MUNICIPAL FRANCHISES

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A Description of the Terms and Conditions upon which Private Corporations enjoy Special Privileges in the Streets of American Cities

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IN

TWO VOLUMES

VOLUME ONE

INTRODUCTORY

PIPE AND WIRE FRANCHISES

ROCHESTER, N. Y.

THE GERVAISE PRESS

DISTRIBUTING SALES AGENTS

ENGINEERING NEWS BOOK DEPARTMENT

NEW YORK

1910

To

GEORGE E. HOOKER, MILO R. MALTBIE, GEORGE C. SIKES
ROBERT H. WHITTEN AND STILES P. JONES,

CONSPICUOUS REPRESENTATIVES OF THE GROUP OF MEN WHO ARE DEVOTING THEIR BRAINS AND THEIR ENERGY TO THE ESTABLISHMENT OF THE PRINCIPLE THAT A "PUBLIC FRANCHISE IS A PUBLIC TRUST," THIS BOOK IS RESPECTFULLY AND AFFECTIONATELY DEDICATED BY THE AUTHOR.

PREFACE.

THE city has been rightly called the battleground of democracy. It is in these mobile centers of population, where great issues can be fought out at short range and with a keen appreciation of their importance, that the political future of the country is to be determined. Municipal franchises are the concrete, definite points of contact between large public and large private interests. While franchise ordinances and contracts are generally technical, and often elaborate and hard to understand, yet the interest of the people in the terms and conditions of franchises is immediate and supreme. Franchises have been regarded as special privileges granted by the government to particular individuals or companies to be exploited for private profit. They are coming to be regarded, however, not so much as privileges, but rather as functions delegated to private individuals to be performed for the furtherance of the public welfare and subject to public control.

It is astonishing that this subject has not been made before now the theme of many comprehensive books. It is a fact, however, that the field is practically new so far as bookmaking is concerned. There are, of course, numberless magazine articles and many special reports, as well as a few books, on the question of municipal as against private ownership of public utilities. Books have also been written on the law of franchises. But so far as the writer knows, this volume is the first one to be published having for its subject the analysis and description of municipal franchises as they exist in actual operation in the cities of America. On account of the complexity of the subject, the great number of cities to be investigated and the numerous classes of municipal franchises, it has been found necessary to confine the discussion strictly to

the United States. Even with this limitation, the work will fill two volumes

Because of the pressing need that is believed to exist for the information contained in this work and for the further reason that it would be impracticable to issue so comprehensive a treatise at one time with all of its parts revised to date, it has been deemed best to issue Volume One a year in advance of the completion of Volume Two. In the volume now presented to the public, the author gives an introductory analysis of the modes of acquiring franchise rights, of the nature of franchises and of the various possible means of restricting public utility monopolies under private operation. Such operation is indefensible unless it is accompanied by the same benefits that would accrue to the public if these utilities were operated by an efficient instrumentality of government actuated solely by the desire to promote the public welfare.

After this introductory discussion, the several classes of municipal franchises are taken up in order. In most cases a brief sketch is given of the history and importance of the utility and the special ways in which it is related to the city. Then follows in every case a description of typical franchises in actual operation in different cities of the country. The utilities treated in this volume are electric light and power, the telephone, the telegraph, electrical signals, electrical conduits, water supply, sewerage, central heating, refrigeration, pneumatic tubes, oil pipe lines and artificial and natural gas. For the second volume are reserved the discussion of the various classes of transportation and terminal franchises and the general observations and conclusions in regard to the taxation and control of public utilities.

A list of authorities and an index, which the author hopes will prove especially serviceable in the use of this volume, have been prepared.

Great difficulty has been experienced in many cases in getting the necessary materials for the discussion of specific franchise grants now in force. There are many cities that have not collected and published their franchise ordinances, and it has been impossible for the author to have copies made of all the important franchises under such conditions. The author desires to acknowledge, however, the great courtesy

of municipal officials in a large number of cities, who have promptly furnished upon request the documents required for this study. Acknowledgment is also due to many personal friends who have aided in getting track of important franchises and in securing documents and information desired.

In the preparation of the second volume of this work, the author would appreciate suggestions and criticisms from the readers of the first volume.

DELOS F. WILCOX.

1426 Tribune Building,
New York City,
November 5, 1909.

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CHAPTER I.

HOW FRANCHISE RIGHTS ARE ACQUIRED.

1. Importance of franchise interests.—The franchises and public utility fixtures in the streets of New York City are assessed at a little less than $500,000,000 under the franchise tax law. The public service companies holding these franchises are capitalized at more than $1,000,000,000. In the United States as a whole, the street railways alone were in 1907 capitalized at $3,775,000,000, and their movements in that year were equivalent to the running of one car more than 1,600,000,000 miles. On the average, 20,400,000 paying passengers were carried by the street railways every day of the year. In the year 1900 the capital invested in the business of manufacturing gas was estimated at $567,000,-

000, and the total output of coal and water gas in 1907 was about 150 billion cubic feet. Electric light and power companies in 1907 had a total income of more than $175,000,000. Telephone companies, forming one of the most recent classes of important public service corporations, were capitalized in 1907 at $815,000,000; and the various telephone systems in the United States furnished facilities for more than eleven billion conversations during that year. Street railways, telephones, telegraphs, gas and electric light and power works, central heating plants, and privately owned water supply systems, involving stupendous investments and rendering necessary and almost limitless services to the people living in cities, and even in many cases to the inhabitants of the rural districts—all these undertakings are enabled to operate only by virtue of special franchises, granted by governmental authority for the use of the public streets.

2. Successive stages of public opinion in regard to utility franchises.—All new improvements have to overcome the prejudices of conservatism. Public utilities are no exception to this rule. Gas lighting was about thirty years in getting established. It was twenty years after the first horse car line was started in New York City before street railways really commenced to develop. The great expansion in telephones and electric lighting came a quarter of a century after these utilities had been introduced. With the complete demonstration of a new utility, however, old prejudices disappear and the public assumes an attitude of friendliness which takes on many different forms. The stages of eagerness passed through by the people are not exactly the same in any two communities or with regard to any two utilities. Different currents of public sentiment are moving at the same time, and the normal chronological succession of conscious public desires is frequently upset. But with these reservations, it may be said that there has been a logical development in the general attitude of public opinion toward franchises through seven stages of eagerness, from the heedless greed of the land speculator to the hopeful enthusiasm of the man who looks to municipal ownership for the millennium.

3. Franchise seekers welcomed as public benefactors.—The exeperience of American cities in franchise granting makes a dark, but instructive chapter in the political and

business history of the country. In the early days of the various public utilities, as soon as they have passed the experimental stage, persons asking for franchises are hailed with enthusiasm by the citizens, upon whom the pressure of urban conditions, unrelieved by modern conveniences, is becoming unbearable. The chief thought has been, as it is even now in the smaller and younger cities, to get the new improvements, at whatever cost. The passion to grow, and by growing to multiply business and enhance realty values, has been almost universal among cities and towns with any ambition at all. Public service corporations, in the early days of a city, are welcomed as public benefactors. The men who risk their capital in experimental services are thought of as exceptionally good citizens. A franchise is regarded, not as throwing a burden upon the municipality, but rather as offering a necessary inducement to the initiation of a much needed service. Street railways make a partial exception to this rule. The instinct of the city councils, even in the early days, often told them that these new burdens upon the public street should be kept carefully under municipal control. As a result, in certain early street railway franchises there may be found some of the most stringent conditions ever imposed upon public service companies. Such conditions marked the experimental stage of street railway building in some of the older cities, including New York, Philadelphia and Baltimore. But as soon as cities had become accustomed to having car tracks in their streets, the pressure for improved transportation became irresistible.

4. Profits suggest boodle.—As the prosperity of the companies increases and the most profitable franchises are being taken up, it begins to dawn upon the political parasites of the cities that a franchise is worth money. There are attracted to the council chambers unscrupulous men who look upon political power as a means of self-enrichment through blackmail and bribery. Then a new epoch in franchise granting is ushered in. Meritorious applications are referred to committees, where they sleep mysteriously. Other applications with apparently less in their favor, are recommended by committees and passed without debate. It is believed that in many cities the use of corruption funds by franchise

seekers becomes, at times, so habitual that bribery is regarded as almost a conventional offense. This condition holds during the long period between the time when the aldermen learn that franchises are valuable and the time when the people at large learn it.

5. Profits and corruption suggest compensation.—The stench of corruption and the gradual recognition that municipal franchises are monopolies, and in rapidly growing cities, monopolies of great value, result in a demand that, not the aldermen, but the taxpayers at large, should receive compensation for franchise grants. Accordingly, all over the United States a demand has arisen at one time or another that franchises should be sold to the highest bidder, either for a lump sum or for a percentage of gross receipts or for an annual rental, to the end that the companies occupying the public streets and getting rich off the necessities of the people, should be compelled to contribute a fund to lighten taxation. This idea received a great impetus in the last decade of the nineteenth century from the stories of municipal management in Great Britain and on the Continent. For several years it was generally believed in the United States that Glasgow was making enough money from its public service utilities to do away entirely with the necessity of taxation. Naturally the property owners and other direct taxpayers in American cities were attracted by this promising idea, and laws were passed in various states requiring that franchises be sold at auction to the highest bidder.

6. Lower rates demanded.—In American cities only a minority of the people are direct taxpayers, and after a while the workingmen, clerks and others who have to ride on the street cars and pay gas bills, begin to think that the most important reform in reference to these services is a reduction in rates. Appealing to the masses of the voters, therefore, a new class of city politicians arises, demanding lower street car fares and lower rates for gas, water, electric light and telephones, to the end that the consumers of these services may themselves get the benefit, and not be taxed either to make a few franchise holders enormously rich or to relieve the property owners from the burdens of government. The great struggle for lower rates is still going on, although there have already been large reductions, especially in the

prices of gas and electricity. In cities like Detroit, where different rates of fare have been charged on different street railway lines, it has been observed that, other things being equal, rents are higher in the vicinity of the cheaper lines. On the other hand, when the rates of fare or the prices of light are reduced, these reductions are often met by poorer service on the part of the companies. It is a common saying in Detroit, that on the three-cent lines at the rush hours, men have to hang onto the cars "by their eyebrows." And whenever in any city the price of gas is cut, large numbers of citizens complain that their light is poorer or that their bills are no smaller.

7. Better service demanded.—Seeing the benefits of lower street car fares going largely to the land owners and the benefits of lower rates in all public utilities being largely offset by poorer service, many people have abandoned the idea that compensation to the city and lower rates to the consumers are the most important things to be looked out for in franchise grants. "Better service" has come to be their slogan. In street railway operation their demand includes more rapid transit, less strap-hanging, better lighting, heating and ventilation of cars, etc. In the telephone service there has been an urgency to eliminate the exasperating indifference of the "hello-girl", with her parrot-like response of "busy!" and the equally exasperating confusion of competing systems. So far as gas is concerned, people have been crying for light enough to read by, pressure enough to cook by, and less gas to breathe. In the supplying of electricity, clear light and steady service have sometimes seemed more important than reduced rates. This demand for better service has found expression in many elaborate franchise provisions in places where public discontent has had any chance to modify franchises. It has also induced a great amount of regulation by law, ordinance and administrative order, independent of express franchise provisions.

8. Maintaining public control of the streets.—Growing out of these various attempts to regulate public service corporations by means of new conditions in franchise grants and otherwise, a settled conviction has been reached by a considerable number of citizens that the fundamental question in relation to franchises is, not compensation for the

city or reduced rates to the consumer,—or better service even,—but rather the plain matter-of-fact problem of maintaining the city's control over the streets. It has been seen that the public highways, which in theory are open to everyone on equal terms, have been in many cases so mortgaged to special franchise uses as to render the "equity" in the street easements remaining to the general public of indifferent value. Moreover, new conditions and the increasing complexity of urban life are constantly multiplying the demands for special privileges; and with the streets already loaded down with vested and inalienable rights, there has been insufficient room even for these new special uses. At this very time, June, 1909, there are in the crowded streets of Manhattan Island more than twenty miles of railroad tracks held there by perpetual franchises, although the operation of cars has been abandoned except for one or two trips a day, which are kept up, not for the purpose of transporting passengers, but to "carry" the franchises. In all underground construction in the streets of the older cities, a large proportion of the cost is due to the necessity of dodging various pipes and conduits already in the streets, or in some cases of actually rearranging them to make room for the new work. Such difficulties as these have led to the application of a new test in franchise grants, namely, this: Do they reserve to the city undiminished, its right to control the streets and to reapportion from time to time, as occasion may require, the spaces in, over and under the highways devoted to the various special uses for which provision must be made, and to readjust the relations between the franchise holders and the city, and among the franchise holders themselves? In order to meet this test, some indeterminate franchises have been granted, while in other grants, limited to definite periods, an attempt has been made to reserve to the municipality such complete authority for stringent regulation of the operation of these franchises as to insure adequate and humble service at reasonable rates and to prevent undue interference by the companies with the ordinary uses of the streets.

