becoming generally four years it follows that each administration will see a growth of the city approximating the proportion of four years to twenty-five years, 12 per cent. to 15 per cent. In some cases it will be less; in others more. But each administration must prepare for a growth of upwards of 15 per cent. that will



LUXEMBOURG GARDENS, PARIS.

occur in the city's size during its term. This will be reflected chiefly on the city's perimeter but it will react also on the city generally, on the central portion especially and on the sub-centres intermediately. The more intensive future use of the portions of the city already built requires our present more extensive preparation. Each administration should at least take care of the additions to the physical requirements of public service that will become needed during its term of office.

Municipal work may be divided into two grand divisions; one, the maintenance and operation of the existing municipal plant; the other, the planning and construction of additions thereto, and the re-planning and reconstruction of portions of it. In respect to its plan, the commonly accepted analogy that a city and its citizens resemble a corporation and its stockholders fails to be true, and hence is misleading. An ordinary corporation can stop its growth, if its directors or stockholders determine that it shall do so. The growth of the municipal plant cannot be stopped.

The maintenance and operation of the existing plant, to which the attention of municipal officials has been so largely given heretofore, is unquestionably of immediate and pressing importance, but the expert skill and knowledge required for planning for the growth of the city that will take place each year, each ten years and each fifty years is of a higher order than that required for maintenance and operation. Just as it takes a higher degree of expert knowledge and skill to plan and build a house than to make repairs to it afterwards, so it requires a better understanding of the problem, a more expert solution and more efficient construction work to plan and build the additions necessary for the future growth of the city, than to maintain and operate what has already been constructed. It used to be said that a carpenter could build a house and he didn't need an architect to tell him how to do it; many cities have been built, and some are still being built by similarly self-satisfied municipal carpenters. It ultimately costs more money to correct a house badly planned or skimped in its construction, than to build it right in the first place, and it costs the city vastly more to reconstruct itself, where it has been planned on wrong, mean or short-sighted lines, than to construct it well on broad lines, in the first place. And the direct money cost is not the only cost. John Burns well said "mean streets make mean people"; and we may paraphrase the remark by saying that mean city planning makes a mean city, and a mean city makes mean citizens.

City Planning, which has to do with all the elements that make up the physical city, involves not only planning but decision. The study of the one and the exercise of the other

are as important duties as any to which a municipal administration can give its attention. During the course of any one day, or any one year, or any five years, this may not appear to be true; if the city were sure to cease to exist with the expiration of any such period, it would not be true, but, considering the entire future life of the city, not the dead past nor the fleeting present, but the far reaches of the future, it is true.

Fortunately the resources of a city increase with its needs. Failure to appreciate the fact that the annual income from taxation will be larger and the annual addition to the borrowing capacity of the city will be greater with each succeeding year, is the reason why the larger and larger plans prepared annually appear to be exceeding the capacity of the city. Our present plans, if they are to be adequate when materialized in the future, must be correspondingly extensive, based on an understanding not only of what the needs of the future will be, but of what the financial ability of that future will be. It is difficult to persuade people that any plan to be carried out in twenty-five years, for which the present capacity of the city is sufficient, is to be regarded because of that fact alone, as probably inadequate, as probably providing for a result at the end of those twenty-five years that will not be commensurate with the existing needs; the sufficiency of the present capacity of the city to finance the plan throws the burden of proof on its proponents to show the enduring sufficiency of the plan itself.

Certain of the more direct financial considerations that have to do with city planning have been discussed at these conferences. The method of paying for various kinds of improvements through assessments on the property

cost, it is desired to exercise some control of abutting property, as by the regulation of occupation, the recasting of lot lines, the determination of lot and building widths and depths, the determination of minimum, maximum and proportionate heights of buildings, the regulation

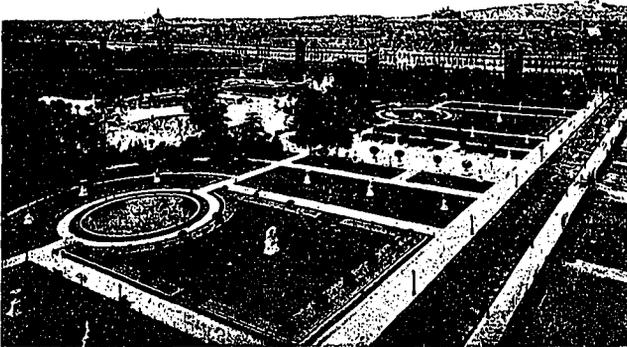


FOUNTAIN IN COLOGNE.

of the relation between buildings on adjoining lots, the prohibition of blind walls — again a suggestive list, not a catalogue—has been urged as a European method desirable and, if these ends are to be obtained, necessary for adoption here. Considerations of expediency will determine which method is the more available in individual cases. Generally, in undeveloped sections, assessment for benefits is the better method, while in developed sections, excess condemnation is preferable.

It should be borne in mind that where the power of excess condemnation is used, any loss as well as any gain will be the city's, whereas in the case of assessments for benefits, the loss, if loss there be, will be the property owner's. Greater justice is thus often secured by excess condemnation.

Frequently, the combination of the two methods will be advantageous: to condemn immediately abutting property to a desirable lot depth and control its development by the creation of easements, will spread the resulting increase in values over a greater territory than if such abutting property were left uncontrolled in private hands. Immediately adjoining the excess area so condemned, there will be consequently an enlarged area subject to assessment for benefits. And, in addition to the returns, in the one case, from the sale of the excess property, and, in the other, from the special assessments, both areas will therefore return annually a larger sum in taxes than before, thus taking care of proportionate interest and amortization charges on bonds that may have been issued to finance the work; or, if no such bonds were issued thus securing a greater income for general municipal uses. The territory



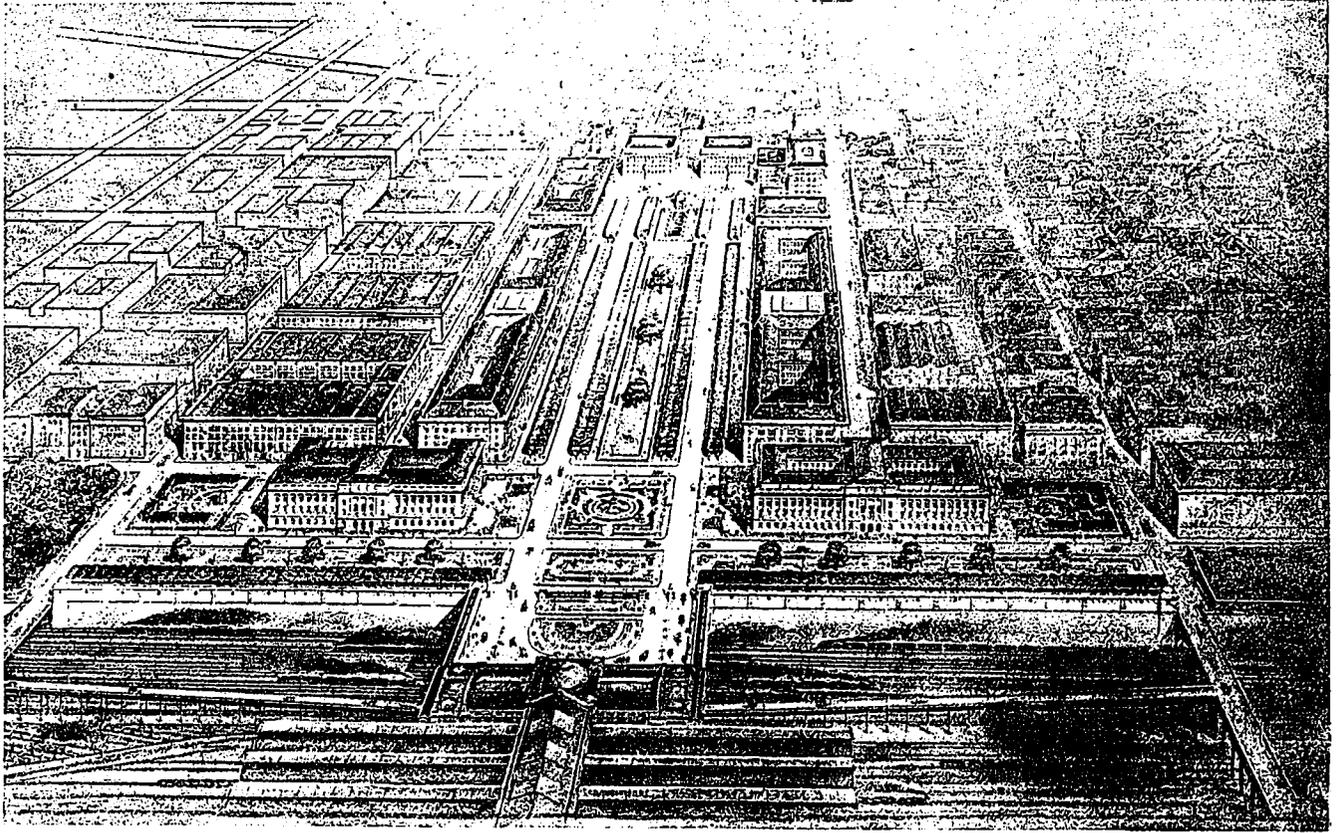
GARDENS OF THE TUILLERIES.

benefited, has been emphasized as an admirable American method, where the sole question is how to finance a municipal improvement. The method of excess condemnation, where, in addition to providing, in whole or in part, for the

actually feeling an increment in value will exceed both areas.

In his admirable paper entitled, "Paying the Bills for City Planning" delivered at our Boston Conference, Mr. Nelson P. Lewis showed the justice of assessing the cost of rapid transit

ally accrued—unearned, that is, by the owners' money, but earned directly by the city's expenditure of money paid by the taxpayers, where the city constructs the system; and this increment begins long before completion of the new lines. City Planning enables the exercise



PERSPECTIVE OF THE PUBLIC BUILDINGS OF CLEVELAND.

systems on the properties within their spheres of influence. A recent Philadelphia investigation confirmed the experience of New York City in this regard, by showing that a newly constructed rapid transit line so concentrated the normal general increase of the entire residential areas of the city within its own sphere of influence, as to cause an actual loss for six years in all the other residential areas combined, despite the erection of some 21,000 new houses in these other areas.

These experiences enable the exercise of municipal economy in another important respect.

Before a city proceeds to the undertaking of the construction of such lines, or before it permits their construction, the city should acquire the real estate it will need for all public purposes, whether for parks, playgrounds, parkways, street, school-houses, police and fire stations, public libraries or what not, in the territory that will be tapped; otherwise, if it waits until it has enormously increased the value of such property and the amount, therefore, which it will have to pay, it will be guilty of rank folly. Elementary prudence dictates action before this unearned increment has actu-

ally accrued—unearned, that is, by the owners' money, but earned directly by the city's expenditure of money paid by the taxpayers, where the city constructs the system; and this increment begins long before completion of the new lines. City Planning enables the exercise

of similar far-sighted economy by present-day expenditure, in many respects other than the rapid transit system—parkways, other main thoroughfares, parks, river front improvements—in fact in the case of every public work where real estate, increased in value by its proximity to one public work, will be needed for another municipal service in the reasonably new future.

It will be observed that I am not here insisting upon the effect of the opening of parks, for instance, on adjacent land values. I am taking it for granted that there is no longer need of persuasion on this point: such testimony as the following: During the sixteen years following the laying out of Central Park, the average increase in the assessed value of real estate in the other parts of the then City of New York was about 100 per cent., while in the three wards then adjoining the new park, the increase was approximately 800 per cent.—has been duplicated in greater or less degree so often, that we are now able to exercise more far-sighted economy. Prompt expenditure is often the truest economy.

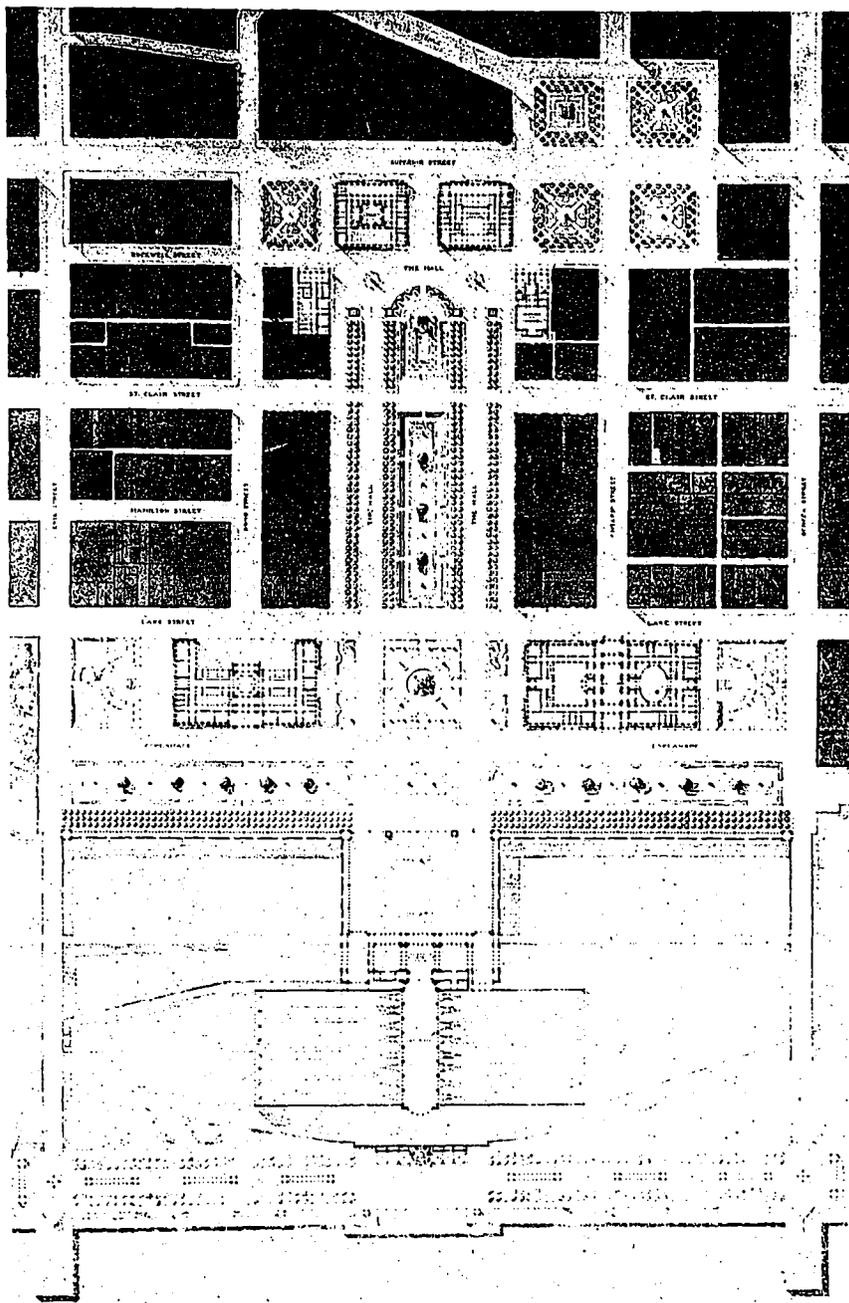
The broad financial aspects of city planning are frequently so general and illusory, so in-

capable of mathematical demonstration, that they have not been appreciated in America at anything like their financial worth to the community.

The manifestations of this monetary benefit fall naturally into two classes, namely, the benefit to citizens through the attraction and circulation of outside money, the magnetic cause of which is to be found in certain city-planning works; and the benefit to the city treasury in the addition to the city's annual income caused by higher assessments for taxation purposes of properties within the spheres of influence of such works. As an example of this lack of appreciation of opportunities, consider the great sum annually lost by American treatment — if utter neglect of glorious opportunities can be called "treatment" — of their municipal river banks? Think, first of course, of the beauty and attractiveness of European water-fronts, the Thames embankment with the Hotel Cecil and other high-class properties crowding to its edge; the Seine; the hundreds of other European city rivers; and then, secondly and soberly, and in your counting-houses, compute the municipal money value of those works: in your calculations, assess the actual values of the properties fronting on the Seine, and compare them with what they would be if the Seine looked like the Chicago River; or the Schuylkill below Callowhill Street in Philadelphia; or Jones' Falls in Baltimore, or the Anacostia Flats in Washington. Compare the actual values of the properties fronting on the Thames embankments with what they would have been if that river's banks looked the way they did at the beginning of Queen Victoria's reign. Then apply your tax rate to the differences and you will get an index to the primary loss caused by our American ignoring of the scenic value of river fronts. I am emphasizing the municipal value of riparian developments mainly non-commercial, but there is a spirited, kaleidoscopic, fascinating scenic value and, hence, financial value, to the municipality in commercial waterfronts developed by masters who seek by-products as well as direct results.

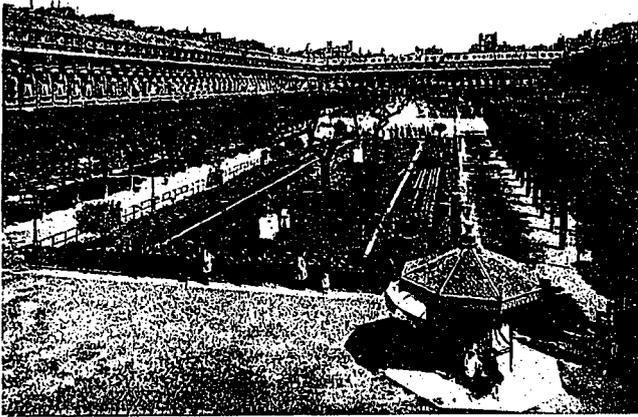
So far, of the loss to the city; now of the loss to the citizen.

Compute the value to the citizens of European cities of their river-fronts. How much money would Parisians *not get a chance at*, if their river were as dilapidated, as uglified as ours are generally? The sums left by visitors to Paris each year are variously estimated from \$50,000,000 up to several times that sum. How much would Parisians lose if the Seine were not a gigantic work in sculpture?

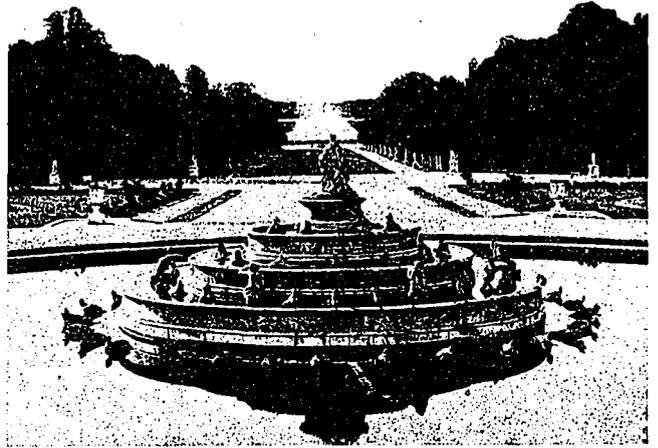


PLAN OF THE PUBLIC BUILDINGS OF CLEVELAND.

There are not wanting indications that the financial value of a beautiful thing to the community as individuals as well as a municipal corporation is becoming more widely appreciated. In a recent decision concerning the Fairmount Parkway, Judge Sulzberger, of the



PALAIS ROYAL, PARIS.

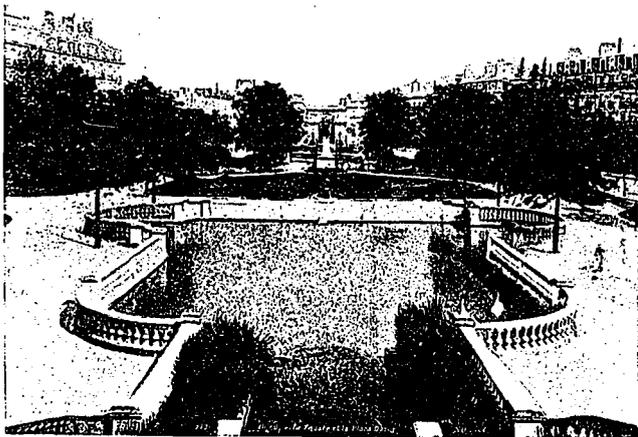


FOUNTAIN AT VERSAILLES.

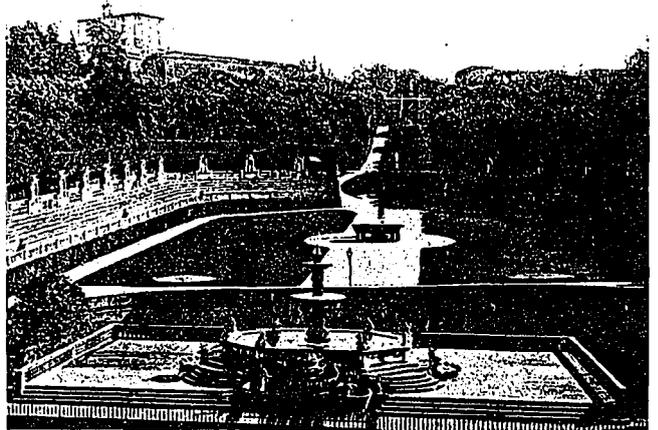
Court of Common Pleas of Philadelphia County, said that such a feature "has an effect directly utilitarian. It increases the attractiveness of the city, induces strangers to visit it, and thus enlarges trade and commerce."

It is a pleasure to note that we are beginning the redemption of our water-fronts. Boston has begun it—true, in a hesitating, apologetic way, so as not to offend Beacon Street!—still it has begun it. You, here in Toronto, promise to do vastly better. Your combination of a commercial and non-commercial development promises to set the precedent for American cities that has been needed so long. The early realization of your plans is therefore a matter of financial concern to practically every American city.

If beauty pays, how much does ugliness cost? Do we realize how dearly we are paying every year for our investment in rectangular, grid-iron schemes of unattractiveness? City treasuries are losing money and citizens far more. Let us never forget, when discussing parkways, river embankments, park and playground systems, group plans and other physical developments, that there is another side to the picture, the side of the city without parkways, without river embankments, without parks and playgrounds, without civic centres—the city crowded with overhead wires, with its sidewalks covered by overhanging, threatening signs, the curbs lined with ugly street fixtures. Which pays? Which costs?



PUBLIC FOUNTAIN IN DIJON.



BOBOLI GARDENS, FLORENCE.

Justice Requires City Planning Before City Bonds Issue.—It is injustice to issue municipal bonds to secure the money to pay for an improvement that will be obliterated before the end of the life of the bonds, e.g., to issue 30-year or 50-year bonds to pay for paving that will not last over 15 years. This compels taxpayers of the last years of the bonds to pay interest and sinking fund charges on bonds for a thing they

cannot possibly enjoy. It is a similar injustice to issue such bonds for an improvement that, while it may physically last the term of their life, yet is conceived only to meet the needs of the citizens who are paying taxes at the date of the issuance of the bonds, and is not adequate for the needs of the citizens who will be taxpayers toward and at the date of the retirement of the bonds.—*Andrew Wright Crawford.*

Playgrounds

The Size and Distribution of Playgrounds and Similar Recreation Facilities in American Cities

HENRY V. HUBBARD*

CITY PLANNING, as we now understand it, is an attempt to create a complete and satisfactory environment for the inhabitants of cities. It is only within recent times that cities have made any attempt at being perfect, complete organisms. Up to a short while ago they were, as Dr. Hegemann says, not places to *live* in, but places to *die* in. Few families of city dwellers lasted beyond the third generation. If the country had not supplied new recruits, the city would have perished. Obviously there was a lack of some element necessary for man's complete and permanent existence. Dr. Cabot, in his recent book, "What Men Live By," enumerates the necessities of man's existence as work, play, love and worship. The completely organized city should provide for all four of these requirements. There has certainly been no lack of work, although the way in which this work is to be done is still very much the concern of the city planner. Family life and religious life are of course also his concern, but not the subject of this discussion. Play, an absolute requirement for efficient and continued human existence, is, of the four essentials, the thing for which least municipal provision has been made in cities, and its lack was first felt and first provided for by those who tried to make our modern cities fit for their inhabitants.