9. Demand for municipal ownership.—Even indeterminate franchises and almost unlimited powers of public regulation have sometimes seemed insufficient to protect, in practice, the rights of the public. And so, in recent years, a

powerful and wide-spread demand has arisen for municipal ownership of public utilities. Some, basing their argument on the apparent inability of the public authorities to control the highways so long as private companies are permitted to place and maintain as their own property permanent fixtures in the streets, have urged that street railway tracks, gas pipes, conduits, poles, wires, etc., should be constructed and owned by the city and be leased for operation to such private parties as would agree to furnish the service on the best terms. Others, foreseeing endless trouble between the city and the lessees of its property under the plan of municipal ownership and private operation, have gone the full length of declaring that public utilities are essentially public enterprises and should no more be farmed out to private contractors than the schools, the police and the fire service are. The advocates of municipal ownership and operation have persistently urged that only by following this policy could the people effectually eliminate the corruption, inefficiency, extortion, stock manipulation and other evils heretofore attaching in a greater or less degree to the granting, operation and ownership of public utility franchises. This view has had a marked effect in recent times upon the drafting of franchises and the framing of constitutions and charters. Nowadays it has become a common practice to reserve in franchise grants the right of the city to purchase the property of the grantee either at the expiration of the grant or, in some cases, at any time.

10. Attitude of franchise granting authorities.—During the whole period in the evolution of political thought relative to public utilities, there has been a continuous stream of franchise grants by a multiplicity of authorities, ranging from the state legislature to the highway commissioner of the rural township. These franchises are many of them perpetual, some of them indeterminate, and others for periods ranging from 10 to 999 years. As a rule, no thoroughly consistent policy has been followed in any city in regard to any single public utility. Much less, therefore, has there been any consistent policy in the country at large with reference to all public utilities. Aside from the various changes in the public attitude toward franchises, which I have already described, the most potent factor in this confusion of grants

has been the inefficiency of aldermen and legislators and their misconception of their functions. Uusually the alderman has looked upon himself as a lord of privileges, one to whom it has been given to grant or refuse the petitions of his constituents and others desiring to do business in the streets of his jurisdiction. Reflecting in his own political character the dearth of intelligent civic spirit among his constituents, and failing to grasp the necessity of a consistent public policy relative to street utilities and other problems of city life, he has remained ignorant and incapable of constructive civic statesmanship. Flattered by the attentions of the courtly agents of corporate wealth and proud of his petty sovereignty, he has been only too glad to grant what franchise seekers have asked. Or it may be that, responding to blind demands on the part of his constituents, he has insisted on cumbering up franchises with illogical and impractical restrictions whose only effect is to harass the companies and make for poorer service.

11. Franchises drafted by those who seek them.—An alderman seldom has had sufficient experience and legal training to prepare a franchise himself, and in the absence of some consistent theory of franchise policy, he has permitted the attorneys for public service corporations to draft the franchises they wanted and present them to him for his approval. The result has been that in every city public franchises are a mass of ordinances and contracts, most of which were drawn by different and sometimes conflicting private interests and with insufficient regard for the general interests of the public. It is likely to take an expert a long time, perhaps several months, to see all the things that are not in a franchise. How certain, then, it has been that an alderman who knew nothing but ward politics, would look at an attorney's franchise draft containing a few high-sounding legal phrases, and pronounce the document good. It is one of the tricks of the public service corporation lawyer, to draft a franchise for his client so that the powers of regulation of which the city could not be deprived in any case appear to be reserved to the public authorities in the most explicit terms, and this reservation is pointed out to prove how liberal to the city the company's proposition is. When public opinion has reached such a state that the corporation asking for a fran-

chise foresees the necessity of making concessions on points concerning which franchises are usually silent, the expert attorney introduces clauses making extraordinary reservations to the city, which further on in the franchise are so limited, checked and modified as to be in reality worthless from the public standpoint. A few weasel words judiciously distributed at strategic points, a few omissions easily overlooked in the *ensemble* of technical phrases, a few fair-sounding reservations upon which lawsuits in the Federal courts may be based, are likely to vitiate any franchise ordinance or contract drafted by lawyers who are paid to outwit the city.

12. Public authorities negotiate in the dark.—It is not necessary to accuse aldermen of extraordinary ignorance, of dishonesty, or even of a natural bent to favor corporate interests. These public officials have shared with the great majority of the business and professional men of the cities, profound incompetence for dealing with franchise questions from the standpoint of a consistent public policy. The corporations asking for franchises have had all the knowledge and experience of the business. Until very recently there has been practically no publicity of public service corporation accounts. Even in those cases in which the books of the companies have been open either to the city's financial officer or to other accountants for the purpose of determining the amount of gross receipts upon which the companies were required to pay a tax, no real light has been thrown upon the essentials of corporate finance. Access to the books showing investment and cost of service has been denied, or double sets of books and the intricacies of accounting have concealed the most essential facts. In the larger cities public service corporation managers have frequently been so deeply engaged in financial jugglery and the manipulation of the stock market that they themselves have been more or less in the dark as to the exact status of the business enterprises for which they were nominally responsible. And so, when franchise negotiations have been pending, the officers representing the city have had nothing to base their claims upon except the desires of the public, and any statistics voluntarily furnished by the other parties to the negotiations have been *ex parte* evidence, with no guaranty of proper book-keeping.

13. Aldermen have not had expert advice.—Even the facts that could be ascertained in regard to franchises and public service corporations, have usually been unknown to the municipal authorities. There has been no city official whose duty it was to collect data and become expert in franchise matters. Every new application for a franchise has found the city officials unprepared with the requisite knowledge. Each city has handled franchise questions blindly and with little or no regard to the experience of other cities. Indeed, a city's own experience has seldom been fully available for the guidance of the aldermen. Even now in many cities, including some of the greatest, there is no compilation of existing franchise rights. New York City had four million inhabitants before it established a bureau for the purpose of ascertaining the rights of the public service corporations already in the field and of being prepared to handle intelligently the applications of new companies for franchise rights. The confusion and ignorance regarding franchises are almost as great proportionally in the smaller cities.

14. Franchises granted directly by the legislature.—Confusion results from several conditions in addition to those already described. It is the theory of American law that the control of the streets rests in the state legislature unless it has been delegated by constitution or statute to the local authorities. On this account it often happened in the earlier days of franchise granting that the state legislatures passed special acts incorporating various companies and giving them specific rights in the streets of individual cities. These legislative grants were even less consistent and less intelligent than the grants made by the cities themselves under delegated authority. Sometimes conflicting grants were made by the state and local authorities, owing to a lack of clearness regarding their respective powers. In many cases franchises were granted without a time limit and were afterward held by the courts to be perpetual. In some cases the grants were made subject to the right of amendment or repeal by the legislature. But this right has frequently been lost by neglect or judicial "interpretation." Often the legislature has confirmed or modified local grants, or made exceptions in favor of particular companies. Sometimes local regulations

have been overruled by legislative action, and occasionally the legislature has tried to evade constitutional restrictions upon its power for the purpose of establishing the rights and privileges of favored companies.

15. Franchise rights under general laws.—In addition to special acts of the legislature, conferring rights upon individual companies, there have been passed in many states general laws regulating the use of the streets, which have been interpreted as being equivalent to general franchises. Usually such acts apply to telegraph and telephone companies or electric light companies. Occasionally they apply to gas and water companies. Even where these general laws do not constitute franchise rights unless the consent of the local authorities is also obtained, there is often a serious question as to whether the city, in giving its consent, is authorized to impose conditions upon the companies in addition to the conditions contained in the general statute. Sometimes all the authority which the locality has, is to designate the particular streets which may be used by the company exercising its franchise under the law of the state. In other cases, where the effect of the general law is somewhat doubtful, companies often prefer to seek or accept local franchises with various conditions attached, even though there is doubt as to whether such franchises are required. In any case, except where the general law is explicit, confusion and uncertainty arise as to the powers of the local authorities and the rights of the franchise companies. Public utility companies often operate for many years without having these doubtful points cleared up, so that at any particular time no one can be certain, even after careful investigation, of the exact status of their franchise rights.

16. Property owners' consents and private rights of way.—In many cases franchise grants have been made conditional upon the consent of persons owning property along the street. The law requiring property owners' consents differs in the different states in which this system is in force. In New York the consent of the owners of a majority in interest along each street to be traversed by the street railway line is required, or, in lieu of such consent, the company may apply to the courts for an order authorizing the construction of the road. There are provisions of the railroad law re-

quiring franchises to be used within a certain number of years after they have been obtained. Inasmuch, however, as the franchise is not complete until the consent of the property owners or of the court has been acquired, it is often a matter of doubt as to when the franchise granted by local authorities may be forfeited for non-user. In some cases the forfeiture clause of the law is self-executing; in other cases the franchises are not forfeited unless an action is brought by the proper public official to have them declared void. No particular method of securing the consents of property owners has been prescribed in New York. It has been required for some years, however, that copies of these consents should be filed in a public office. The condition of the public records and the difficulty of determining at a later period just what constituted the requisite consents for a particular street, surround many franchise grants now in use with considerable uncertainty. In cases where a company has built a part of its franchise route within the prescribed time, but has failed to build the rest, it may claim that it could not secure the requisite property owners' consents, and in any action to forfeit its franchise rights it is difficult for the public authorities to establish the facts relative to such consents. In Ohio the law, until recently, required a renewal of consents on any street where a new company proposed to operate in place of an existing company.

In many ways the consent law has added complexity and confusion to franchise granting and has rendered it difficult to determine at any particular time the precise status of franchise rights in the streets.

In the suburbs of large cities it frequently happens that street railways have been built upon private rights of way acquired from old turnpike companies or secured by special arrangement with the owners of surburban lands. When turnpike roads upon which street railways have already been laid, are converted into public highways, the status of the street railway companies is often in doubt, especially as regards their obligation to maintain their roadbed and keep the streets clean and in repair.

17. Franchise grants by administrative departments.—While it is true that the legislature, barring special constitutional restrictions, is the authority having control of all

public highways of the state, and while it is also true that where the power to grant franchises or to consent to their exercise is delegated to the local authorities, the city council is ordinarily held to be the municipal body with which this power rests, there are, nevertheless, numerous cases in which franchise rights are obtained in other ways. For parkways, boulevards and roads or streets running through parks, the park department is often the franchise granting authority. Over bridges this power is sometimes exercised by the administrative department having control of bridges. Sometimes terminal rights at public piers are under the control of the special authority having charge of a city's docks and wharves. In this way it happens that in the same city companies may be exercising franchises granted by different local authorities, whose records are kept in different places and either not published at all or published in separate reports. Furthermore, on various occasions, when old suburban roads are superseded by city streets, or when bridges are removed or other changes are made in the structures used by street railways, permits are issued by the administrative authority having control of the streets for locations not exactly covered by the franchises of a company. In these various ways franchise rights are obtained without the usual publicity and deliberation.

18. Franchises granted by suburban districts.—The confusion as to franchise periods and franchise conditions has been greatly increased by the rapid growth of cities and the consequent annexation of suburban districts which had already given franchises on different terms and to different companies. With the enlargement of the city, all of these grants by suburban communities become a part of the city's franchises. The records in the case of suburban towns and villages are often more imperfectly kept than in the case of the cities themselves. It has been the practice, especially of street railway companies in large cities, to seek and secure, often by doubtful means, long-term franchise grants from outlying towns and villages shortly before their annexation. In such cases the proceedings are frequently hurried, irregular and more or less secret. In the confusion attendant upon annexation and the supplanting of the old local authority by a central power which is occupied with bigger problems,

these grants, regarded as comparatively petty at the time, go unchallenged; or, if challenged, the issue is not carried through to a conclusion. In the meantime the company, knowing that "possession is nine points in the law," takes possession.

19. Influence of territorial expansion upon city franchises.—In addition to being plagued by franchises granted in suburban districts afterwards annexed, cities are sometimes troubled by the effect of territorial expansion upon the rights and obligations of the companies already operating in the city under city franchises. In the case of street railways, where grants are usually made for specific streets, the question, "Does the franchise follow the flag?" is not likely to arise. In the case of gas, water, telephone, and electric light companies, however, it is often contended with considerable plausibility that, having been granted the right to occupy, generally, the streets of the city, they are entitled to exercise similar rights in the streets of any new district that may be annexed to it. It is readily seen that this becomes a question of grave importance in the case of cities which are growing rapidly. In the natural course of events, if a franchise follows the growth of the city, it will often cover a very much larger territory after a few years than when it was first granted. Furthermore, if suburban franchises have been granted to other companies, there is likely to arise a conflict of "jurisdiction" as the city expands and the companies operating within its limits reach out to extend their operations to the newly acquired territory.

20. Franchise grants conditioned upon formal acceptance or other specific acts of the grantees.—It is quite usual to require the individual or company to which a franchise is granted to file a written acceptance of the terms and conditions of the grant within a prescribed period. In other cases the grantee is required to file a bond to protect the city from damages that may result from the exercise of the franchise. Frequently, also, the grantee is required to commence work on the proposed plant, or to complete construction, within a specified time, on penalty of the forfeiture of the franchise in case of failure. The records showing the fulfilment of the various conditions upon which franchises have been granted are in many cases imperfect or

entirely lacking. It is possible that a company may have been operating a public utility for many years under a franchise that, according to its terms, never went into effect at all, owing to the failure of the grantee to fulfil the conditions contained in the grant.