Recreation is essentially mental or physical relief from any exhausting activity or environment. In our modern cities this exhaustion has been, of course, mostly the result of work and of the confinement and repression incident to the existence of large bodies of men in wholly man-made surroundings. Men's recreations are different as men's work and environments are different; that is, each man's recreation will be relief from his own particular form of exhausting activity. In our crowded cities, however, all people are alike subject to certain exhausting forces: the tenseness of their struggle for a livelihood and the restriction of their man-made surroundings. It was natural, therefore, that the kind of recreation which was first seen to be needed was leisure, openness of surroundings, room to walk and to breathe and a chance to see trees and grass instead of bricks and mortar. Our first public recreation facilities were, therefore, parks.

But these parks, even when sufficient for this particular demand, did not meet all the requirements. As we have come more and more to see

the sound sense of providing outdoor recreation facilities, and as cities have been more and more willing to withhold land from the obvious utilities of business and residence for recreation purposes, cities have acquired—beside considerable areas of the countryside reserved for the use of the citizens—smaller parks for more intensive use, athletic fields, playgrounds, neighborhood centres, small resting places, swimming pools and other such specialized provisions for outdoor recreation. Some indoor recreations also have come to be carried on by the municipalities, such as public baths, gymnasiums, libraries, museums and social centres. Of course, there has been, too, commercial provision by private agents for any kind of recreation which could be made to yield profit to private investment. Theatres we have always had; moving pictures, penny arcades, amusement parks, dance halls, skating rinks, bowling alleys, pool rooms and so on will arise of themselves because they pay, and the task of the city planner will be not to bring them into existence, but rather to regulate them and to counteract their effects where they are bad.

The complete city will contain provisions for all desirable forms of recreation; and practically all of the outdoor forms, as well as many of the indoor forms, will be provided by the municipality. Since much of the land which must be taken for these purposes is valuable, recreation facilities, like other facilities, must be as efficient as possible per unit of area. This efficiency will be secured by differentiation of function, by proper determination of size and interior arrangement and by proper spacing, throughout the city, of the various pieces of land devoted to recreation. This differentiation is, as we have seen, already well begun and will doubtless be more complete in the future as our knowledge grows.

We find, as we should expect, that when cities have since attacked the problem of outdoor public recreation they have attempted to provide for almost all kinds of needs on the same piece of ground. The large parks have been called upon to serve as resting places, as walking places, as playgrounds, as athletic fields and so on. As the cities have grown around these parks and the use of the parks has become more and more intensive, many of these specialized uses of the parks have been found to be incompatible with one another and with the primary use of the parks. Just how far it is wise to provide separate facilities within the large

*Asst. Professor of Landscape Architecture, Harvard University.

parks for specialized recreations is still in many cases an unsettled question, and often it is a question which can be settled only in the individual case by a knowledge of the individual circumstances. However, some general considerations can be stated which will hold true in practically every case.

The large park has properly a distinctive and very important purpose: namely, that of affording relief from urban conditions, relief not only by providing an opportunity for a man to do things which he cannot otherwise do in the city, but particularly for him to see and to think things which the city excludes. The freedom of a park, the fact that in a park one may do many different things at his own will and is not forced to do any particular thing, the fact that the park is not obviously designed for one definite and recognized object, is the very essence of the value of a park; but it is also an element of great danger to a park when men come to seek for space for more definite and specialized recreation uses. A playground, for instance, is a thing which anyone can under-

schoolhouses, of museums, of effective public buildings is also a desirable and necessary thing; but the serving of these purposes should not be at the expense of the park. Moreover, the park is an inefficient location for the playground. A playground is a neighborhood utility. It draws only on its immediate surroundings for users; it should be in the midst of a populous district and not where half the land in its vicinity has no permanent inhabitants.

On the other hand, the children's playground does by its very nature belong near the school, as we shall see later more in detail, they both draw upon the same population and therefore normally would be in the same location, the local conditions governing the choice of a site for one apply also to the other, and in use each is helpful to the other.

At present the logic of circumstances has produced, for the most progressive of our cities, the following types of outdoor recreation facilities:

(1) The "reservation," a municipal holding of country land, perhaps in connection with city



GENERAL VIEW OF CORSTORPHINE, SCOTLAND.

stand; its uses are obvious; its value is evident. To take a small portion of the area of a park for a playground would appear to be the cheapest way in which the city could get land for a playground; it seems to be good for the playground, it seems to be of little harm to the park. But the arguments which justify a community in doing this are just the arguments which are advanced for building schoolhouses in parks, for building libraries and museums in parks, for devoting, in a word, portions of the park to public uses not that of the park; and once granting these arguments, once entering upon this policy, there is no stopping place short of the entire destruction of the park as far as its peculiar recreation function is concerned. The quiet, the informality, the suggestion of natural growth, the lack of buildings in the park are what enable it to serve its purpose, a purpose which has come to be recognized universally as worthy of the expenditure of hundreds of thousands of dollars by almost all of our larger cities. The noisy play of children is absolutely desirable and necessary; the construction of

forests or city water supply, made accessible by roads, it may be, but not yet developed for intensive recreational use, and frequented mostly by picnic parties and others spending several hours at a time in the open.

(2) The large park, or "country park," designed to give, as far as is consistent with fairly intensive use, all the sense of freedom that the unspoiled country gives, and being the nearest thing to unspoiled country that most of the city dwellers can commonly take time to enjoy. It is fitted to receive large crowds and not to be destroyed by them, and indeed not to be crowded by them, for its main use is still to relieve a man from too close contact with his fellows.

(3) The small park, or "intown park," more accessible but less extensive, not pretending to a countrified appearance, but depending upon its design, its foliage and flowers, even upon architectural accessories at times; providing amusements which can be enjoyed by crowds and making the crowd a part of its design. "Commons," "public gardens," many of our larger so-called "squares," are of this type. Our "parkways,"

which serve as pleasure traffic connections for our large parks, have a local use in some cases like small parks.

(4) The playfield, for the active play of adults and young people over twelve, in games taking considerable space, like baseball, football, tennis, track athletics, etc., under supervision.

(5) The boys' outdoor gymnasium, or restricted playfield, for very intensive use by boys over twelve, with apparatus, such as parallel bars, ladders, etc., and a supervisor.

(6) The girls outdoor gymnasium, for intensive use by girls over twelve, with giant strides, swings, etc., and a supervisor.

(7) The children's playground, for boys and girls under twelve, with sand pits, baby hammocks, etc., and a woman teacher in charge.

(8) Special facilities depending upon local opportunities, such as swimming pools, wading pools, skating ponds, facilities for bathing in lake, river or ocean.

As to the best distribution and arrangement of all these facilities, we are still somewhat in the dark. In the light of what experience we have had, however, we believe the following combination of facilities to be efficient. The "park system"—outlying reservations, suburban large parks, radial and circumferential boulevards and parkways—is now an accepted thing. The relation of children's playgrounds to schools is obvious. The neighborhood recreation center—indoor gymnasium, meeting rooms, lockers, showers, etc., outdoor gymnasiums for both sexes of older children, small children's playground and perhaps wading pool, swimming pool and playfield—is now a recognized unit, a workable combination that meets a great need, when land enough can be obtained in one place to allow of combining these activities and profiting by their mutual benefit in upkeep and supervision. And some of us think that the best general arrangement of these recreation facilities throughout the city will prove to be locating these neighborhood centers each where it best serves its district, surrounding each at a suitable distance with resting places and little children's playgrounds, and relating these local provisions to the park and athletic field system by the boulevards and parkways.

If a city were sufficiently provided with these facilities it might properly feel that in the physical provision for outdoor recreation its people were well taken care of; but practically none of our large cities are so provided. The ideal differentiation and combination of recreation

facilities is, probably far in the future. For a long time to come we shall be obliged to allow boisterous play in parts of our country parks, construction of schools without sufficient playgrounds, playing of children in the streets made as safe as possible by temporary closing of the streets, but still tolerated as a temporary



COTTAGES IN SCOTLAND.

measure rather than accepted as the final solution of the problem.

On the broad, general laws governing the size and location of playgrounds and similar public outdoor recreation facilities, we are, I think, all agreed. We believe that every efficient community must set aside a portion of its area for these purposes; that the separate pieces of land which make up this total area devoted to recreation should be of such sizes as best to serve each its chosen function, and so located throughout the community as to be reasonably accessible to those for whose use each is designed. The size of a recreation area will, of course, depend, for one thing, upon its internal organization to fit its use—the size of a tennis court, the size of a baseball field, for instance, is a more or less definite thing, which has to be considered in fixing the boundaries of a playfield. But the



LANDSCAPE GARDENING AT CORSIOPHINE.

great and important factor is the number of people who need the kind of recreation provided by this particular area and who can come to the recreation ground without having to travel too great a distance. In the ideal case, where you are not considering such topographical difficulties as the obstruction of canals, railroads or

particularly crowded streets, the area served by a playground will be a circle having for its radius the distance which the people served will travel to get to the playground; and the distance between one playground and another will, of course, be roughly twice this distance. When the playground appeals to a localized class, then the playground seeks the dwelling or working

very large price for a playground would be justified by this fact.

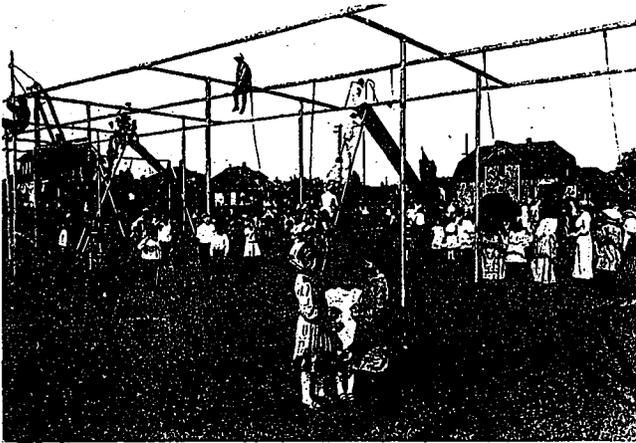
So far I have merely reviewed a field which is more or less familiar to us all. These general considerations are worth having. They may prevent us from going far wrong in meeting the actual problems, but if we mean to go accurately right we must know more. We must know, in usable figures, the various factors which it is so easy to state in general terms. Just how much total playground area is needed for the average American city of a certain size and character? Of what sizes shall the separate playgrounds be? How far apart can they be? The only way to find this out is to determine what the circumstances actually are in our American cities, to record them for reference when they are satisfactory and to determine what is wrong when they are unsatisfactory. By a study of enough data of this kind we can eliminate the local variations and come to definite general conclusions which will enable the designers of our future playgrounds to move with more certainty and to make use of the experience which we are now so painfully acquiring.

place of this class—a noontime playground would be near a factory, a colored people's playground in the colored district.

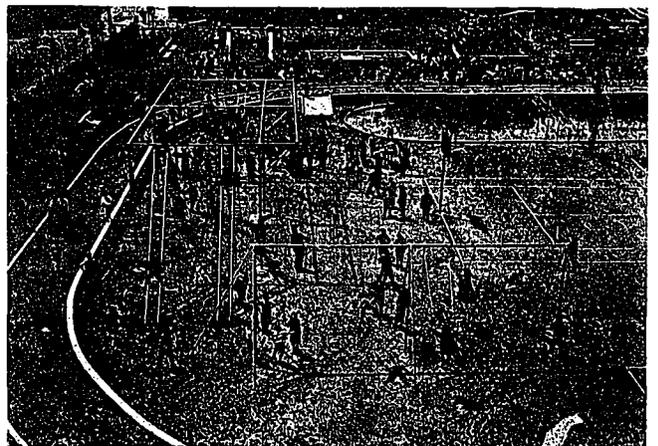
Having decided in a general way, by the consideration of these major factors, on the approximate place where the playground is to be located, the exact piece of ground to be chosen will be determined by the suitability of the site to the recreation purpose and by the consideration of cost. Suitability of site depends both on whether the site suits the playground (for instance, you do not of choice put a playground on the steep side of a hill) and on whether the playground suits the site (you do not put a playground next to a hospital).