21. Franchises by "acquiescence."—When companies have long occupied the streets for the purpose of distributing gas or electricity or transporting passengers or supplying water, with the acquiescence of the municipal authorities, it is claimed that the companies have acquired rights of which they cannot be deprived arbitrarily, even though their franchises were not valid originally, or have expired long ago. Where the law requires an elaborate procedure in the granting of franchises, it is possible that after the grant has once been made and the conditions fixed, the public authorities charged with the duty of protecting the common interests may, by neglect, modify the terms of the franchise and virtually give to the company, either by collusion or by simple carelessness, privileges which could not have been granted originally. Accordingly, it is possible that the wording of the terms of an old franchise may not give an accurate idea of the actual privileges and obligations now attaching to its use. It may be necessary to know in detail the history of the relations of the franchise holder with the administrative authorities from the time when the franchise was first granted. It may be that the company has been relieved, by later ordinances, resolutions, or simple "understandings", from the strict fulfilment of some of its franchise obligations.

22. Exclusive franchises. — Although experience and reflection unite to show that public utilities are essentially monopolies and that competitive franchises have a strong tendency to be consolidated, the ancient antipathy of the people to monoply in any form, and the fear that a public utility legally established as a monopoly would be especially difficult to regulate, have resulted in the enactment of constitutional provisions in various states forbidding the grant of exclusive franchises. Where such a provision is not found in the constitution, it may be included in the laws of the state by which franchise granting authority is delegated to the localities, or it may be made a part of the municipal charter enacted by the people in those states in which home rule charters prevail.

Even in the absence of specific prohibitions, there is grave doubt as to the authority of public officials to grant exclusive privileges in the streets. Nevertheless, city councils have often attempted to make such grants. Sometimes a grant has been made exclusive for a limited period, after which it should be open to competitive grants. It may be that after a council has attempted to grant an exclusive franchise, a succeeding council, believing the exclusive feature of the grant to be invalid, has given similar privileges to other companies. The result has been confusion and uncertainty as to the status of both the old and the new companies.

23. Franchises that do not expire when their time is up. —If "a cat has nine lives" it may be safely said that a franchise has as many. Franchises seldom die on schedule time. When an exclusive grant is made for a certain number of years, at the expiration of the term it is sometimes claimed that while the exclusive feature of the grant is terminated, the grant itself goes on in perpetuity. Or if the right to lay down fixtures in the streets for a specific period is granted, the owner of the fixtures may claim that after the expiration of the period, although he is not entitled to lay down any additional fixtures, he at least has the right to maintain and operate those already laid without regard to the time limit. The theory is sometimes advanced that a limited term franchise, even where the company's corporate life is limited by its state charter, is only an agreement fixing the particular terms and conditions under which the public utility is to be supplied during the period mentioned, while thereafter the company or its successor, has the right to continue the business under a readjustment of terms, or in case of inability to agree with the city on a new contract, then subject to reasonable regulation and at fair rates. Indeed, unless a franchise specifically provides what shall be done with the fixtures in the streets at the expiration of the grant, the life of the franchise is likely to be prolonged by sheer force of circumstances. Public necessities will not permit the operation of the utility plant to cease and the courts, in their rôle of defenders of property, will be very slow to order a system of pipes, wires or tracks to be torn up and made into scrap.

24. Franchises granted to different companies. —Still

another source of confusion has been the granting of franchises, at different times and on different conditions, to different companies. Even where there is no claim that any franchise grant is exclusive and no doubt as to the validity of the various grants made by the public authorities, still there remains the confusion resulting from the use of the same streets by fixtures of the same class but belonging to different owners. Indeed, sometimes the ownership of particular fixtures is not clearly identified. This difficulty becomes greater where the rights granted to competing companies cannot be exercised independently by all the grantees. In such cases there is often a keen rivalry between companies to get their fixtures placed in the streets first, or at least to get possession of the strategic points first. This rivalry has often been the occasion of private wars, in which gangs of men representing different interests have battled in the streets as if they were the retainers of hostile feudal lords. Occasionally different companies having the right to use the same streets are required to build and maintain the tracks or other fixtures in common. Sometimes the company first making use of its franchise is required to permit other companies to use its fixtures on the payment of a rental. The status of a franchise right which the owner has exercised only through the use of another company's fixtures placed there under another franchise, may, after the lapse of time, fall into a doubtful condition, especially if the company whose fixtures have been in the street, should remove them.

25. Competing franchises absorbed by a single company.—The confusion increases where, through a process of merger and consolidation, the property and franchises of a large number of companies, originally competitors, are absorbed by a single operating company. In such a case it frequently happens that different gas pipes or electric light mains, located in the same streets and owned and operated by the same company, are held under different franchises. The consolidated company, as it renews its fixtures and extends its lines, may claim to operate under any one of the franchises secured by it from its constituent companies. It is an actual occurrence in many cities, that great public utility corporations, owning numerous franchises running for different periods and subject to different conditions, are oper-

ating as monopolies without the city's being able to ascertain under what particular franchise or franchises operation is being carried on. Naturally, the pipes, wires and tracks of the constituent companies are gradually replaced by new fixtures and become commingled so that the traces of the originally separate systems covered by the different franchises, are lost. The condition is in no wise simplified when the operating company, instead of absorbing the original companies by merger, simply leases their property and franchises for a fixed period or in perpetuity. Although New York City and Brooklyn have perhaps furnished the most notable examples of the utter confusion arising from the piling up of leases, mergers and consolidations in the street railway, electric lighting and gas industries, conditions have been almost as bad in practically every large American city.

26. Franchises expiring at different periods.—One of the most exasperating conditions which the large cities have had to face in negotiating new franchise settlements, has been the fact that franchises for the same utility held by the same company, expire at different times. This condition operates to the advantage of the company seeking a renewal of franchises, for the reason that the city cannot readily take over the system piecemeal or get any competing company to bid on that basis. The city cannot take away the unexpired portions of the existing company's franchises, and the system must be operated as a unit. The convenience of the public demands that operation shall be uninterrupted. Public service companies have not failed to see the advantage to be derived by them from franchises that are not coterminous. The companies, therefore, have a powerful motive to take advantage of the various circumstances already described, which lead to confusion in franchise grants. Indeed, if the concessions exacted by the companies in new franchise negotiations on the strength of the possession of unexpired fag ends of ancient grants could be catalogued, it would make a startling demonstration of the folly of cities in ever letting slip franchises for the same utility that do not expire at one time.

27. Franchises subject to different conditions.—Not only are franchises granted to different companies and to the same company for different periods, but they are granted on

different conditions. One company may be taxed on gross receipts alone, while another pays only the regular property tax. One street railway grant may require the sale of eight tickets for a quarter, while another line in the same city is permitted to charge a straight five cent fare. One company may have to pave between its tracks, while another on an adjoining street is exempt from paving obligations. With the changes in public sentiment and the conditions surrounding the operations of the public utilities,—yes, even with the varying whims or interests of the franchise committee of the board of aldermen—the conditions attached to franchise grants have varied from year to year and from company to company. Some of the electric light franchises granted by the towns and villages on Staten Island before their consolidation with New York City, required the company to furnish free lights to churches. Other electric franchises now in force in New York require the companies to pay the city one cent per lineal foot of streets torn up to lay their wires; but now that the wires are shoved into conduits under the streets from the manholes, what becomes of the city's one cent per foot? Some of the village franchises required that the price of light should be no higher than that in vogue in certain neighboring villages, without specifying the rates. Some franchises provide for one free public arc light for every fifty commercial arc lights supplied by the companies; and the companies now claim exemption from this requirement on the ground that they no longer supply arc lights, but only current. When a company is operating, through consolidation, under several franchises having different conditions, who is to tell how much it operates under each particular grant? In negotiations between the city and the company, the latter will claim the advantages of its most favorable franchise, and will probably win concessions on the strength of this claim.

28. Extensions sought by the companies.—It often happens that an operating street railway company is anxious to secure a particular extension, not because there is any strong demand for the immediate extension of its service, but because it desires to occupy all the strategical points for the purpose of rendering competition impossible. The most noteworthy cases of this kind occur where there is only one

entrance to a city available for interurban railroads coming from a particular direction, or where there are only certain limited sources of water power available for generating electrical energy to supply a city or district. In such cases, if the coveted franchises are granted, important concessions may be wrung from the company in regard to rates or service or surrender of existing rights. The city may not realize the strategical importance of the grant it is making and may afterwards discover that the concessions it has secured have been purchased at an exorbitant price. The franchise policy of the city may be handicapped for all time to come by what seemed at the time an unimportant grant.

29. Extensions demanded by the public.—It is an entirely different story, though the ultimate results may be much the same, when it is the public, not the company, that seeks the extension. Then the company holds off, says that the extension would not be profitable and refuses to make it. But real estate men whose land is awaiting development, or the people already living in the district adjacent to the desired extension, are clamoring. Then strong pressure is brought to bear on the aldermen to offer liberal terms with the new franchise, or even to give up some advantages the city enjoys under existing ones, in order to induce the company to extend its lines. This introduces another complication that tends to neutralize the effect of any intelligent thinking the aldermen may have done concerning the theory of franchise granting, as well as the effect of any facts they may have collected from the experience of other cities. Immediate local interests, with a real estate boom at stake, have a strong tendency to take the bit in their teeth and trample roughshod over the general interests of the larger community. So prudence and courage may be cast to the winds and franchises may be granted without any intelligent regard to past or future policies of the city.

30. Renewal of franchises before the expiration of existing grants.—When companies need to issue new bonds for reconstruction or extensions, they sometimes feel the need of new franchises, even though the ones they have do not expire for ten or fifteen years. Or it may be that without any necessity except the desire to secure themselves and their property as far ahead as possible, they begin maneuvering for renewals.

It is at such opportune times that the companies enter politics by the back door and endeavor secretly to elect friendly aldermen when the franchise question is not at issue before the people. Then the city wakes up some morning to find that its position has been rendered untenable by a flank movement. With the company asking for a new franchise to its own liking and the company's aldermen anxious to meet its desires, good public policy may be disregarded, and any campaign before the people on franchise questions may be avoided, by keeping the expiration of the grants continuously at a distant point in the future. Franchises, like legislative measures, receive no real consideration on their merits when the minds of the aldermen or legislators are on something else. When every point gained for the public interests is a *concession* on the part of the aldermen, these points are likely to be few and unimportant, or at least are likely to be checkmated by other points eagerly given to the company. When the lawyers on both sides of a case want it decided in the same way, they generally carry their point.

31. Franchises modified by judicial interpretation.— Every franchise, like every law, gets its final interpretation from the courts. If the city reserves the right to purchase the grantee's property, when as a matter of fact such a purchase would be beyond the legal powers of the city, the courts may declare this reservation void even though before the time arrived for exercising the option, the city should obtain the legal right to purchase. When the general laws of the state authorize companies of a certain class to use the streets after obtaining the consent of the local authorities, the courts may hold that the city has transcended its powers in imposing conditions at the time of giving consent. In cases where local grants have been made without due authority, the legislature may ratify the grants without ratifying the conditions. When the terms of a franchise run counter to the judges' ideas, the grant may be interpreted to mean what the courts think it should have meant. Reservations of the right to amend or repeal, may be nullified by the interpretation that such reservations are subject to limitations in the fundamental law and that, no matter what was agreed to in the granting or acceptance of the franchise, the right to repeal cannot be exercised arbitrarily when such action would result in the de-

struction of property rights. Franchises once exercised are seldom forfeited. Fixtures in the streets are nailed fast by the need for the service and the claims of investors. Franchise restrictions, when they have passed through the fire of judicial interpretation, are sometimes much less formidable than they appeared to be when first examined.

32. Consents to changes of motive power.—In connection with street railway franchises a special complication has arisen by reason of the several different kinds of motive power used at different periods and under different conditions for propelling cars. Horse power, cables and electricity have been the most common, though dummy steam engines and compressed air motors have not been unknown. Electricity may be used by the storage battery, the overhead trolley or the underground conduit system, and now the monorail system is being introduced. Early street railway franchises usually specified animal power or granted the right to use any power other than steam. When the changing from horse-power to cables, or from horse-power or cables to electricity, was at its height, the consents of railroad commissioners, city councils and property owners to these changes in motive power were almost equivalent to a general re-granting of franchises. A horse railroad in a street is quite different from an electric road with its enormous interurban and express cars. Sometimes new conditions were imposed on companies at the time these consents were given. Such franchise modifications may be hidden away in the records of state commissions or the archives of the companies and never be known to the general public. Conditions imposed in the original franchises may be modified by implication in these consents. At any rate the amount of the investment upon which the companies must earn a "reasonable" return before rates can be reduced by legislation, is greatly increased, and the price the city will have to pay in exercising any option to purchase, is increased in a similar proportion.