The cost is the final deciding factor, which, wrongly understood, has wrecked more well-intentioned recreation schemes than anything else that can be named. It is in the consideration of this factor that the experience of the city planner will stand him in good stead. Cost is the measure of the desirability of a particular site for any purpose whatsoever for which men will pay money. It is the proof that other utilities besides that of recreation are bidding for this piece of land, as they are bidding for all the land in the city. The good city planner will naturally choose for his playgrounds, other things being equal, land which is most valuable when used as a playground, not land which would be most valuable if used, for instance, for a factory. But this consideration must not blind him to the larger fact that, unless the district to be served has a playground somewhere in the immediated vicinity, it is not fit to live in, and a

It was the purpose of the investigation which prompted this paper to begin the general collation of these facts. The blank forms which you have before you were sent out to such people as seemed most likely to be informed on this subject in all the larger cities of Canada and the United States. The most salient fact demonstrated by the replies received was that only in a few cases had it been possible with the means at hand to accumulate all the data called for, and only in a few instances had the persons concerned with the playground movement had time and opportunity to familiarize themselves sufficiently with the conditions to make them willing to allow their opinions to be used as the basis of any general judgment. The following statements are, therefore, more the intelligent guesses of a few well-informed men working with little precise data than the un-



PLAYGROUND AT SPOKANE.



PLAYGROUND AT JERSEY C.I.Y.

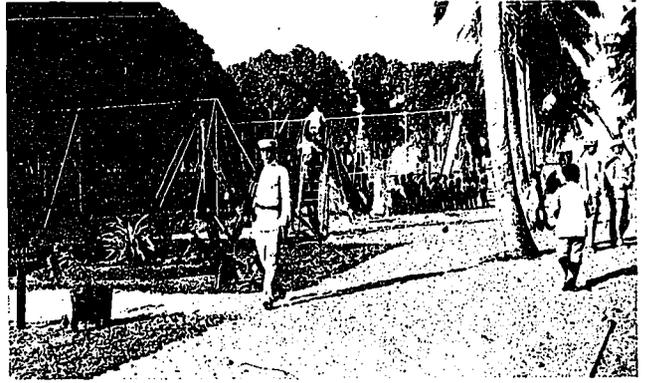
capable result of the compilation of thousands of figures. However, even as they are, they may serve to show what knowledge we should have with more definiteness, and to suggest a way to go about acquiring this knowledge.

Question 1

What do you consider the maximum distance from each of the recreation areas beyond which people find it too hard to come?

A. Little Children's Playgrounds.—A compilation of the answers to this question shows the distance most commonly given, as well as the rough average of all distances given, as *one-quarter of a mile*.

Plainly, the distance will be inversely proportional to the amount of difficulty and danger which lies between the child's house and the playground. Railroads, canals, etc., will almost completely bar the passage of little children,—that is, parents will not allow children to cross such obstacles alone,—and busy streets, especially if they have electric cars and considerable automobile traffic, will produce much the same



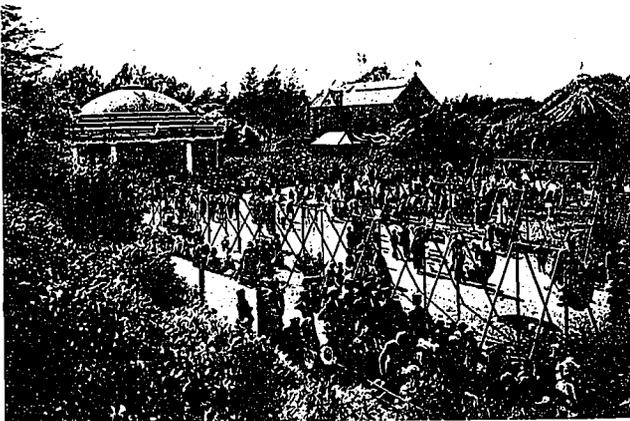
PLAYGROUND AT SAN JUAN, P.R.

ren's playgrounds properly serve the schools, they properly serve the city. And while the playground gives the school light and air and accommodation for the children at recess, the school gives the playground shelter, toilet facilities, room for indoor games and sometimes a gymnasium and baths.

The spacing of the schools, therefore, might well be a guide to the spacing of playgrounds. But often in the actual case this school-spacing is far from ideal, and we must determine the proper spacing of the playgrounds directly by determining how far the children may reasonably be expected to come to them. Only one satisfactory way has been found of determining the "effective radius" of any playground, and that is to record the residence of all children attending a playground and discover what is the radius of the circle that will include the great majority, say 80 per cent., of the children's homes. This will give existing conditions accurately. There will still remain to be determined whether some greater attraction at the ground, some different traffic regulation, some further education of the people, perhaps some free public method of conveying children to playgrounds as they are now sometimes conveyed to schools, would not modify these results; but of course such modifying circumstances will apply to any data that we could obtain.

B. Playfields. In such of the answers to this question as seemed to be the results of original investigation, the average effective radius given was about *one-half a mile*.

As these recreation areas are used mostly by children who are able to go about without the company of older people, their effective radius is naturally longer than that of the little children's playgrounds. The limiting factor here seems to be inertia rather than danger or inconvenience. To most city children or young men a walk of much over half a mile needs a considerable attraction at the end. Commonly a person will seek some other amusement nearer home rather than walk over half a mile to a playfield. And if he is willing to pay five cents



PLAYGROUND AT SAN FRANCISCO.

effect. This is so common a difficulty that there is strong argument for having the playgrounds for children under six years old within each block. There would then be no streets for the children to cross, and mothers could go about their household duties and still be within call of the playground.

The playground for children of school age, however, should without a doubt be near the schools when this is possible. If the school buildings are ideally placed, they are accessible to all the children, each school—primary, grammar or high school—drawing all the children of appropriate age from its district, and its district lying contiguous on all sides to the districts of other schools of the same grade. One grammar school will then include in its district the districts of more than one primary school, the children as they grow older walking farther to school; and one high school similarly covers the districts of a number of grammar schools. So if the child-

and take a street car, he will probably ride, not to the playfield, but rather to a large park, a large athletic field, a bathing beach or some such more interesting place at a still greater distance. So the effective radius of the playfield seems not to be much increased by the use of the street cars. The boys' and girls' outdoor gymnasium or restricted playfield has apparently



ENTRANCE TO NEW PALACE, POTSDAM.

much the same effective radius as the "playfield."

C. Neighborhood Centers. The average effective radius given in the replies under this head is about *half a mile*. The neighborhood center is a group of a number of recreation facilities, appealing to different classes of people and drawing them from different distances. The little children's playground serves, as we have seen, an area of one-quarter of a mile radius, whereas the swimming pool will draw boys from a mile or more if there is no competing pool. It is probably best to space the neighborhood centers in relation to the circles of influence of the kinds of recreation carried on in the neighborhood center which have the longest effective radius, and to duplicate the short-radius recreation facilities—e. g., little children's playgrounds—spaced according to their own circles of influence, in a subsidiary ring around each recreation center.

D. School Playgrounds. School playgrounds will be of the different kinds already mentioned. The little children's playground should serve

the primary schools; the boys' and girls' playgrounds and smaller playfields should serve the grammar schools; the larger playfields or athletic fields should serve the high schools. Of course this parallel is not absolute, but in general in the United States the school ages and the different types of playgrounds correspond in this way.

E. Grounds for Special Sports; for instance: swimming, skating, curling, lawn bowls, tennis, baseball and football on full-sized grounds.

The fact as to the effective radius of these special recreations is simply that a devotee of a special sport will go any reasonable distance to indulge in it. A five-cent fare in the street cars plus half a mile of walking would certainly not deter many of the enthusiasts.

There follow three interesting personal opinions bearing on the subject of effective radius of playgrounds:

Mr. Joseph Lee, In the *Chautauquan*, June, 1906, p. 354.

Effective radius for playground areas:

- (1) For children in arms: one-quarter mile.
- (2) For children under six, who can walk: one-quarter mile, not crossing electric or railroad track.
- (3) Children 6-12: half mile.
- (4) Children 12-17 who cannot afford car fare: three-quarter mile.
- (5) Ball fields for men and boys: 1 mile plus five-cent car fare.

These are maximum radii.

Report of Parks and Playgrounds Association, Inc., of City of New York, 1909, p. 4.

The experience here of block limitation is typical of many localities for playground work. A complete and accurate registration with addresses was kept of all members, and maps prepared with a dot for each child placed at its house. These maps, included in the appendix, show that children under twelve or thirteen, as a rule, do not go more than two blocks for a playground, that they are loath to cross avenues; and to form an adequate system of playgrounds, a small lot placed at distances not greater than five blocks, between avenues, is the only effective plan. For older boys and girls, for athletic events, baseball or occasional trips, much longer distances may be given.

George A. Bellamy, Board of Trustees, The Hiram House, Cleveland, Ohio.

There are four kinds of playgrounds:

(1) For small children located so as to draw children from two ordinary city blocks any direction.

(2) Playgrounds for children who can go three or four blocks. Both of these playgrounds are usually open in the summer only and during good weather.

(3) Large playground of ten acres or more

with a field house, such as the municipal centers in Chicago, drawing upon a population of half a mile radius or more.

(4) Large area varying from ten to a hundred or five hundred acres, which supply the need for the entire city's population for large municipal recreational activities.

Question 2

Do racial or social barriers affect the use of the playgrounds?

The concensus of opinion is this:

The playground is the best place to overcome racial and social prejudices—feats of strength and agility are recognized as worth while by all children, and there grows up in the playground, under proper supervision, a democracy of play, or at any rate an aristocracy of physical excellence but little influenced by race.

A playground in a racially or socially definite and homogeneous neighborhood takes its social standards from its users. Race segregation in this way is more or less automatic in many playgrounds, as, of course, is segregation according to wealth. In the case of *negroes*, the combined playground seems to be impossible in the South and elsewhere where this race prejudice is strong.

There follow two interesting and diverse opinions:

S. Dillon Mills, Toronto Playground Association.

Influence of Racial and Social Differences.—

All races are to be found in our schools and in the limited playgrounds attached to most of them; it is not advisable to encourage racial separation; we cannot build up a united nation in any place so well as in the playground. As to *social barriers*, the true democratic spirit does not recognize them; economic conditions will in any case cause a rough separation of wealth from poverty; the poor cannot live in the same quarters as the rich; if they knew more of each other it would be better for both; in Toronto this separation is so complete that the question does not arise as regards playgrounds.

Lafon Allen, former President Louisville Recreation League.

. . . We found it was out of the question to arrange successfully for the simultaneous use of the playground by children of both races (white and black). My recollection is that we finally settled upon a scheme of certain hours for white children and other hours for colored children. This was quite unsatisfactory, but it seemed the best thing that could be done. Even at that, a good many white parents would not permit their children to come to this playground because it was used by colored children.

Questions 3 and 4.

3. (a) How much land *in toto* for the whole city do you consider requisite per capita to total

population for the various recreation uses?

Little children's playgrounds.

Playfields.

Neighborhood centres.

School playgrounds.

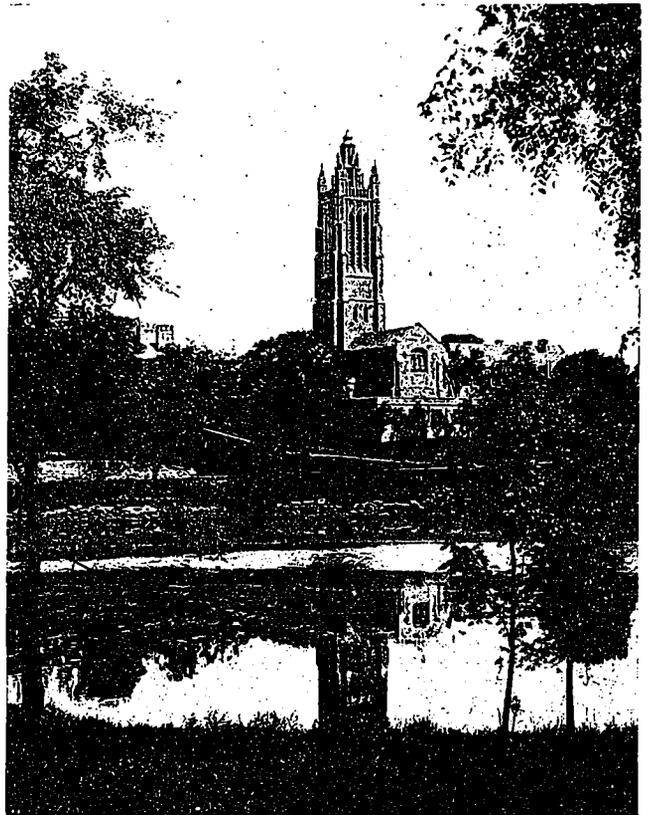
Grounds for special sports.

(b) How much land *in toto* for the whole city do you consider requisite per capita for actual attendance?

4. What total area of separate playground do you consider necessary for the effective performance of its functions for each type, with due regard to first cost and operating expense?

Very few replies were received to fit the form in which these questions were asked. From the various fragmentary replies and the opinions returned, moreover, it is evident that, except for the playgrounds for smaller children, little definite collection of figures has been made, and most of the opinions are general impressions only.

The consensus of opinion as to children's playgrounds is that 30 square feet per child is



PERKINS INSTITUTION, WATERTOWN.

a minimum space, and 75 square feet is none too much. This appears to be based on an assumption that about half of the children will be actually playing at one time, for such figures as are obtained as to maximum crowding allowable give about 300 children per acre as the "point of saturation," and this is over 140 square feet per child.

Several opinions follow:

Francis R. North, Playground and Recreation Association of America.

Fifty to 75 square feet per child is a reasonable minimum on school playfields. Three hundred children an acre when children are playing at once.

C. Ward Crampton, Director of Physical Training, Department of Education, New York City.

The minimum allowance of space per school child should be 30 square feet. The space will also take care of the adolescent situation, if one-third of it is enclosed and all of it provided with artificial lights. Sixty per cent. of this space should be attached to schools which should be used as their neighborhood centres; the balance obtained by the use of parks. This is the absolute minimum. In addition, in all centres of population of 10,000 and over, there should be a space of 400 × 600 feet for use as an athletic field, and for occasional civic demonstrations and pageants. With each 50,000



ROYAL PALACE, BELVEDERE, VIENNA.

population, this should be duplicated. In addition to the provision of this space, there should be provided seats for at least 1,000, and facilities of the type used by the Department of Education, New York City, for its athletic fields.

British Institute of Social Service.

III. That where provision is made for games:

(a) Each undivided playground for 200 children and upwards should provide:

- (1) 20 square feet for each older child.
- (2) 16 square feet for each infant.

(b) Each undivided playground for less than 200 children should provide 2,000 square feet, together with:

- (1) 10 square feet for each older child.
- (2) 6 square feet for each infant.

IV. That where no other provision is made for games:

(a) Each undivided playground for 200 children and upwards should provide:

- (1) 30 square feet for each older child.
- (2) 16 square feet for each infant.

(b) Each undivided playground for less than

200 children should provide 2,000 square feet, together with:

- (1) 20 square feet for each older child.
- (2) 6 square feet for each infant.

V. That

(a) Where a site is expensive (regard being had to the price of the land and the resources of the authority), the Board may accept a playground below the measurements specified in Section IV (a) and (b) above.

(b) The precise degree of reduction from this standard shall be decided on the merits of each case, but in no case shall the reduction bring the playground below the measurements specified in Section III (a) and (b).

S. Dillon Mills, Toronto Playgrounds Association.

Extent of Ground.—About one square acre for 150 children is the minimum for effective play. But calculations of this kind are very unreliable; the temperament, nationality and previous habits of the children form factors of unknown quantities and of great importance in the matter: 300 children of the slum type or of phlegmatic temperament could play quite acceptably in a space in which 100 active youngsters would be hopelessly crowded. The child population of every district varies from year to year; actual playground attendance even more so: it is at best a very uncertain quantity, one respecting which no means has yet been devised for obtaining figures with accuracy. Two acres appears to be the smallest admissible in an average district of one-quarter of a mile radius with house rents averaging \$25 per month, and the reason that this space is sufficient in any instance arises from the fact that not more than about one fifth of the school population will be found in the ground at any one time, unless there is some special attraction, such as annual games, etc. Three acres would be much better, for it must be remembered that children are not always engaged in active play; they desire also rest, and cannot have this unless they have room to retire from the boisterous crowd. This is one reason why in Toronto we find so many children in the streets near the open playground. Space should also be available for garden plots and for shade trees. The size of recreation grounds for older persons does not come within the scope of these notes.

An Opinion from Minneapolis.

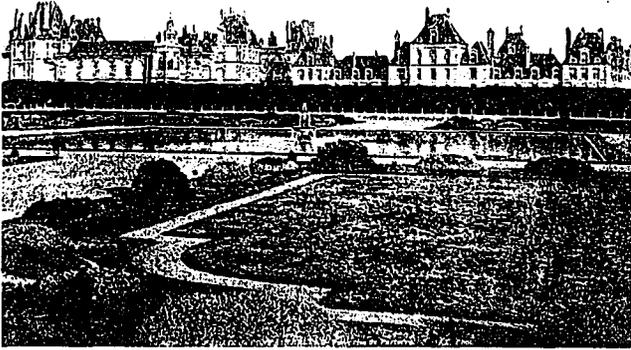
There should be one acre of little children's playground for each 15,000 population; one acre devoted to the uses of a neighborhood center for every 5,000; and one acre for grounds for special sports (baseball, football and athletics) for each ten thousand of population.

A little children's playground should be at least 1 acre in area, a playfield from 2 to 10 acres, a neighborhood center from 2 to 4

acres, a ground for special sports from 2 to 10 acres.

Question 5

To what extent do you believe it expedient



GARDEN AT FONTAINEBLEAU.

and wise to use and to depend upon using for play purposes land primarily devoted to other purposes, such as unoccupied land, designated streets, etc.?

The opinions on this topic were generally in accord, and can be summarized thus:

Unoccupied ground may well be used for children's play if no better facilities can be obtained. Successful intensive play needs apparatus and superintendence, however, and neither can readily be provided for an uncertain and temporary opportunity. The question really centers about the use of streets for play. If a city is well planned, so that heavy and fast traffic keep to their own main thoroughfares, leaving the residential side streets comparatively free; and if these side streets have the minimum of road surface and the maximum of turf or sidewalk according to the density of population; and if perhaps, in addition, the streets are barred to traffic during certain hours, then play in the streets may be more or less successful. But there is no denying the general fact that play in areas specially designed for play is better.

Several opinions follow:

S. Dillon Mills, Toronto Playground Association.

Use of Streets as Playgrounds.—Where nothing better can be done this is excusable, but there are many objections. The city becomes liable to claim for damages to house property, etc. The street being a long, narrow strip, renders supervision very difficult; the absence of supervision means simply leaving things as they are: we are looking for progress. The stopping of traffic on any one street during play hours, and the assembling of the children from several adjacent streets on it, are serious annoyances to the residents, even with supervision, and will be

likely to cause depreciation in property values on that street, unless in actual slum areas, where annoyance caused to tenants cuts a very small figure because they cannot help themselves. There is just one bright feature about street playground and that is—that if the supervisors are of the right type, their street work will open to them many opportunities for doing splendid social service.

George A. Bellamy, Board of Trustees, The Hiram House, Cleveland, Ohio.

Where land is expensive, I think it is quite possible with good results to depend upon the use of the streets where traffic is limited at certain hours of the day for play purposes. Policemen on their beat could very well manage the opening up of certain streets for certain games, eliminating danger to life. The city could well afford to pay an instructor for certain hours to control games on the street set aside for such purposes. Of course the street does not make as desirable a place to play as the ordinary ground, but it is better that it be regulated and be made lawful for the children to use the streets at certain hours than to have promiscuous play undirected and contrary to law, as it is in some cities.

Francis R. North, Playground and Recreation Association of America.

I do not think that the streets ought to be depended upon, except as a temporary measure. They can be closed in certain periods of the day and used for play. The increased use of automobiles is rapidly making ordinary use of streets less and less practicable.

To return now to the questions with which we started our investigation:

Just how much total playground area is needed for the average American city of a certain size and character? Of what sizes shall the sep-



PARK AT DRESDEN.

arate playgrounds be? How far apart shall they be?

Our conclusion is apparently this: we have not yet collected data enough to enable us to

answer these questions, but we do know what data we need and how to get it.

Let us turn to the people in charge of the various recreation facilities, the teachers in the little children's playground, the instructors in the boys' and girls' outdoor gymnasia, those in charge of the swimming pools, the playfields, the larger athletic fields. Let each one of these people record accurately, for his own playground (and for each activity in his playground, if these activities are assigned separate spaces) the following five points:

(1) How large is the area of useful playing surface?

(2) Just what activities are carried on upon it?

(3) How many people does it take, using the ground at one time, to fill the playground to its maximum efficient capacity?

(4) What is the age, sex, race and occupation of each person enjoying each recreation?

(5) From what distance does each person come to the playground?

These data can all be obtained and recorded by those locally interested, without any special trained knowledge of statistics.

Further, we should have from each city, for every residential area tributary to a playground, the total population and its character, and the total juvenile population. These facts could be obtained in part from the city census, in part from the school census, and completed with sufficient accuracy by sample counts or "soundings" in each area treated.

By a comparison of the number of people actually attending a certain playground with the number of people within its tributary area for whom the playground is designed, the proportion of predictable attendance to possible attendance can be obtained; and the collation of these figures from many playgrounds would give us a generally applicable ratio.

If a definite form in which all these data could be recorded was used in every case, the information relating to the same kind of recreation activity throughout the country could then be compiled by some central authority. We should then

know (as far as it is possible to know) the three main considerations which determine the size and spacing of playgrounds and other similar recreation facilities: (1) what, under present conditions, is the minimum efficient area of ground, per person present, for each of our recreation facilities; (2) from what size of surrounding residential area people will come to each recreation facility; and (3) how many people will actually come to each kind of recreation area from a surrounding residential area of a certain character and number of inhabitants.

To apply this knowledge in designing a new city recreation system, or improving an old one, we should first determine the various characters and densities of population throughout the city, and tentatively locate on the map the various recreation facilities that are to serve the population, having regard to the effective radius of each facility. We should then determine how many people, of an age and sex to use each particular playground under discussion, live within its effective radius from its proposed site. Now, by applying our ratio of actual users to possible users, we should obtain the total number of persons to be reasonably expected as actual users of each playground; and then, by employing our figures as to the necessary number of square feet of space per person attending, we should have as definite an idea as it is possible to get of the proper size of each playground.

A careful restudy in the light of what we should then know of the size and effective radius of each playground would give us a more or less ideal arrangement of recreation facilities for our city.

And then would come the practical work without which the ideal scheme is worthless: determining what can be done with the resources in hand, with the various and overlapping departments of the municipal government, with the thousand conflicting private interests, to bring the scheme to a workable realization, to make the city provide for its people what the city has taken away from them—one of the essentials of complete living.