33. Trackage rights in lieu of franchises.—In New York, street railway companies having franchises and tracks in certain streets may give trackage rights to other companies which have no franchises in those particular streets. Consequently, a property owner who has consented to the construction of a street railway in front of his house may dis-

cover some day that two, or three, or half a dozen companies are operating cars past his door, instead of the one company to which a franchise was given. What seems like a material enlargement of franchise rights must in such cases be traced, not to the minutes of the board of aldermen or the board of estimate and apportionment, not to special acts of the legislature, not to the consents of property owners filed in the county clerk's office, nor in the records of the supreme court, but in the private vaults of the companies, where their operating agreements are kept. In such cases the companies enlarge their own franchise rights. This certainly does not diminish the confusion or lessen the difficulty of intelligent action in granting new franchises or regulating the operation of those already granted.

34. Constitutional and statutory limitations.—Every grant made by the legislature, either by special or by general act, is subject to the limitations, whatever they may be, imposed by the state constitution. The fundamental law of the state may forbid exclusive grants, or limit the period for which franchises may be granted, or require the referendum or the consent of the local authorities. In like manner the general laws of the state or the city's special charter may impose limitations upon the action of the city council in granting franchises. Some general restrictions of constitutional or statute law exist in almost every state of the Union. If these restrictions are not clear or if the local authorities seek to evade them, the result is that the status of a company's franchise rights is rendered uncertain and unsatisfactory. However, it is from the general requirements of constitution, statute or charter, that a little order is brought out of the chaos of special privileges granted by different authorities at different times and in different places. Another force tending toward a lessening of the chaos is found in the regulative control exercised by state commissions. But thus far these forces tending toward uniformity and well-defined franchise law and franchise policies have had comparatively little practical effect. Bold and powerful must the man be who grapples with the problem of a general settlement of franchise rights in a great city.

35. Purpose of this book.—The confusion resulting from the changing attitude of public opinion toward public util-

ities, from the variety of franchise granting authorities, from the lack of information on the part of public officials, from the absence of any consistent or comprehensive public policy relative to franchises in any particular city, and from the multiplicity of constitutional and statutory restrictions imposed by forty-six different commonwealths, has left franchise matters throughout the United States in a deplorable condition. The purpose of this book is to simplify, as far as possible, fundamental conceptions as to the nature and purpose of franchise grants; to state as clearly as possible the necessary conditions to be imposed in connection with various classes of franchises; to describe the best types of franchises actually in force in different cities of the country; and, finally, to discuss in a general way the principles involved in the regulation of public service utilities by means of taxation, rate regulation, public service commissions, the Referendum and municipal ownership. In volume one will be included the preliminary discussion of fundamental principles and illustrative chapters on electric light, telephone, telegraph, signal, electrical conduit, water, sewer, heating, refrigerating, pneumatic tube, pipe-line and gas franchises. For volume two will be reserved the chapters on the various classes of transportation franchises and the concluding discussion of taxation and control.

While not hesitating to express his own opinions on controversial matters, the author aims primarily to present an analysis of facts and conditions in such form as to be available for the use of officials having responsibility for granting franchises or enforcing franchise contracts, special students of public affairs, and citizens who, individually or through semi-public organizations, are endeavoring to bring intelligence to bear in a practical way upon the governmental problems of their home cities. While it is not the purpose of the author to cast aspersions upon the intelligence or sincerity of any class of public officials or of politicians in general, it is clear that this book can be useful only to those persons, either officials or private citizens, who are in good faith seeking for light upon this most complex problem and who approach the subject, not from the standpoint of personal or private interests, but from the standpoint of the public good.

CHAPTER II.

WHAT A FRANCHISE SIGNIFIES.

36. The network of railway tracks built into the streets.
37. The web of telephone wires connecting the buildings.
38. The system of water-pipes underground.
39. The high tension wires carrying light and power.
40. What a franchise is.
41. Franchises establish monopolies.
42. What gives monopoly its advantage.

36. The network of railway tracks built into the streets. —Some years ago, while investigating the street car service in Grand Rapids, a city of 100,000 population, the writer desired to observe the "headway" or schedule of operation of the various street car lines in the place. With this purpose in view, he took up his position near Campau Square, through which practically all the car lines pass. During the hours he stood there, watching the drama of the streets, he got a new idea of the meaning of a franchise. Behold these heavy cars ceaselessly swinging back and forth, across and around the city, on the network of steel ribbons there in the streets, driven by a ruthless force invisible save in occasional flashes of light and crackling, twinkling electric sparks! There they go right through the open street, in the choicest part of the thoroughfare, back and forth, back and forth, all day long, carrying half a city-full of people every twenty-four hours, clanging to everyone to clear the way and crushing those who fall across their path! There they go, harnessed to the streets by the roadbed and the iron rails beneath and the live wires overhead—and by the habit of travel! How did they get there? What gives them this right of way as against all other vehicles? It is a writing approved perhaps fifteen years ago by the aldermen who were then enjoying a license to rule the city for a couple of years. And what is it that will keep these iron tracks in the streets and these cars running past the expiration of the period fixed in the written franchise? It is the necessities of the public. The city cannot stop traveling

just because a day is set in that old document promulgated by aldermen who may long since have died or been sent to jail. It was the franchise that permitted the building of this wonderful mechanism into the frame-work of the city, but the lapse of the franchise will not take it out again.

47. The web of telephone wires connecting the buildings.—And how about these singing wires? If a powerful hand could reach down from the upper air and grasp into its fingers all the wires and cables entering the central telephone exchange and lift them up, how the city would awake! If the wires were strong enough to hold the buildings they are fastened to, the city itself would vanish into the sky. Every store, every factory, every public building, every office building, most of the fine residences and many of the humble ones, would dangle in the air together. We seldom think that thousands of stores and dwellings in every large city are literally tied together with telephone wires. The whole city is caught in a network of sound-conductors through which human voices are ceaselessly speaking to human ears. The telephone makes the people of a great city close neighbors to each other. Night and day, week-day and sabbath, winter and summer, rain and shine, urgent business and pleasant gossip are equally expedited by this marvellous uniter of the modern world. How came these houses to be tied together? How is it that on poles or in conduits these copper tendrils are carried through every street, cutting through the people's shade trees or breaking through the city's pavements, reaching out in all directions to make the city one? This, also, is the fruit of a franchise, a written word of some council or legislature granting to some particular man or set of men the right to occupy the streets with their fixtures to perform this public service. And when will the wires come down or the conduits be ripped out of the streets? Surely not on the date mentioned in some thirty-year-old writing. The people want the telephones to stay. They do not wish to stop talking to each other on a day certain, set down in the almanac a generation ago. No, the franchise brought the wires and the conduits, but the lapse of it cannot take them away again.

38. Tho system of water pipes underground.—If a man lays his hand upon a hydrant, he touches a system as big as the city. Underneath the streets there is a wilderness of iron

pipes through which water flows with shackled force, eager to put out fires, quench thirst, sprinkle the lawns, wash the clothes, flush the sewers, cleanse the streets, cook the food or bathe the body. If one could pull the system of water pipes up through the streets, it would be a sight to see. Down underground there the city's life currents flow, constantly pushed outward and upward by the weight in the reservoirs and the standpipes or by the ceaseless work of the great throbbing pumps. Woe to the city if its heart stops beating! Water! Water, indeed! The essence of life! How came these pipes here? Whose are they? If not the city's pipes, a franchise must have opened the streets for them. But whether the city's or not, they must stay. The lives and property of the people compel them to remain. They are indispensable to the city. If they are operated for private gain, look well to the terms of the franchise.

39. The high tension wires carrying light and power.— The city is ablaze at night. How strange and impenetrable is the darkness of the country, with only here and there a flickering ray from some farm-house window! How short the winter's day! How long and dark the winter's night! How meager the opportunity for social life and gaiety, if one must be at home when night falls. What makes the city light? It is those curious little pipes running under the streets, up to the lamp-posts, into the houses, coming from the big tall cylinders where the invisible, expansive gas is stored and from which it is squeezed under the whole city and into every building, ready to burst into flame and give light and heat or, in lieu of that, to spread death with its poisonous fumes. The turning of a stop-cock and the striking of a match turn the night into day in any city home. And, besides, there are those bundles of tubes running to manholes at the street corners. Through them the cables unrolled from a reel are run and spliced together to carry in safety underneath the ground the currents of lightning that mount the towers and course through the arc lamps and make loops in the incandescents, until the whole city, from street to lofty dome, is wreathed in the glory of electric light. Through these cables also run the currents of power that drive the engines of industry. Wonderful, indeed! Light, heat and power distributed throughout a city! These, too,

come by means of franchises and stay because they must. These pipes and wires and conduits may be removed only when the city's time has come and it needs light and power no more.

40. What a franchise is.—A special privilege granted to one man or one group of men, to the practical exclusion of others, to capitalize these common needs of a city-full of people, build these all-pervasive systems into the public thoroughfares and own and operate them for private profit—that is a franchise. No wonder that Tom L. Johnson, as mayor of a great city, said: "The best franchise is a dead one."[1] And no wonder, either, that the Committee on Public Policy of the National Electric Light Association, representing vested privileges, said: "All franchises should be perpetual."[2] As we have seen, a franchise reaches out its numberless tentacles and fastens onto the streets of the city with a grip that never relaxes. It enters the houses both from above and from beneath the surface of the earth and lays hold of their most vital machinery. In all the large cities of the United States most homes would be hardly habitable if all public utilities that are operated under franchises were cut off. This universal dependence upon franchise utilities may be good or it may be evil. My purpose here is not to show that it is the one or the other, but simply to call attention to the nature of the hold franchises have upon the common life in every city and to emphasize the potential importance of every franchise grant, no matter how insignificant it appears when it is being voted by the city council. Surely we cannot give private individuals practically an exclusive license to furnish us water, light, communication or transportation, without taking the utmost pains to pull the sting of the monopoly. A franchise, carrying, as it does, the power of intimate control over certain fundamental conditions of urban life, should not be granted hastily or carelessly or ignorantly. Above all, it should not

[1] In a public speech made in Detroit in the street railway franchise campaign of 1906, when Mayor Johnson went over from Cleveland to help fight the renewal franchise offered by the Detroit United Railway, Mr. Johnson may have said, "The only good franchise is a dead one," instead of "The best franchise is a dead one," as quoted in the text. The writer, who was present, has to depend on his memory for this quotation.

[2] Quoting from the report of the Sub-Committee on Taxation and Franchises, June 6, 1907, as follows: "The public is interested in those things, which we will endeavor to state in the order of their importance: (1) complete service from a geographical standpoint; (2) good service, and (3) low-priced service.

"To do this effectively requires that all franchises shall be perpetual."

be made the subject of corrupt or private bargaining. Few men are so depraved that they would commit the treason of betraying the people's trust in franchise negotiations if they clearly understood what a franchise is. And few constituencies are so sodden that they would tolerate such a betrayal if they were conscious of its full significance.

41. Franchises establish monopolies.—The United Railways and Electric Company of Baltimore is the successor, by consolidation, purchase and stock control, of seventy-five railroad and street railway companies. The Consolidated Gas Company of New York controls, or has succeeded to the rights of, about seventy gas and electric companies, while the Brooklyn Rapid Transit Company, a business corporation, includes in its historical chart the names of seventy-five companies. The complexity of the corporate history of public service companies operating in the great cities is, of course, more striking than that of the companies which serve small and medium-sized towns. Nevertheless, through the expansion of telephone and interurban railway systems, there are many cases of complex consolidation even outside of the important cities. Although it is unusual for a city to grant a franchise that is in terms exclusive—and, indeed, in many states exclusive franchise grants are expressly prohibited by the constitution—in practice the natural tendency toward monopoly everywhere throttles competition. In spite of the practically uniform experience of cities, the authorities still cling to competition, as if it were a fetich, for the regulation of public service utilities. Year after year and decade after decade, the same old story is repeated, of franchises granted to new street railway companies, gas companies, electric companies, telephone companies, which in a few years, by the inevitable logic of events, either absorb their predecessors or are absorbed by them.