Readjustment for Greater Efficiency.—The basic principle of city planning is to increase the working efficiency of the city. No far-seeing business man would undertake the construction of a large manufacturing plant without making provision for future expansion and other possible contingencies, but the building of a city, our most important and complicated enterprise often proceeds in a haphazard fashion without preparation for change or growth. The result is the confusion and congestion with which we are all so familiar. — *Arnold W. Brunner.*

Cities that Grow.—Cities exist because human beings can work more effectively and play more enjoyably in groups than alone. Cities may grow, though poorly planned, if possessing superior natural advantages. Cities may grow if wisely planned, despite unfavorable location or topography. Cities must grow which combine superior natural advantages with far-sighted planning for present and future needs. And, if community expenditures are assessed in proportion to benefits conferred, the people who work and play in such cities will enjoy a steadily increasing happiness. — *Harold S. Battenheim.*

Elevated Playgrounds

ACCORDING to the *New York Times* the last word in up-to-date playgrounds was uttered when New York formally opened its first elevated playground to the mothers and children of the east side. To plan the city's recreation, especially in the heavily congested districts, has for the past decade been one of New York's gravest problems. By way of solution there have been playgrounds on piers, playgrounds on roofs, even suggestions for floating playgrounds on the water. But one of the most novel suggestions for play space was put forth a few months ago by Hugh E. McLaughlin, a civil engineer. It was a suggestion to utilize the space above streets in the congested districts, not already occupied by elevated roads, for elevated playgrounds. The idea, although new and therefore likely to be branded as impracticable, met with immediate favor from the city administration, and the first elevated playground, at the Manhattan end of the Williamsburg bridge, was thrown open July eighth. Thirty thousand square feet at the end of the Williamsburg Bridge has been going to waste since the bridge was built. This space was an open cut which broke the esplanade at Clinton and Delancey Streets under which the elevated trains ran. On either side were the north and south footwalks of the bridge. A flooring has been placed over this open cut, giving a playground and park area measuring 68 by 450 feet. In the center a bandstand has been constructed, and through the Summer evenings there are to be not only band concerts but dances.

"The Williamsburg Bridge playground is only the start," explained Mr. McLaughlin. "My idea would be ultimately to build a series of these elevated playgrounds along New York's entire east side. That is, along First Avenue north of Twenty-third Street as far up as the density of the population requires it. At Twenty-third Street the elevated road begins. Switch the elevated playgrounds, therefore, along Second Avenue from Twenty-third Street south.

"These playgrounds are not to be mere bare

spaces where people can climb up to sit. They are to be real playgrounds, and beautiful parks. My plan is to build them in alternating sections 60 by 200 feet, the first section a park with grass, shrubs, vine shelters, and even trees, where the older folk especially will like to come to sit on hot afternoons and warm Summer nights. "These park squares can be made things of genuine beauty for the crowded dwellers on the third and fourth floors of the tenements on either side to look out upon. To say that an upper deck park of this sort would be impossible or too expensive is absurd. Two feet of earth will grow grass and a great variety of shrubs. Three or four feet of earth will grow some of the firs, especially the hemlocks, whose roots run out along the surface of the ground. Vine-covered trellises, fountains and flower beds are possible.

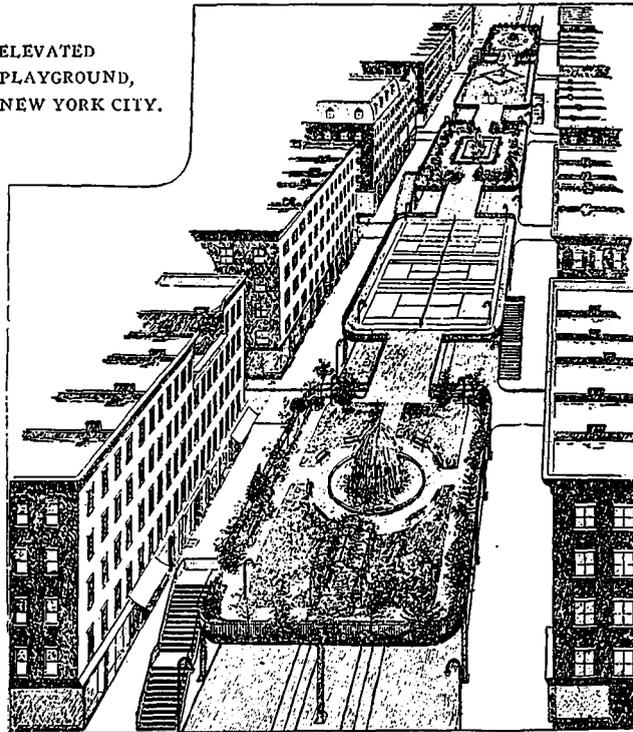
"The alternating sections will be the playgrounds proper. Here unlimited possibilities unfold. The great difficulty for those who have planned roof playgrounds or even pier playgrounds has been lack of space for real sports. The long, narrow shape of these playground sections adapts itself easily for games. "Think what it would mean to take baseball off the street! That alone would justify putting up a mile or so of elevated playgrounds. "It is absurd to call the

innocent play of our children criminal and to arrest them for it when we give them no places for recreation. Many of our boys take their first step in delinquency for nothing more than playing ball.

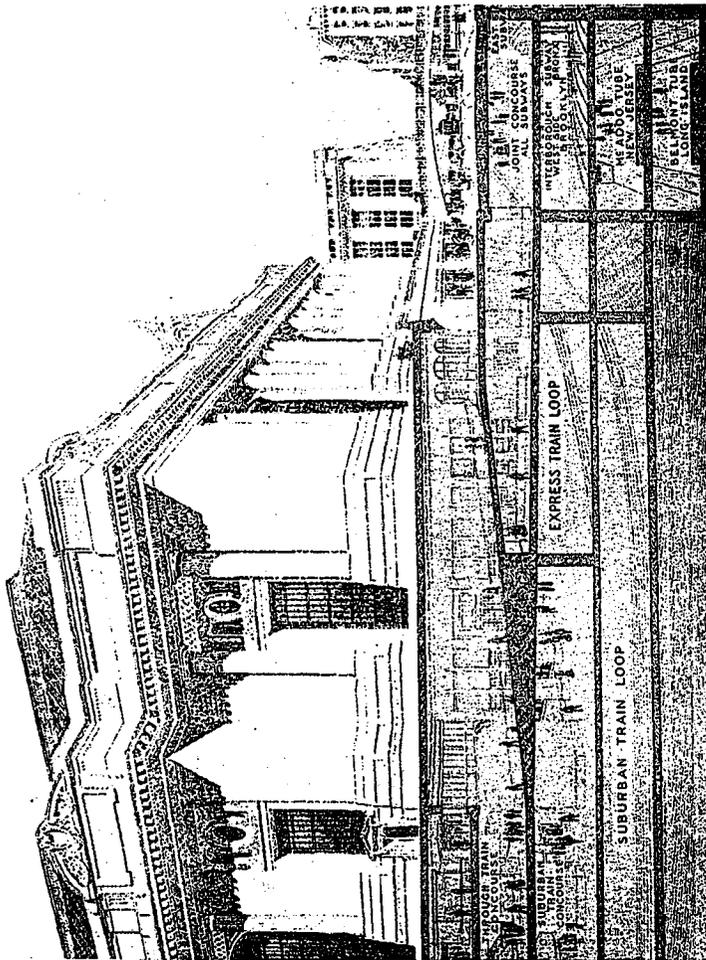
"Now, on these elevated playgrounds there would be covered baseball diamonds and plenty of them. In addition there would be running tracks, a football field, tennis courts, basketball courts, and sections reserved for the smaller children with swings and simple gymnasium apparatus.

One thing we have forgotten in planning for our playgrounds in this city—the outlook of the child. The child's realm is a very small one, bounded at either end by the streets that cross the avenue where he lives.

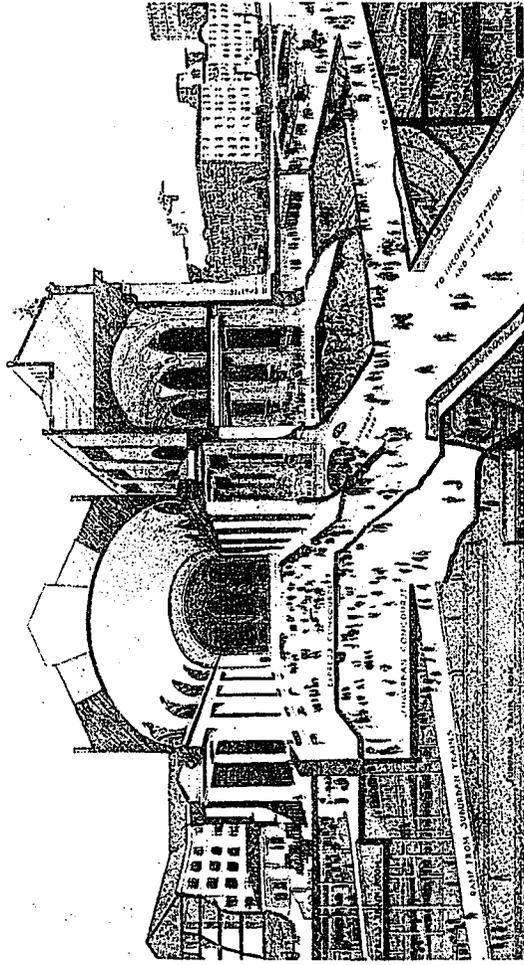
ELEVATED
PLAYGROUND,
NEW YORK CITY.



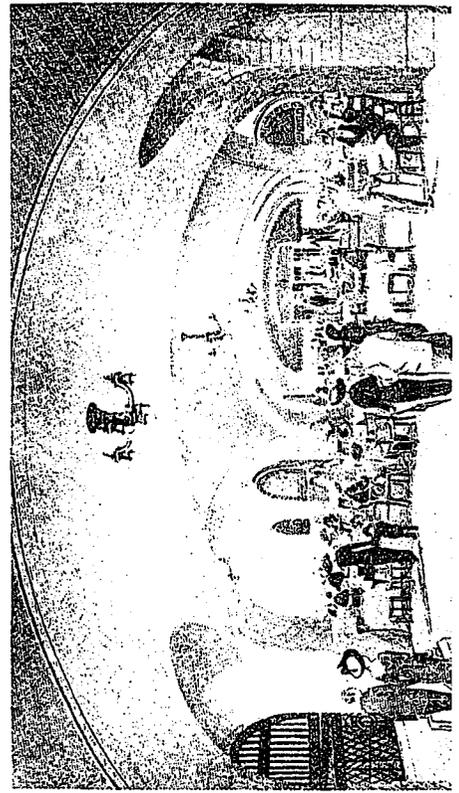
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SECTIONAL VIEW OF SUBWAY CONNECTIONS.

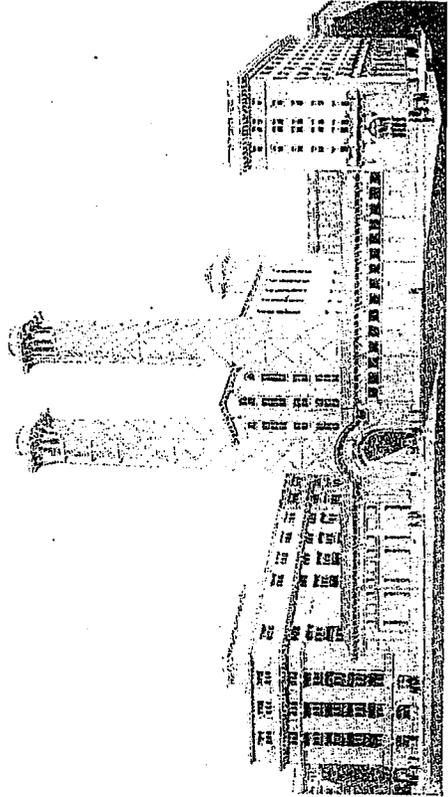


CROSS SECTION SHOWING INCLINE WALKS.

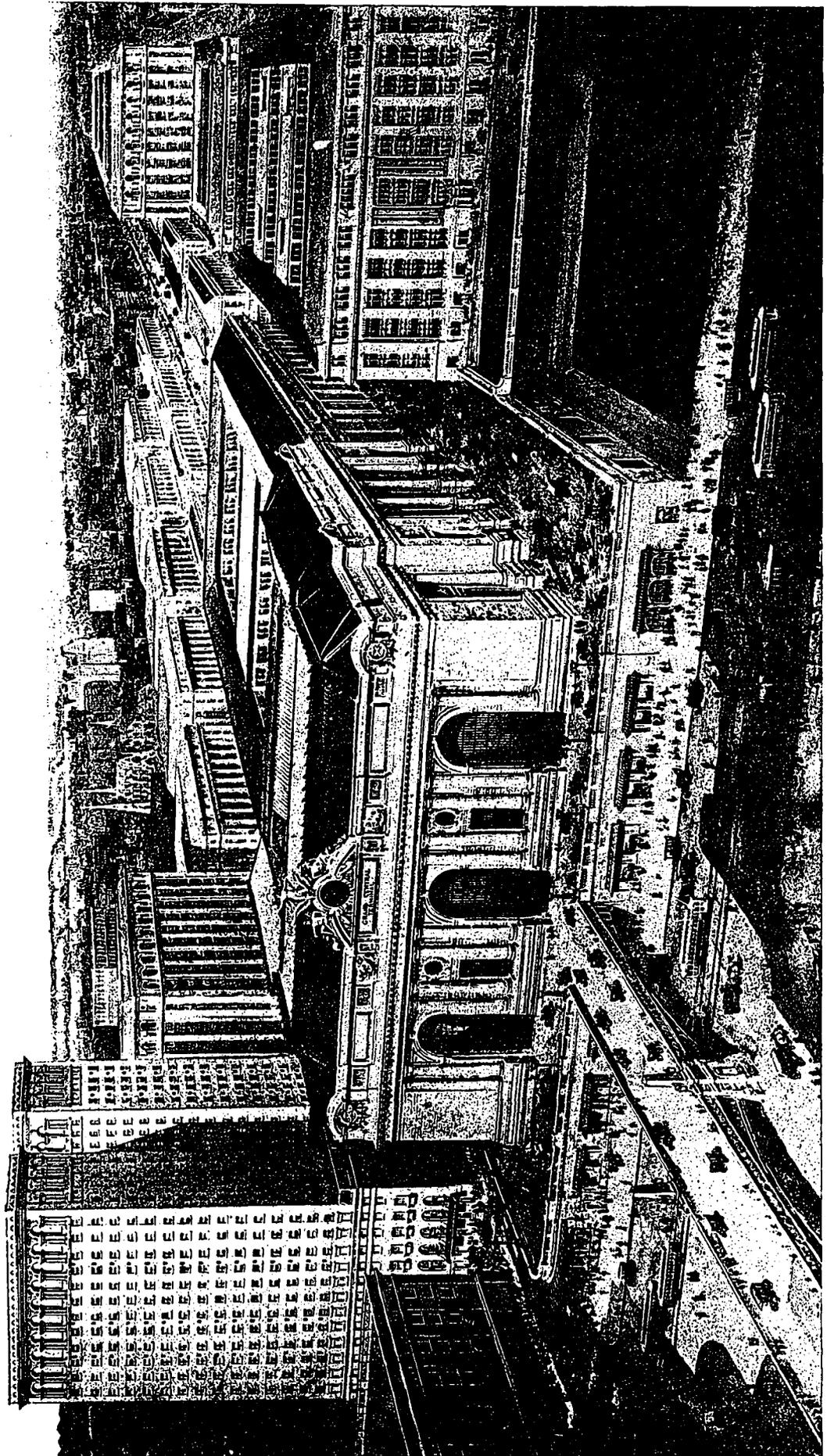


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A JOURNAL FOR THE ARCHITECTURAL
ENGINEERING AND CONTRACTING
INTERESTS OF CANADA



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CONTRIBUTIONS.—The Editor will be glad to consider contributions dealing with matters of general interest to the readers of this Journal. When payment is desired, this fact should be stated. We are always glad to receive the loan of photographs and plans of interesting Canadian work. The originals will be carefully preserved and duly returned.

Entered as Second Class Matter in the Post Office at Toronto, Canada.

Vol. VII Toronto, August, 1914 No. 8

CURRENT TOPICS

D. C. COTTON, architect, has removed his offices from 36 Toronto street to 54 Adelaide street east, Toronto.

* * *

ATTENTION—ARCHITECTS.

The Shakespeare Memorial Committee is instituting a competition for designs for the erection of the Theatre, and as a preliminary step it invites architects to submit photographs or drawings of important buildings they have erected or designed, with a view to the selection of six architects, who will be invited to enter the competition.

The Committee reserves the right to add two names to the number of architects so selected, and has appointed Mr. T. E. Colcutt, Past President R.I.B.A., to act as assessor for the competition, to draw up the conditions and instructions, and to select six designs.

The authors of five such selected designs shall each receive a premium of 150 guineas, and the author of the design placed first by the assessor

shall receive a premium of 500 guineas, to be merged in the remuneration payable to him on the preparation of the contract drawings. Such remuneration shall be as provided in the schedule of charges for professional practice as sanctioned by the Royal Institute of British Architects.

Preliminary conditions of the competition may be obtained on application to the Secretary, the Shakespeare Memorial Committee, 3a Dean's Yard, Westminster Abbey, London, S.W., to whom drawings and photographs must be sent on or before the 15th day of September, 1914.

* * *

BULLETIN B 7, issued recently by the Herbert Morris Crane & Hoist Company, Limited, is devoted exclusively to a hand operated overhead travelling crane, light in construction and designed in various sizes up to 11½ ton. By making all the main parts of rolled-steel section the weight of the crane itself has been kept very low, thus avoiding that disproportion between the dead weight and the live or useful weight which is so often a discouraging feature of all overhead travelling cranes.

* * *

THE Royal Architectural Institute of Canada will hold their seventh general annual assembly at Quebec, September 21-22, 1914. At the inaugural session addresses by His Worship the Mayor of Quebec, the President of the Quebec Section of the Province of Quebec Association of Architects, and the President of the Quebec Builders' Exchange will be responded to by J. H. G. Russell, President of the R. A. I. C. On the afternoon of the second day V. J. Elmont will read a paper on "The application of Reinforced Concrete to Dome Structure." Arrangements have been made for complimentary luncheons by J. P. Ouellet, and the architects of Quebec City; also an automobile trip to the various points of interest in this old historic town. Further information may be secured from Alcide Chausse, Hon. Secretary, 5 Beaver Hall Square, Montreal.

* * *

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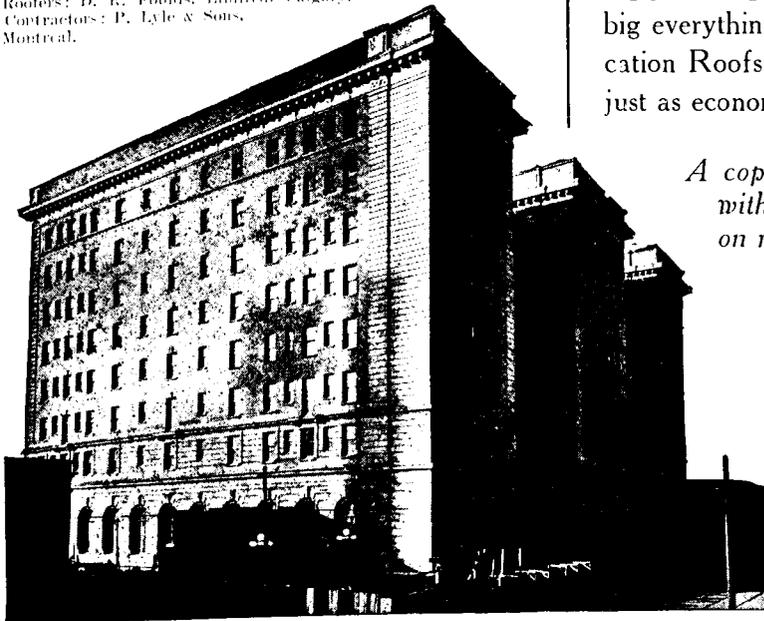
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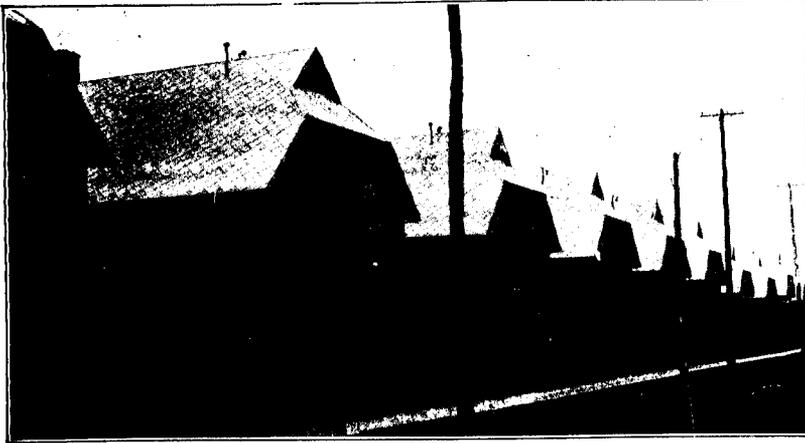
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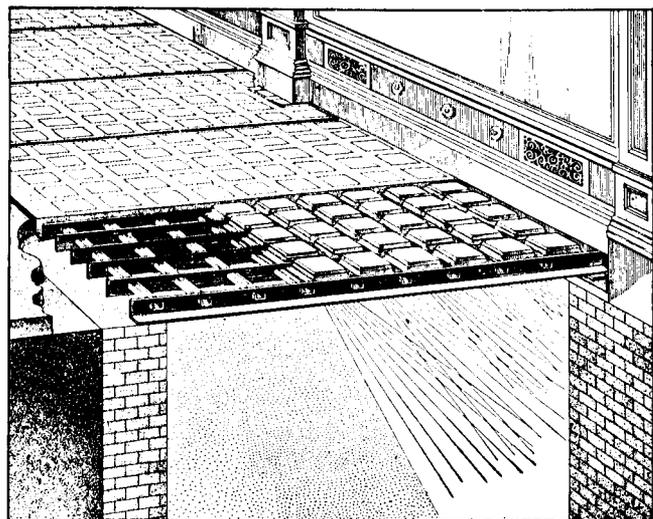
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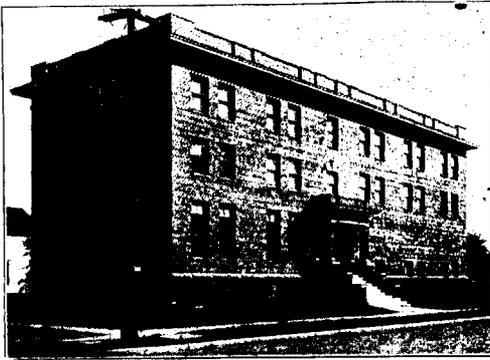
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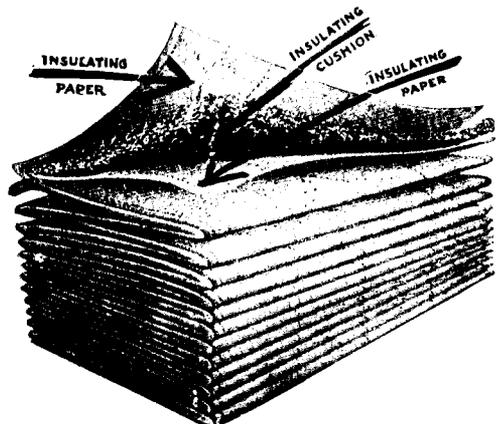
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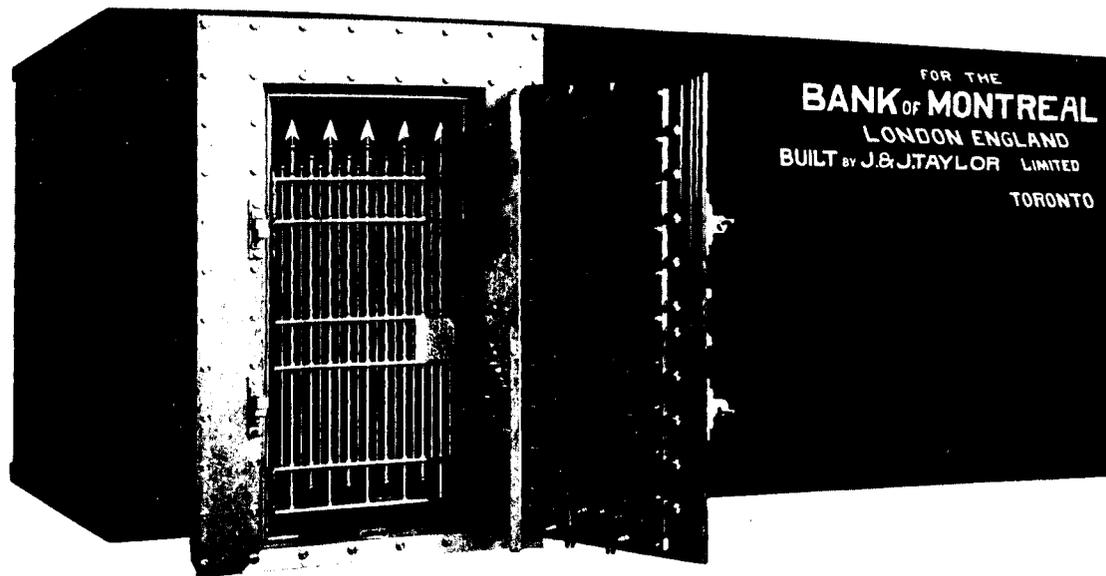
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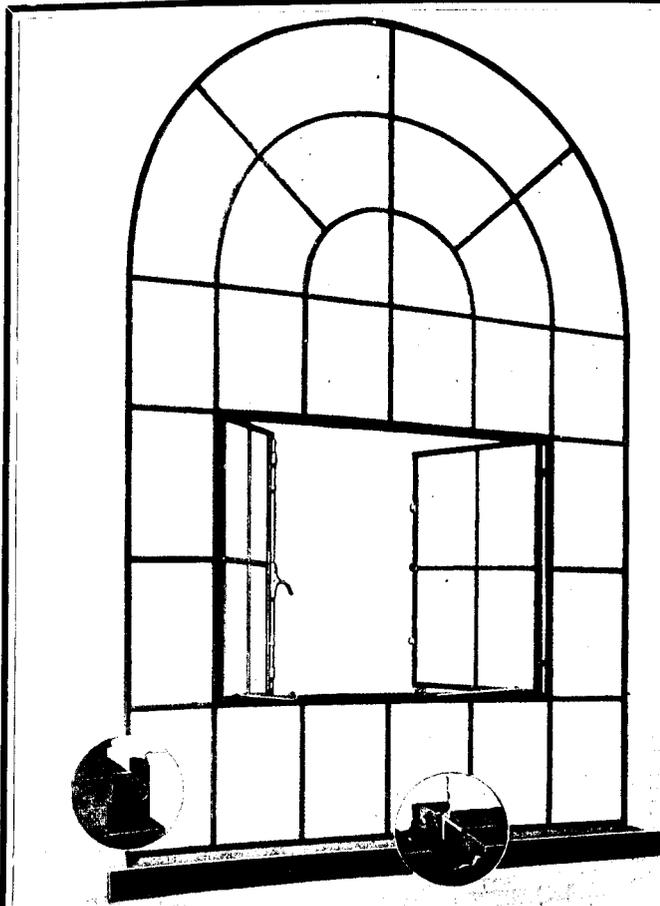
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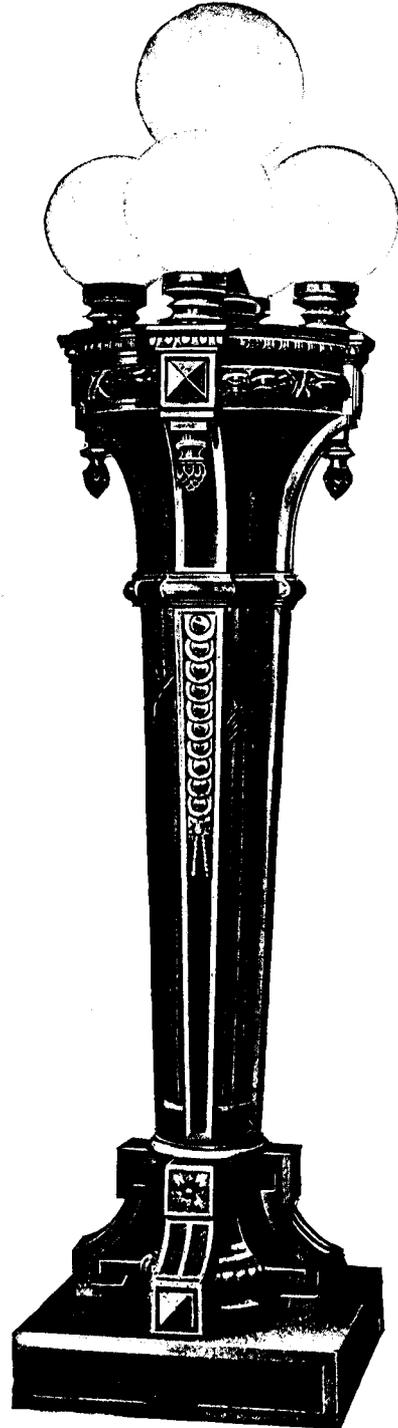
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are made of refined Creosote and no kerosene. The colors are lasting, clear, and beautiful. They are the original and standard shingle stains, and every gallon is guaranteed.