"Public utilities, whether in public or in private hands, are best conducted under a system of legalized and regulated monopoly," says the report of the National Civic Federation Commission on Public Ownership and Operation.[1] The reasons for this statement are not far to seek. The available space in the streets for the use of permanent fixtures is strictly limited. Furthermore, the construction and maintenance of

[1] "Municipal and Private Operation of Public Utilities," Part I, volume I, p. 26

any particular outfit of fixtures entails upon the public great inconvenience and loss through the tearing up of the streets, the obstruction of traffic, and the resulting dangers and inconveniences. It is apparent, therefore, that from the standpoint of the public interest, every permanent fixture placed in the street, whether overhead, on the surface or under ground, should be used to its full capacity before other similar fixtures are constructed except such as may be built at convenient times in anticipation of future needs. From the standpoint of the companies supplying public services, the advantages of monopoly are obvious. Street railway tracks, gas and water pipes, electrical conduits, poles and wires, all require the investment of very large amounts of capital in providing the facilities for the distribution of the commodity or service. If one of these distributing systems is duplicated in the same streets or in the same territory, there is involved a duplication of investment which, with competitive rates, is ruinous to the enterprise. After capital has once been invested in unnecessary fixtures, the pressure of competing rates leads the owners of the different fixtures to combine in order to maintain prices and avoid insolvency. Such combination is rendered comparatively easy by the fact that the number of possible competitors is very closely circumscribed by the physical limitations of the streets. A consolidation having once been effected, the public suffers a further inconvenience as a result of the abortive effort at competition. Having combined their interests, the companies naturally crowd up rates or skimp the service in order to be able to pay interest and dividends upon the large amount of capital wastefully invested. From the standpoint of the companies, there is still another reason for consolidation. In most of the public utilities, aside from the matter of the duplication of fixtures in the streets, there are great economies in unified operation. These savings appear in the manufacture of gas and electricity, in the development of water supply, and in the practical operation of street railway lines. It is generally much cheaper to manufacture electrical energy at a great central station than at a number of small plants operated independently of each other. The street railway system of a great city can be operated at less cost if the same management controls all the lines and is thereby enabled to

establish through routes, transfer cars at convenient points and adopt means to lessen congestion of traffic. From the standpoint of the public, there is also an advantage in unified administration, especially in the case of street railways and telephones, because unity of operation means greatly improved service. As a result, therefore, of the natural advantages, both to the public and to the companies, resulting from consolidation, there is a universal and practically irresistible tendency toward monopoly. The conclusion reached by the Civic Federation Committee is in line with reason and experience. In each center of population every public utility should be controlled and operated as a monopoly.

The only difficulty with this conclusion is found in the fact that a private monopoly, unless under strict public control, is odious. The power to charge all the traffic will bear and to neglect improvements in service, without fear of losing control of a business, is the one temptation that has always proved irresistible to those in possession of monopolies. It is the experience or the fear of such oppression as the outgrowth of private monopoly, that keeps alive the dream of competition in franchise grants.

42. What gives monopoly its advantage.—In the preceding section we have seen that monopoly in the control of public utilities is almost inevitable; and, indeed, both from the standpoint of the public and from the standpoint of the business itself, is for many reasons highly desirable. The difference between public utilities and other lines of business, so far as the question of monopoly is concerned, is in the fact that in the case of public utilities the interests of the public unite with private interests in support of the monopoly principle. It is evident, however, that no monopoly of a necessary and universal service can be safely intrusted to private operation unless it is kept under strict public control. The sting of private monopoly lies in the fact that without competition to keep rates down to a basis of cost, including reasonable profits, the natural tendency of those in control of the business is to establish rates at the point where they will yield the maximum of profit, taking into consideration the amount of the business. It is here that the interests of the private owner and the interests of the public clash. In the case of water and gas, electric light and telephones, trans-

portation and practically all other public utilities, the general interest of the community demands that the use of the utility should be as wide-spread as possible. The reason for this is that public utilities furnish the natural compensations for the disadvantages of urban life. They enable a congested community to live and do business with a much greater degree of health and comfort than would be possible without them. Public policy requires, not only that utilities should be made as cheap as possible to the people living within the congested districts, but also that the area in which these utilities are available should be as widely extended as possible. Low rates and the extension of the service into sparsely settled suburban districts, both run counter to the monopoly interest of the private holder. Primarily, then, the attention of the city or the state, in the granting of a franchise or in the regulation of a public utility operated by private parties, should be directed to the problem of providing an adequate substitute for competition in bringing about extensions of the service and in keeping down its cost to the consumer.

Any public utility operated substantially as a monopoly under a franchise from the public authorities, gives its holder a special economic advantage over all other persons not similarly favored. But the furnishing of a service that is a universal necessity, or at least a common convenience in a city, when no other person is in a position to furnish a similar service, gives the franchise holder two special advantages. In the first place, he is assured of a steady and regularly increasing income, which generally takes the form of cash at the time the service is performed or very shortly after the commodity is supplied. In the second place, it enables him to fix a price for the service or commodity far above the actual cost and to maintain the price at a high point long after the cost of manufacturing the commodity or rendering the service has been reduced either by the increase in the demand or by improvements in the art. Where the franchise holder enjoys a special advantage, other people, including both would-be competitors and the general mass of consumers, are at a disadvantage. It is evident, therefore, that the first requisite of a good franchise, or of a good regulation under a franchise, is to pull the sting of the monopoly. Although there are several ways in which the holder of a

monopoly franchise may secure unusual profits or inflict unusual injuries upon the public, the first and most important source of his economic advantage is the unlimited profit which he may derive in the direct course of the business.

CHAPTER III.

MONOPOLY PROFITS, AND WAYS OF LIMITING THEM.

43. The short term franchise.—The source of greatest profit in a public utility monopoly is the increase in the demand for the service. Indeed, many public utilities operated under exclusive grants are not at all profitable during their first years. A public utility requires a heavy investment, and adequate returns can be secured only after the demand for the service has been developed and the territory in which the service is rendered has become fully populated. In the early days of franchise granting hardly anyone realized that a franchise might become extremely valuable. In 1837 the population of Chicago was 4,170. Seventy years later the population of this city had increased to 2,000,000. It is evident that a street railway, gas or water franchise, the operation of which would be utterly unprofitable in a city of 4,000 people, might become of immense value long before the city had grown to the present size of Chicago. One of the most effective ways, therefore, of limiting the profits of a franchise monopoly, is to limit the term for which the franchise is granted. While many franchises, especially in the eastern states, were originally granted without time limit and are therefore considered to be perpetual, in recent years there has been a strong tendency to limit franchises to periods

of from twenty to fifty years. Even in New Jersey, where, until very recently, great corporations have held practically undisputed sway, a commission appointed by the Governor in 1905 to investigate the subject of franchises, recommended, among other things, that "all privileges hereafter given should be limited and not exceed thirty-three years unless a majority vote of the legal voters should authorize longer grants not to exceed sixty-six years."[1] The time limit for franchises recommended by the National Municipal League in its "Municipal Program," published ten years ago, was twenty-one years. At about the same time, when the charter of Greater New York was framed, a provision was inserted to the effect that original grants should not be made for a longer period than twenty-five years; but the right to renewal for a further period of twenty-five years at a revaluation might be included in the grant. When the legislatures of Ohio and Illinois in the last decade of the nineteenth century passed street railway laws authorizing the local authorities to grant franchises for periods of fifty years, there was a tremendous outcry and public sentiment compelled the repeal of this legislation. In Illinois the maximum period for which a franchise may be granted was fixed at twenty years. In Ohio, after Cincinnati had granted a fifty-year franchise, the maximum period was limited to twenty-five years. In the new constitution of Michigan the limit is fixed at thirty years.

It is apparent that if monopoly profits are to be curtailed by the limitation of the period for which the franchise is granted, this period should be shortest in the case of well-developed utilities and in large cities where population is dense and business is profitable. There are some disadvantages, however, in the short-term franchise as a means of curtailing profits. Unless provision is made for taking the plant and fixtures off the hands of the franchise holder at the expiration of the grant, it will be necessary for him, in the conduct of his business, to charge prices that will enable him to get back his capital out of the earnings. This is true for the reason that public utility fixtures might as well go to the scrap-heap if they have to be removed from the streets. In-

[1] See Report of the "Commissioners to Investigate the whole Subject of Franchises granted by Municipalities to Public Utility Corporations," published by the State of New Jersey, 1906.

deed, in many cases the "remains" would not be worth the cost of removing them and restoring the streets to their original condition. Another disadvantage of short-term franchises without provision for purchase of the plant and fixtures, is that the franchise holder will necessarily confine his operations to the most congested districts, leaving the sparsely settled portions of the city undeveloped. It is therefore desirable, from the standpoint of public policy, that in case franchises are to be granted for short terms, provision should be made for the purchase, at the expiration of the franchise period, of the property at its actual value, either by the city or by another company to which a franchise may be granted.

44. The indeterminate franchise.—Recognizing that a public utility is a permanent enterprise bound to develop and expand with the growth of the community, some authorities are opposed on principle to the granting of franchises for definitely limited periods. It is said that no city can foresee, even for the comparatively short period of twenty years, the vicissitudes of any particular utility. In the case of street railways changing conditions may require the removal of the tracks from certain streets, a change in motive power, the relaying of the rails and roadbed, and other radical alterations involving large additions to permanent investments. In other utilities corresponding changes may be required. It is urged that for the proper development of the utility and for the continuous control of the streets by the public authorities an indeterminate or revocable franchise is required. Massachusetts is the home of the indeterminate franchise. In that state street railway "locations" may be revoked by the local authorities at any time after the expiration of one year from the date of a franchise; but the revocation, unless accepted by the franchise holder, is subject to approval by the State Board of Railroad Commissioners. In legislating for the District of Columbia, Porto Rico and the Philippine Islands, the United States Congress has followed the example of Massachusetts and has established the indeterminate franchise. The new street railway ordinances of Chicago also reserve to the city the right to terminate them at any time by the purchase of the property. Wisconsin, in its public utilities law passed in 1907, adopted the principle

of the indeterminate franchise for all future grants, and also authorized companies operating under limited-term franchises to surrender them and accept indeterminate permits. The new constitution of Michigan recognizes the indeterminate franchise by providing that any franchise not revocable at will shall require the affirmative vote of sixty per cent of the electors of a city before it becomes binding. There are numerous instances in various parts of the country where franchises granted by special acts of the legislature or by ordinance have reserved to the legislative body the right to amend, alter or repeal them. This reservation has not, however, been of much practical use. The specific way in which the indeterminate franchise tends to limit profits, is by putting the franchise holder on his good behavior and encouraging him to grant reasonable rates and give excellent service in order to keep on good terms with the public and avoid losing his franchise altogether. It is apparent, however, that the indeterminate franchise might under some conditions result in over-conservatism in the investment of capital. In other cases, if the public authorities should become capricious, the indeterminate franchise might bring about unmerited loss to investors. In order that sufficient capital to meet all reasonable requirements of liberal extensions and improved service may be had, and that rates may be kept close to the line of necessary cost of service, there should be attached to the indeterminate franchise a provision that in case the grant is revoked, except possibly for special locations where changing conditions require the removal of fixtures, the city should pay to the franchise holder the full value of his operating plant.[1]

[1] On the general subject of indeterminate franchises, see report of the Massachusetts Special Committee on the "Relations between Cities and Towns and Street Railways," Charles Francis Adams, chairman, published in 1898; "The Question of Franchises," by Geo. C. Sikes, published in the Atlantic Monthly for March, 1903, and afterward reprinted as a separate pamphlet; and the "Report on the Indeterminate Franchise for Public Utilities" submitted by Commissioner Milo R. Maltbie to the Public Service Commission for the First District, New York, Dec. 29, 1908. It is fair to say that there is considerable sentiment in Massachusetts in favor of replacing the indeterminate franchise by definite term grants. This sentiment has been voiced in the legislature by Dr. Julius Garst, of Worcester, whose bill to effect the change was defeated in the lower house in 1904 by the rather close vote of 76 to 112. The opposition to the Massachusetts indeterminate franchise is based upon the fact that grants in that state have proved to be practically perpetual. "I consider the indeterminate franchise law of this state impracticable and delusive," writes Dr. Garst under date of Jan. 14, 1909. "To revoke a franchise suddenly without giving twenty or more years for the stockholders to recover on their investments is a proposition that I would not approve and I think that no legislature would do so, and if it were to do so it is probable that the supreme court would rule that the market price must be paid for the capital stock."

45. The sale of franchises.—One of the most obvious ways of preventing franchise holders from enjoying the fruits of monopoly, is to sell the franchise to the highest bidder. Under the laws of California, when a franchise is to be granted, after its terms have been fixed by the local authorities, it is advertised for a certain period and sold to the company offering most for it. The plan of selling street railway franchises at auction was in use at one time in New York City. When franchises are sold, payment is taken, sometimes in a lump sum, sometimes in a fixed annual payment and sometimes in a percentage of gross receipts. Occasionally a franchise is offered to the company that will give the lowest rates and the best service. It is obvious that the policy of selling a franchise for a lump sum payable when the grant is made, is not consistent with good municipal policy. The franchise is a continuous burden upon the street, and any payment which the city receives for it should at least be distributed over the entire period of the life of the franchise in order to offset this burden. To sell rights in the streets for twenty or fifty years or for an unlimited period and apply the total price of these rights to the reduction of taxation or the payment of current expenses in the year when they are sold, is substantially equivalent to the issuing of bonds for maintenance purposes or to the sale of real estate and other permanent investments for the same purposes. A further objection to the sale of franchises for a lump sum, is that the city is almost certain not to get the full value of the franchise. No one can accurately foresee how much a franchise will be worth during the course of a generation. Its future value will depend upon the growth of the city, the development of the particular utility for which the franchise is to be used, and numerous other conditions. If the successful bidder for a franchise is asked to determine and pay to the city in advance the amount that he is willing to give for the franchise, he must, as a matter of necessity, figure a very liberal discount on the future value of the grant. He must protect himself against risks of loss, and of course he must deduct from the future value of the franchise at least the interest on his money from the date of payment until the full value of the franchise is realized in use. Furthermore, the difficulty which the franchise holder will have in securing

capital to invest at the beginning of his enterprise in the purchase of intangible rights years in advance of the time when the practical value of these rights will be fully developed, will also tend to reduce very greatly the amount of his bid. If the payment for a franchise takes the form of a definite sum payable year after year throughout the life of the grant, some of the difficulties mentioned are obviated. There remains, however, this difficulty, that the bidder cannot foresee with even approximate certainty what the value of the franchise will come to be before its expiration; and accordingly, to be on the safe side, he must bid low. A much more satisfactory method of giving compensation for franchise rights, is the payment of a percentage of gross receipts from the business transacted under the franchise. This percentage may remain the same year after year throughout the period of the grant, or it may be arranged so as to increase at periodic intervals. If the percentage of gross receipts is the same year after year, approximate justice will be attained inasmuch as the compensation for the franchise right will increase in the same proportion as the gross receipts from the business. If, however, the business is likely to be unprofitable for the first few years and very profitable thereafter, a much better arrangement will be to require the payment of a small percentage during the first few years and a larger one later. The New York law now requires street railways to pay a minimum of three per cent of their gross receipts for the first five years and five per cent thereafter.

It is sometimes contended that compensation for franchise rights ought in justice to be measured according to the amount of net receipts or profits rather than according to the amount of gross receipts. A practical objection, however, to this plan is that it is extremely difficult for the public authorities to ascertain exactly what net receipts are, and it is extremely easy for an operating company to juggle its accounts or manipulate its expenses so as to keep the apparent net receipts at a low figure. The division of net profits with the city is not a workable scheme unless the city has very far-reaching control over the company's accounts and expenditures.

A serious difficulty in the way of the entire plan of selling franchises to the highest bidder is encountered in the case of

extensions. If the proposed extension of a railway line, for example, is of such a nature that it must be operated in connection with an existing railway, there will be no competition and consequently the city is not likely to receive a reasonable compensation. If, on the other hand, there are competing railway systems, in connection with which the extension might be used, there is likely to be excessive competition. One company, in order to keep its rival out of a particular street or to hold for itself a strategic point in the future development of the business, is likely to offer so much for the franchise that it will be unable to pay the price. It has sometimes happened in New York City that rival companies, bidding for an extension, have offered to pay to the city from thirty-five per cent to one hundred per cent of the gross receipts. Indeed, some years ago an important new franchise for many streets in what is now the Borough of The Bronx, was sold at public auction, and the highest bidder [1] guaranteed to pay to the city for the first five years 97 per cent of the gross receipts in addition to the statutory minimum of 3 per cent, and for the remainder of the period after the expiration of the five years, 95 per cent in addition to the statutory minimum of 5 per cent. Of course it is clear that franchises granted on such conditions will never be used.

Our discussion has already led us to the conclusion that in any community each public utility should be operated as a monopoly. If this condition prevails, it is apparent that the plan of limiting profits by the sale of the franchise will be entirely ineffectual, except in the case of the original establishment of the utility or the renewal of the franchise for the entire city. In the case of extensions the city would receive no compensation unless for certain important lines very much desired by the company for the purpose of strengthening its position or developing an unusually profitable field. In the great majority of cases, where the demand for extensions comes first from the public, the city would get no compensation at all and, indeed, might be required to compromise on payments due under the main grant in order to induce the company to undertake the desired extensions. For these reasons the plan of limiting profits by the sale of the franchise is generally unsatisfactory.

[1] The People's Traction Company.

46. Fixing rates in the franchise grant.—Even more important in some cases than limiting the period of a franchise or making it revocable, is the fixing of a maximum rate above which the charges for the service may not go while the franchise is in use. It has been customary in practically all street railway franchises to fix the maximum fare at five cents for each ride. This maximum has been varied in a number of cases either by requiring a more or less complete system of free transfers or by requiring the sale of tickets at a lower rate than five cents, or by fixing special rates at certain hours or for certain classes of patrons. In recent years there has also been a strong tendency to fix a maximum price for gas, electricity and telephone service in franchise grants. Much more generally, however, than in the case of street railways, these utilities have been subject to rate regulation by state legislation or local ordinance. Unquestionably, the fixing of a maximum rate may limit profits very considerably. This is especially true in connection with a public utility such as water, which is an absolute necessity to every one. While it is true that in many cities the use of wells and the sale of water in bottles curtail to a limited extent the monopoly of the water works, in other cities there is not left even this slight leeway for competition. With the growth of population and the enlargement of city areas, street railway transportation, telephones, gas and electric light, become almost as necessary as water. Wherever under the prevailing conditions a particular utility is a necessity, the company having a monopoly of the supply would undoubtedly find it profitable to fix a high price if it were permitted to do so. It is in these cases that a maximum limit established in the franchise grant is of most use. It cannot be said, however, that a specific limit can be fixed in advance for a long period of years, which does not give great possible advantages to the franchise holder or else subject him to the probability of heavy loss. If the cost of service is greatly reduced, then the fixed maximum operates to his enormous advantage. If, on the other hand, the value of money decreases or the necessary expenses of the service are largely increased, he suffers disadvantage which may mean financial ruin. When these possibilities are taken into consideration, the almost inevitable outcome is that the maximum rate fixed in the franchise and

accepted by the grantee is a rate that will certainly be high enough and may be exorbitant. In public utilities where lower rates have a marked effect upon stimulating consumption, the franchise holder may find it to his advantage voluntarily to reduce the rates below the maximum fixed in the grant. It is clear that while the establishment of a maximum rate in the franchise itself may be a valuable safeguard in protecting the public from extortion, it is not in itself a sufficient guaranty that rates will be reasonable under conditions as they develop from time to time. Accordingly, provision should be made for periodic readjustments of rates, or the power of rate supervision should be reserved. There is, to be sure, an advantage in establishing in the franchise itself as low maximum rates as possible, provided that such rates will surely permit, during the entire period of the franchise grant, the adequate and satisfactory service which, after all, is the first requisite in the management of a public utility.

47. **The regulation of rates.**—In recognition of the futility of attempting to fix reasonable rates in the franchise itself for the whole period to be covered by it, there has been a marked tendency of late years to reserve to the city the right to regulate rates from time to time, or, without any such specific reservation, to depend upon the general powers of the legislature to exercise this function or to delegate it to the local authorities. Of course, rates cannot be diminished by legislation in cases where they have been fixed by a definite and valid contract. The right to regulate rates is more often exercised in connection with gas and electric companies whose franchises are silent on the rate question. In New York this power was formerly exercised by the state legislature, but has recently been delegated to the Public Service Commissions. In California the right to regulate the rates of water and light companies is reserved by constitutional provision to the local authorities. In all cases where the legislative body attempts to regulate charges, it is bound to make them fair and reasonable. The provision of the Fourteenth Amendment to the United States Constitution forbidding any state to deprive a citizen of life, liberty or property "without due process of law" throws the whole question of rate regulation into the Federal courts. While

no exact agreement has been reached as to what may be termed a "reasonable" rate, there is a disposition on the part of the courts to hold any legislative rate confiscatory unless it is sufficient to yield to the company a net profit of at least six per cent on its investment.

That brings us to the nub of the problem, namely, what is the investment? The celebrated 80-cent gas case recently decided by the United States Supreme Court, involved questions of fundamental importance in connection with rate regulation.[1] The Consolidated Gas Company of New York claimed that the present value of its real estate and its franchises should be included in the investment upon which it was entitled to a reasonable return. The court held that the value of the company's franchises as fixed at the time of its formation as a consolidation of the seven constituent companies in 1884 should not now be questioned by the state, inasmuch as that consolidation was effected and stock covering the franchises was issued in accordance with express provisions of law. The Supreme Court refused, however, to allow for any alleged increase in the company's franchise values.

"This corporation," said the court, "is one of that class which is subject to regulation by the Legislature in the matter of rates, provided they are not made so low as to be confiscatory. The franchises granted by the various companies and held by complainant (the Consolidated Gas Co.) consisted in the right to open the streets of the city and lay down mains and use them to supply gas, subject to the legislative right to so regulate the price for the gas as to permit not more than a fair return (regard being had to the risk of the business) upon the reasonable value of the property at the time it is being used for the public."

The lower court had estimated the increase in the value of the franchises since 1884 as being in the same proportion as the increase in the value of the company's tangible property. After calling attention to the fact that several of the constituent companies had paid annual dividends averaging 16 per cent on their capital stock through the entire period from their incorporation to the date of consolidation, the Supreme Court said:

"Real estate may have increased in value very largely, as also the personal property, without any necessary increase in the value of the franchise. Its past value was founded upon the opportunity of obtain-

[1] January 4, 1909. This case involved an appeal by the Public Service Commission, the City of New York and the Attorney General from a decision of the United States Circuit Court, declaring the 80-cent gas law unconstitutional.

ing these enormous and excessive returns upon the property without legislative interference with the price for the supply of gas, but that immunity for the future was, of course, uncertain and the moment it ceased and the Legislature reduced the earnings to a reasonable sum the great value of the franchise would be at once and unfavorably affected, but how much so it is not possible for us now to see. The value would most certainly not increase."

Nevertheless the court held that the $7,781,000 franchise valuation fixed in 1884, should, on the peculiar facts of this case, and not as forming a precedent for the valuation of franchises generally, be included as part of the company's property upon which its right to earn a reasonable profit should not be questioned by the state. In another paragraph the court said: "It cannot be disputed that franchises of this nature are property and cannot be taken or used by others without compensation. The important question is always one of value." A careful examination of the court's reasoning in this case shows an element of inconclusiveness which, it was hoped, would be absent from this decision. The court says that the legislature had the right to reduce rates to a reasonable sum and so diminish the value of the franchise, but that in this particular case although it may have diminished the value of the franchise by reducing the rates, still it should not so reduce the rates as to prevent the company from earning a reasonable profit on the value of the franchise before it was reduced. Moreover, this case is not to be taken as a precedent, but in any case such franchises could not be taken away without compensation. The fundamental question as to whether or not the legislature has authority by regulating rates to wipe out the value of a franchise as a special privilege was answered both ways, and left open for the decision of the court of "last guess" at some future time.

The issue is so momentous that we need hardly be surprised at the court's hesitation to take sides once for all. It is, of course, obvious that a franchise sold by the city for a lump sum represents on the books of its owner a legitimate capital investment to that amount. But when a franchise has been received from the city as a gift, or is being paid for by an annual rental or gross receipts tax, it is anomalous that the rate-regulating body should be required to take into account its value in estimating the capital investment upon which a reasonable return must be allowed. The value of the

franchise is itself determined primarily by the rates that may be charged. If a rate reduction that would impair the value of the franchise is confiscation, then the whole scheme of rate regulation goes a-glimmering, and the franchise holder is entitled, subject to his contractual limitations as expressed in the franchise itself, to charge whatever rate will make his franchise most valuable. This means that the rates will gravitate toward the point at which they will yield the maximum return, without reference to public policy or the rights of the consumer. If, on the other hand, the Supreme Court should ultimately decide that the value of franchises need not be included in a valuation of investments upon which a reasonable profit must be allowed, the way will then be opened for the practically complete resumption, by the public, of the unearned increment in franchise values through the regulation of rates. The regulation of rates is, however, a difficult and expensive process, especially for city councils, which are not usually blessed with expert assistance and the accumulation of knowledge and experience requisite for just rate making.

With reference to the inclusion of the unearned increment of real estate values in the estimate of property upon which the rate-regulating authority must allow a fair profit, the decision in the 80-cent gas case was more favorable to the company than on the question of franchise values. The court held "that the value of the property is to be determined as of the time when the inquiry is made concerning the rates," and added:

> "If the property which legally enters into the consideration of the question of rates has increased in value since it was acquired, the company is entitled to the benefit of such increase. This is, at any rate, the general rule. We do not say there may not possibly be an exception to it, where the property may have increased so enormously in value as to render a rate permitting a reasonable return upon such increased value unjust to the public."

This portion of the decision is not especially important so far as municipal utilities are concerned, except in great cities, where companies occupying land of extreme value may thereby secure the right to maintain high rates. If a company builds its power house or its gas works upon land whose value is later immensely enhanced by the increase of

population and business, and if the company is entitled to count this unearned increment of land value as a part of its capital investment instead of being required to treat it as undivided surplus, there will be no inducement for it to move its plant to a more suitable location where land is cheaper.