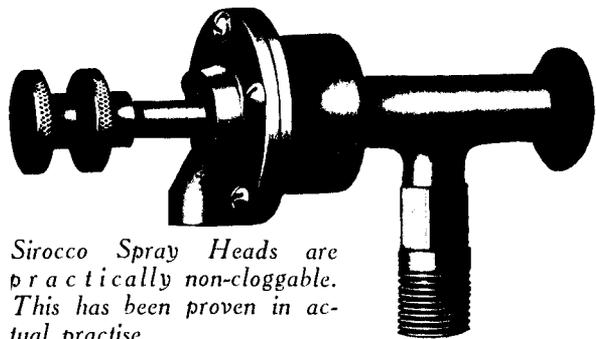
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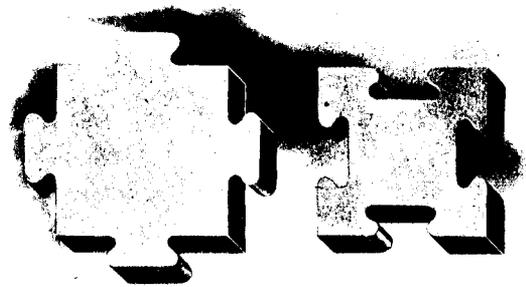
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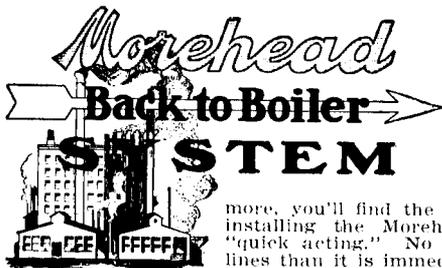
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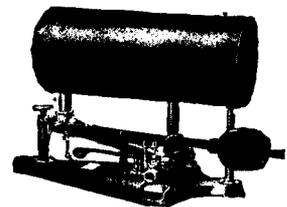


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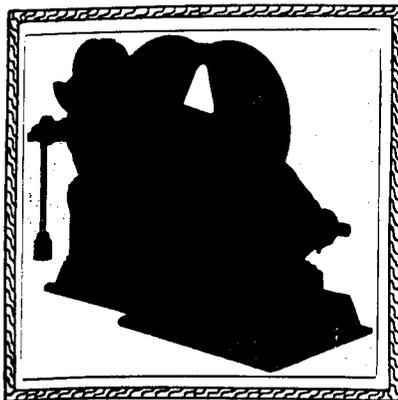
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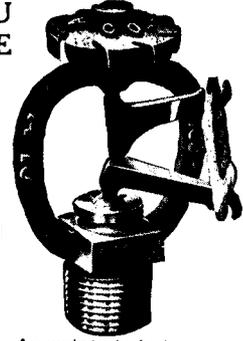
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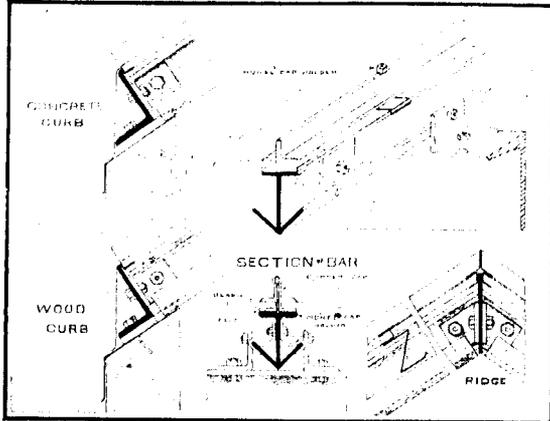
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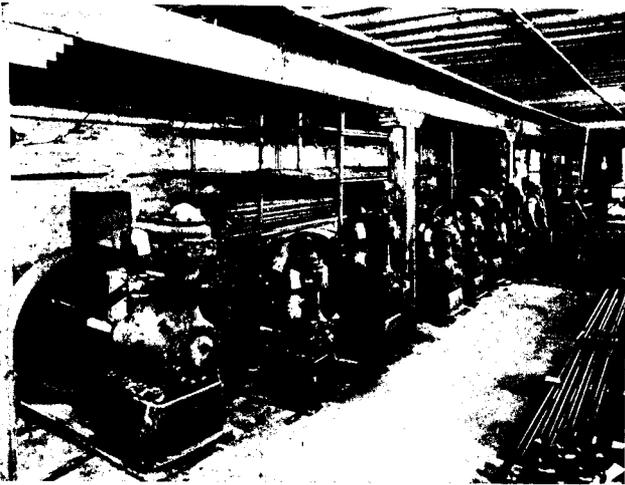
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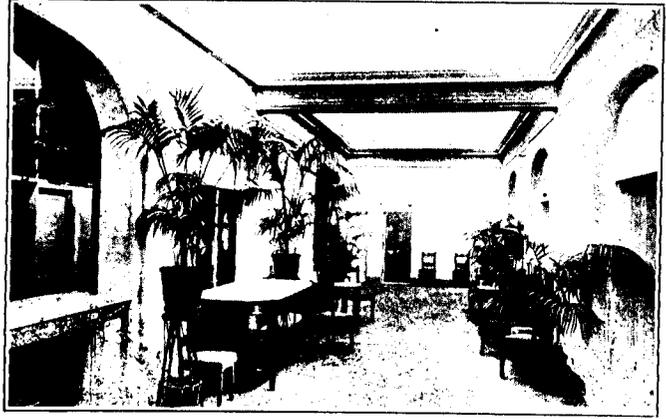
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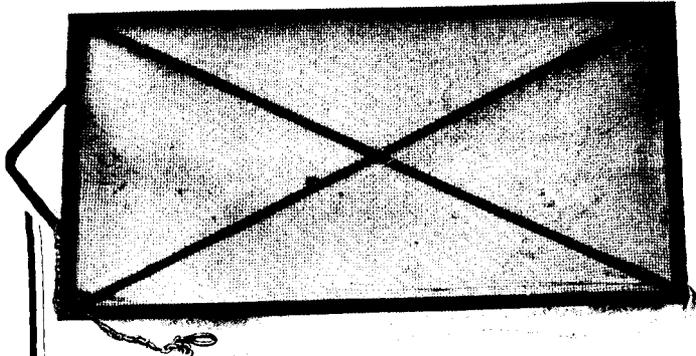
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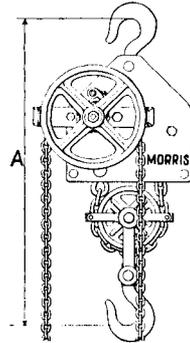
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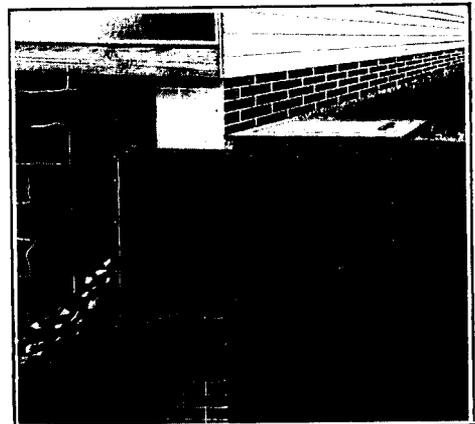
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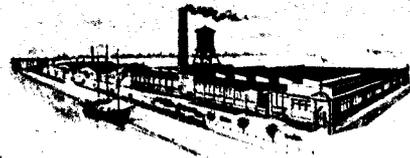
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