Aside from all questions of law as to the items that should be included in a valuation of a company's outfit, it is clear that the first requisite for the regulation of rates is such a valuation. In the absence of publicity of accounts, there has been almost no public knowledge of the cost of utility plants. It is very expensive and extremely difficult, even with the assistance of experts, to make an accurate valuation of a street railway system or a gas plant without having the books thrown open to the last detail. Even then the records are likely to be of little assistance because of the stock watering and the juggling of accounts in the past. Without complete and accurate knowledge of the facts, any attempt to fix rates is but a stab in the dark, and the city or the state is more than likely to be led a merry chase for several years through the Federal courts, only to find at last that the rate fixed was a little too low and consequently void. Meanwhile, and until further action is taken and sustained, the consumers pay the original rate although, even by the terms of the courts' decisions, that rate may be much higher than is necessary or just. Every franchise or law reserving to the public authorities the right to regulate rates should first of all provide for publicity of accounts. In addition, it should either fix an agreed-upon valuation of the property or provide the definite means for making a scientific appraisal whenever needed. A city council that hopes to limit the profits of a monopoly by the exercise of its statutory or reserved right to regulate rates, without the help of knowledge, is leaning upon a broken reed.

48. The imposition of special taxes.—If in the fixing of rates, franchise values have to be taken into consideration along with actual investments, it is still possible to get at the monopoly to a certain extent through the power of taxation. These profits have generally been trimmed a little in the case of street railways by the exaction of car license fees. This may be provided for in the franchise or, if not, may be fixed

by ordinance. The same is true of the pole-tax sometimes imposed upon telephone, telegraph and electric light companies. The theory of these exactions is that the cars and the poles place a special burden on the streets and may therefore be subjected to a special tax or license fee. In the District of Columbia Congress has imposed upon street railway, gas, electric light and telephone companies a special tax on gross receipts in lieu of the ordinary tax on personal property, but they are also subject to ordinary taxes on real estate.

A gross receipts tax should be distinguished from a percentage of gross receipts paid by a company in accordance with the terms of its franchise and as compensation for it. In the absence of special constitutional obstacles, the tax may be levied by the legislature, or by the city council under legislative authority without regard to the terms of the franchise. The distinction referred to here is important, inasmuch as many people seem to think that public service corporations, after being compelled to pay for their franchises, should be relieved of the burden of paying taxes on them. The fallacy of this position is seen at once, if we suppose that the city is selling, not a franchise, but a piece of real estate. Certainly no man would expect to go scot free of taxation just because he had bought a piece of property and paid for it. The confusion arises from the memory of the past when franchises were given away and were not recognized as property subject to taxation. The injustice of the old policy was a double one. Instead of relieving a corporation from taxation because it had paid for its property, the public relieved it from taxation because it had got its property for nothing. When the public "puts the screws on" and undertakes to cut away entirely the franchise holder's special privilege, there is naturally a considerable outcry and something of a panic.

Some states and cities impose this specific gross receipts tax as the simplest and easiest tax to levy and collect. This plan avoids the necessity of an expert valuation of intangible property such as franchises, patent rights, good will, etc. On the other hand some states and cities treat public service enterprises like other forms of property. The real estate, machinery, equipment, etc., i. e., all the tangible property, are assessed for taxation in the usual way. But in addition to

this an effort is made to arrive at the true value of the special privileges resulting from the possession of a practically exclusive franchise to engage in the street railway, gas, or other utility business. Of course, if franchises have never been taxed, their value will be greatly reduced by the imposition of taxation at regular rates. If the average rate of return on untaxed capital is six per cent, then a tax of two per cent will diminish the value of the capital by approximately one-third. It is on this account that special-franchise taxes are an important means of limiting the profits of franchise monopolies. But even this remedy for past injustice, drastic as it may appear in some cases, is after all nothing but the application of the ordinary principles of equal taxation, and does not affect the monopoly privilege to render a common service at rates unregulated by competition. Unless the specific taxes imposed upon public utilities are exceptionally burdensome, or the valuation of the franchise includes other elements than monopoly privilege, profits will not be limited. The only way actually to resume franchise values through taxation without resorting to discrimination is to apply the principles of the single tax and gradually shift upon land and land rights, which include franchises, the whole burden of supporting the government. In this way franchise values for purposes of transfer or profit could be made to disappear entirely, but only in the same proportion that land values generally disappeared. In other words, the imposition of special taxes upon public utilities, whether in the form of car license fees, pole taxes, a gross receipts tax or a franchise tax, unless these taxes are unjustly and especially oppressive, will not pull the sting of the monopoly.

For the sake of safety and to avoid possible misunderstanding and litigation, a franchise may well contain specific provisions fixing car license fees, pole taxes and other special contributions so as to cover the special expenses imposed upon the city by the presence of these obstructions in the streets. In regard to taxation proper the only thing to be said in the franchise is that all the property and rights of the franchise holder shall be subject to taxation or exemption from it under the general laws. This will not deprive the franchise holder of his special privileges, but will keep him from claiming what may be termed the special special-privilege of having a

special privilege without having to pay taxes on its value, whatever that may be under the conditions subject to which it is exercised.

49. Special obligations imposed in franchise grants.—It is not unusual in franchise grants to require telephone companies to furnish a certain amount of service to the city free of charge. Electric light companies are sometimes required to furnish free lights, but more often to provide room on their poles or in their conduits for the city's police signal and fire alarm wires. It is sometimes stipulated that street railway companies shall carry policemen, firemen or other public employees free of charge. When the franchise holder is not obliged to render a considerable amount of service free, provision may be made for exceptionally low rates to the city.

The most important special obligations imposed upon public utility companies are the obligations of street railway companies to pave and repair the surface of the streets between and about their rails, to clear and sprinkle the streets and to remove snow and ice from the tracks in winter. The importance of such obligations is well illustrated in the case of Philadelphia where under the new street railway agreement, in effect July 1, 1907, the city commuted the old franchise obligations of the companies with reference to paving, snow removal and car license fees for a cash payment of $500,000 a year for the first ten years, the annual payment to be increased by $50,000 for each succeeding ten-year period until 1957. The city has been compelled to appropriate the entire sum of $500,000 a year to meet the paving obligations of which the companies were relieved by this settlement.[1] In Philadelphia, however, the paving obligation imposed on the companies by the old franchises was an unusual one in that it required them to maintain the street from curb to curb. In its usual form this obligation extends only to that portion of the street between the rails and tracks and one foot, eighteen inches or two feet on either side.

Ordinarily the special obligations imposed upon a company by the terms of its franchise represent concessions obtained by the city authorities in a more or less unintelligent dicker. The city wants something for the franchise and the company

[1] See "*Philadelphia's Relation to Rapid Transit Company*," by Edwin O. Lewis, in Annals of the American Academy of Political and Social Science, May, 1908, p. 76.

offers to assume a number of duties each one comparatively trivial in itself, but possibly much desired. The city generally has no clear idea as to what the paving obligation amounts to, how much it will cost to remove snow from the tracks or to sprinkle them, or how much free rides for policemen and firemen will burden the company. The company wants the franchise; in fact must have it in order to do business. The aldermen think of some little things they want done for nothing. The parties strike a bargain; and neither side knows how much the obligations assumed will amount to. It is poor policy to load up a franchise with a lot of miscellaneous obligations of this sort. Free services of uncertain amount should be eliminated. A street railway may reasonably be required to meet the expense of performing certain duties, such as paving and keeping the roadbed clean and in repair. It may even be advisable to require the company to sprinkle, either at its own expense or at cost, the entire width of the street it occupies. It is also proper to require the company to pay the expenses of widening a street, strengthening a bridge or making other changes in the roadway rendered necessary by the additional servitude imposed by the franchise. An electric light or telephone company may reasonably be required to reserve space on its poles or in its conduits for city wires, but this obligation should not be made unnecessarily onerous by keeping the spaces unused for years when not needed by the city.

Every obligation the amount of which cannot be closely estimated in advance should be avoided. For any looseness in the arrangement will almost of necessity operate in favor of the company, which is compelled to cover in other ways the risk it assumes. It is proper, however, that companies operating in the streets should assume liability for all damages caused by their operations, either in the construction and maintenance of their fixtures, or in the actual work of supplying the service. This is of especial importance to the city in cases where injury results to persons or property by reason of the streets being torn up or obstructed by the company. Finally, apart from requiring the franchise holder to abate the nuisances he creates, repair the damages he does and assume to the full extent the obligations that normally attach to the business he is doing, the city should not attempt

to limit profits by imposing the obligation upon the franchise holder to perform a multitude of miscellaneous services free or at reduced rates as a sort of bonus for his right to operate.

50. Improved service required.—If those who are responsible for drafting a franchise regard good service more important than compensation or low rates, monopoly profits may be limited effectively by the requirement of specific improvements in the service. For example, if it is street railways that are concerned, a change of motive power, free transfers, through routes and joint use of tracks may be required. The company may be compelled to improve its roadbed, to furnish a seat for every passenger, to heat and ventilate its cars, and to light them so that passengers will be able to read without straining their eyes. The abolition of strap-hanging would alone be a body-blow to monopoly profits in street railway operations. If electric light and power is the utility in question, the franchise may require the company to stand ready to supply break-down service to private consumers having power plants of their own and may include special provisions to insure uninterrupted service, adequate fixtures and clear light. A telephone franchise may call for the installation of the automatic system, secrecy of conversations, adequate connections for long distance service, etc. For gas, the requirement may be a higher candle power, a regulated pressure, the prompt repair of fixtures and the stoppage of leaks. It can readily be seen that service in almost any utility is capable of indefinite improvement. Though some improvements are profitable to the company, others can be had only at a sacrifice of its profits. A franchise cannot, of course, elaborate in detail all of the improvements that may prove desirable in the course of a generation. All that should be attempted is to set certain general standards of service to be required of the franchise holder, and then reserve to the public authorities the right to compel specific improvements in the service from time to time by law, ordinance or administrative order.

51. Extensions into unprofitable territory.—From the public standpoint it is extremely important that public utility services should be available over as wide an area as possible. Such a policy tends to send population to the suburbs, increase the size of the average building lot, multiply open

places and enlarge the total value of the land on the tax-roll. But profits come most readily from congested business. The denser the population the better for the water, gas and electric light companies, and the shorter the average haul the better for the street railway companies. A scattered population may render the use of telephones more general, but it also greatly increases the length and maintenance expenses of the lines. It can readily be foreseen that this conflict of interests between the companies and the public must lead to important results. If a street railway company is granted locations in certain streets with no provision for the extension of its lines from time to time, there is certain to come a period after population has pressed out beyond the end of the established routes when people in the outskirts will suffer hardship for want of adequate transportation facilities. If the company finds that after walking for half a mile these people will have to take the cars anyway in order to get down town, it will be very slow to extend its tracks to meet them, especially as they would not have to pay any more for the long ride than they do for the shorter one. Public service corporations handling other utilities are sometimes disposed to let scattered suburban populations go without service altogether rather than incur the expense of extending their lines for the limited business they would receive. Indeed, with utilities like electric light and the telephone, which in the poorer sections of a city are used by only a small minority of the people, it is quite possible that a person residing almost in the heart of a great city may desire service and not be able to get it.

From these facts we can see that one of the most effective ways to limit profits is to insert into the franchise-grants adequate requirements for extensions. The necessity for any extension might be left entirely to the discretion of the city council, but such a plan would meet the violent opposition of the franchise-seeker. He would be very loath to subject himself to possible financial ruin at the whim of a body of aldermen. Sometimes, however, franchise holders agree to extend their lines at the beck of the aldermen, if the length of the extensions that may be required within any one year is definitely limited. It is possible, however, to fix in the franchise certain definite rules by which the necessity of any proposed extensions may be determined. Extensions may be

required upon petition of the majority in number or interest of the people living on a particular street or in a particular district. The law frequently requires gas and electric companies to supply any person whose place is within a certain number of feet, perhaps 100 or 150, of their mains. Sometimes the extension of the lines to supply a district in which the company is guaranteed a certain amount of business in advance is mandatory. Extensions may be required into territory having a certain density of population. Or the whole matter of the reasonableness of an order for extensions may be left to arbitration or to the determination of the courts after a judicial inquiry into the financial prospects of the extension. It can hardly be expected that a company would accept a franchise reserving to the city the unlimited right to compel extensions without reference to their cost or the probable business to be received from them. It might not be amiss, however, to require extensions wherever the immediate or guaranteed gross income from them will pay the current rate of interest on their cost. There will usually be a comparatively slight increase in operating expenses anyway, and such as there is may safely be taken from surplus profits until it is met by the development of additional business. If a franchise is exceptionally profitable, and the public demand for unprofitable extensions is acute, the company may, as a matter of understood public policy, be required to cut deeply into profits to carry extensions that do not pay. But this requirement should not be left indefinite; the extensions required should be limited to a certain amount per annum, or to a certain proportion of surplus profits.

52. A uniform rate without a minimum charge.—The problem of minimum charges does not present itself in the case of street railways, or in the case of water works and telephones where an unlimited service is furnished at a flat rate. In all cases, however, where the consumer pays according to the amount of the commodity used by him, or the service he receives, the cost of rendering the service is frequently greater than the return would be if reckoned at the regular rates. Accordingly the companies often have a system of "meter" charges or minimum charges by which they aim to recover from every consumer, no matter how little he uses, the cost of maintaining the service, keeping the account,

reading the meter, etc. If it appears sufficiently important to encourage the general use of a utility, the city or state may insist upon the Post Office principle of a uniform rate to everybody, thus compelling the profitable part of the business to carry the part that is not profitable.

At the other end of the scale the companies sometimes find it profitable to grant wholesale rates on a large consumption. Retail rates would bring in a greater return, if they brought the same amount of business. But they do not. Electricity and gas may be used for power in large quantities if they can be had at sufficiently low rates, but in many cases would not be available at all at the retail rates for lighting. At the same time the companies may be in a position to reap an additional profit from the supplying of their surplus product at very low rates. The enforced abolition of the wholesale rate would curtail their production and substantially reduce their possible profits. Generally speaking, public utilities are in such widespread demand that good public policy would tend to favor the maintenance of a uniform rate per unit of service to all consumers irrespective of the amounts they use. There is a general tendency, however, to admit the wholesale principle, on condition that there is to be no discrimination among individuals in the same class. It is sometimes suggested that while a uniform rate per unit of commodity used for the same general purpose is sound politics, a difference may reasonably be granted where the commodity is used for another purpose. For example, it is urged that although gas or electricity for light should be supplied at a uniform rate no matter how great the quantity used, a different and lower rate might appropriately be established for gas heating or electric power. However this may be, the rate per unit should be the same to all consumers for every separate use. While a small minimum charge for the service is not likely to work any great hardship on the small consumers, the better policy is to abolish all rate discrimination based on the amount consumed. It is not for the government to authorize the use of a public franchise in such a way as to favor the large consumer. The doctrine of comparative cost does not apply. The city should equalize prices for big and little alike. If variations in rates are to be permitted according to the use of the commodity, the franchise should

very carefully draw the line between such uses so that any possible misunderstanding may be avoided.[1]

53. Better treatment of employees required.—The profits of a public service corporation, like those of any other concern, depend not only upon revenues but also upon expenditures. A public service, touching as it does the lives of the people in manifold ways, is fraught with unusual danger unless intelligently operated. It requires carefulness, accuracy and a steady hand to handle gas, electricity and transportation with efficiency and safety. The responsibility of motormen and conductors operating cars in the crowded streets is one to appal the stoutest hearts. The mere possibility of catching a young child under the wheels, grinding his body to pulp and carrying it several miles before the accident is discovered, as happened recently in a case in New York City, is too terrible to permit any man fit for the job to undertake the handling of an electric car with a light heart. The work of those who repair high tension electric wires and are constantly within a touch of death, is such as to appeal only to brave men or to reckless ones. If employees are of the latter class, the danger is transmitted to the public. The public is more deeply concerned with the treatment of public service employees than in the case of an ordinary competitive business. The special circumstances just described and many others, coupled with the vital public necessity of uninterrupted, efficient, safe service, make it necessary that special measures should be taken by the public authorities on behalf of the employees of public service corporations. Such measures may take the form of a guaranty of a minimum wage, or the requirement, for example, that street cars should be vestibuled to protect drivers and motormen from undue exposure, or that no employee shall be compelled to work more than a certain number of hours at a stretch.

A public service corporation operating under a monopoly franchise, has a special advantage over many classes of its employees. If they lose their jobs, or quit them, there is no chance of getting similar work except by moving to another city. On the other hand, the men may form a close organization and extort concessions from their employers by reason of the necessity the latter are under of furnishing

[1] For further discussion of discrimination in rates, see section 72. *post*.

continuous service to hold their franchises. This advantage of the men is sometimes diminished by the insertion of clause in the franchise exempting the company from the ordinary penalties for non-performance of its contractual obligations if prevented by strikes. A bill was introduced in the Massachusetts legislature in 1908 to require all public service corporations to adopt the plan of distributing surplus profits, over and above a fixed return on invesment, among the stockholders and employees in proportion to dividends and wages. Such a scheme naturally concerns the general law regulating such corporations, rather than the specific franchises granted to individual companies. It is hardly to be considered good public policy to load down the franchise with specific provisions regulating the relations of the companies with their employees The power should be reserved to the state or the city to adopt such regulations from time to time as changing conditions may require, and it is not unreasonable in a franchise to provide for arbitration of labor disputes. Whatever can be put into a franchise to insure uninterrupted service by careful, intelligent, thoroughly trained men, is not only justificable but positively to be desired.

54. Controlling the company's contracts.—In connection with the operation of public utilities there is frequently a double monopoly profit. Patents in connection with the manufacture of gas, the production of electric light, the purification of water, the furnishing of telephone service, etc., are often controlled by a holding or "parent" company which has special relations with a multitude of operating companies in different parts of the country. Notable instances are the General Electric Company and the American Telephone and Telegraph Company. The latter is both an operating and a holding company. A "parent" company may dictate the terms of the contract under which an operating company receives the right to use certain patents of more or less value. If the use of the patented process or article is essential to the business the patent itself will enable the "parent" company to mulct the operating company and through it the consumers for large tribute. If, on the other hand, the patents are not essential and have value only in name, the parent company can attain the same result by means of its stock control over the operating companies. "Addition, division and silence"

is a famous rule especially applicable to such transactions. This rule also applies to numerous cases where the controlling company is the manufacturing company and sells the desired commodity, such as gas or electrical energy, to its subsidiary operating companies. By a judicious arrangement between pockets, the cost of gas, electric power, street railway equipment, or what not, may be kept conveniently high in order to justify higher rates. There is danger of extortion through the collusion of two companies, only one of which is directly responsible for the ownership of the franchise and operation under it. It should be required in every franchise that the contracts of the holder be made public, and that contracts for the supply of a commodity by one public utility company to another should be void unless approved either by a commission or by the franchise-granting authority itself. This is a matter of great importance. Unless some such control is vested in the public authorities, publicity of accounts, valuation of plant and the right to regulate rates are likely to be rendered ineffective through the familiar hide-and-seek tactics of the corporations, wheel within wheel.

55. The sliding scale device.—A special plan for limiting monopoly profits has been adopted in the case of the Boston Consolidated Gas Company. A standard rate to the consumer and a standard rate of dividend on the company's stock were fixed. It was then agreed that the company could not increase its dividend rate unless it had previously reduced its charges for gas. For every five cents decrease in the rate of charge per 1000 feet below the standard, the company is permitted to add one per cent to its dividend rate. This scheme of limiting profits seems to find considerable favor among corporation men. It starts out with a guaranty that they shall not be disturbed by rate regulation ordinances to the extent of endangering their ability to pay a regular liberal dividend. It continues by guaranteeing to them a steady share in the profits of economy or cheaper processes. The plan would certainly tend to make the companies zealous to reduce costs and to lower rates. It might not encourage them to improve service except when the improvement would bring immediate financial returns. If this idea is to be embodied in a franchise, great care should be taken in fixing the basis of rates both for charges to consumers and for

dividends. Starting with high rates in both cases, the plan would operate unreasonably well for the companies. Suppose, for example, that with a price of 80 cents per 1000 cubic feet for gas, the company can earn a net annual dividend of six per cent on the capital invested. If, in fixing the terms of a franchise on the sliding scale plan, the basic rate of charge for gas is established at 90 cents and the basic rate for dividends at 8 per cent, the company by reducing the price of gas 5 cents, will be entitled to pay nine per cent dividends. That is to say, the price to the consumer may be kept above the normal while dividends also are far above the normal. It is true that the desire for still greater profits would stimulate the movement toward lower charges for gas. The self-interest of the companies would ally itself with the public interest, to a certain extent, but an exorbitant profit would be allowed without the necessity of reducing rates to a reasonable basis. If, on the other hand, the basic rates for gas and for dividends were fixed too low, the scheme would work with double force against the company. The value of the whole scheme depends upon getting the rates right in the first place. Even then, however, changes in the value of money or in the cost of production will essentially change the normal standard rate. A great increase or decrease in cost may take place entirely independent of the skill and diligence displayed by the company. And so the justice of the fixed basic rates is likely to be upset. Accordingly the sliding scale plan is likely to work hardship either to the city or the company, unless provision is made for the readjustment of the basic rates from time to time to correspond with changes in cost over which the company has no responsible control.

56. Division of profits with the city.—Under the laws of Rhode Island and Massachusetts, street railway companies are required to pay a special tax on dividends equal in amount to the excess of dividends paid over a fixed rate. This plan means in substance that the company must share its profits with the city, half and half, above a rate of profit considered reasonable on the par value of the capital stock. This does not establish the value of the property or the total amount of the investment as the basis for determining profits. If the company is grotesquely overcapitalized, a five per cent dividend on the capital stock outstanding may mean a consider-

ably higher rate on the total actual investment, including that portion secured by the issue of bonds. Any division of surplus profits between the company and the city should be based upon a certain fixed rate of return, not on capital stock but on actual investment. The new Chicago street railway franchises are based upon this latter principle. The investment value of the properties is fixed in each franchise, and provision is made for keeping a complete check upon future additions to investment. The normal rate of profit is then fixed at approximately the rate of interest on the company's bonds. In the Chicago scheme net surplus profits are divided in the ratio of 55 per cent to the city and 45 per cent to the company. The plan of dividing net surplus profits will not be satisfactory unless there is provided in the franchise or by legislation adequate means by which the city or the state may exercise a definite control over accounts and expenditures. It is often urged in support of the plans for limiting profits described in this paragraph that the city, furnishing the franchise under which the utility is operated, should have a "fair share" in the profits of the enterprise. It is urged that by this scheme the independence, energy and ability of private management will be maintained, while at the same time the interests of the public are conserved. If the minimum rate of profit is low enough and is based on a true accounting of the investment, the division of the surplus will bring the city a large revenue and still leave to the company sufficient incentive to do its best. The plan at least tends to stability of investment values and helps to hold speculation and frenzied finance in check. It should be distinguished from the plan, sometimes proposed, of taxing a company on its net receipts before dividends and interest are paid.

57. The right to purchase reserved to the city.—It is a common thing to reserve in a franchise grant the right to purchase the property of the grantee either at the expiration of the grant, or at regular periodic intervals or at the discretion of the city. A considerable part of the monopoly profit in public service industries is prospective, arising from the hope of better things to come. A short-term franchise tends to limit the value of this hope, but unless the city is in a position to buy the property at the expiration of the franchise or to license some other company to buy it, the logic of

necessity bolsters up the company's hope of renewal in an extraordinary way. If it is known that the franchise will be absolutely dead and valueless when it expires, and the company's property can be taken away from it at a fair price so as to permit the continuation of the business under other auspices without interruption, the monopoly value of the franchise will be greatly curtailed. The actual profits from present operation will be no less, but the public will be delivered from the much heavier burdens of capitalized hope mortgaging the future. The reservation in the franchise of the right to purchase the property of the grantee, with adequate provisions for determining the price, is one of the most important guaranties that the city can have. With the exceptional opportunity for profit that goes with an unregulated, unlimited monopoly franchise practically removed by various devices, including the right to purchase, the franchise holder will be more likely to engage in good faith in the manufacture of gas, the production of electrical energy, the furnishing of transportation, or the proper management of whatever the business may be for which the franchise is granted, rather than engage primarily in the manipulation of securities, the robbery of stockholders and the milking of the public. Preferably the option for purchase should be open to the city to exercise at any time after reasonable notice. Provision may properly be made for the payment of a considerable bonus in addition to either present value or investment cost in case the city should desire to take over the property within a few years after the grant is made and before the investment has been given a chance to earn a reasonable profit. Some such provision as this would be necessary in the case of public utility extensions into comparatively undeveloped territory. Care must be taken, in any case, to lay down rules that will exclude absolutely from the reckoning in case of purchase the value of the franchise which the city has given away. Some will urge that "good will" should be counted in as an asset for which the company should be paid. The happy condition where a monopoly-holder actually enjoys the good will of his patrons is not likely to be disturbed for the sake of municipal purchase. The city will be much more likely to exercise its option when ill-will stands on the liability side of the company's ledger than when "good will" stands on the

asset side. The trouble is that a private monopoly, having the entire business safely in the hollow of its hand, does not need any "good will." The people have to patronize it anyway.

The phrase "as a going concern" is sometimes inserted in the section of the franchise describing the principles upon which the valuation of the property is to be fixed. This is a dubious phrase, and should not be used unless it is carefully defined. If it means simply that the plant and fixtures must be valued as being already in place and ready for use, it is all right. If it means, however, that the property is to be valued according to the net profits earned by it while being operated under the franchise, then it will include the market value of the franchise itself minus that portion of this value arising from the hope of greater returns in the future. Great care should be taken to have the purchase clause absolutely clear and straightforward, as it is the most important means of accomplishing two purposes, namely, the limitation of monopoly profits and the maintenance by the city of control over the streets. An excellent illustration of the way not to provide for possible purchase by the municipality is found in the Nashville street railway settlement of half a dozen years ago, according to which the city was authorized, at any time after twenty years, to buy out the companies by "paying that sum of money which, if invested at the same rate of interest that would be realized by an investment in the open market . . . . in bonds of the city of Nashville then having twenty years to run, would yield a yearly income equal in amount to 50% of the gross receipts" of the companies for the preceding twelve months.[1] Facts and figures furnished by the Massachusetts State Board of Railroad Commissioners enable us to see how such a scheme would work in that state. If we count the actual rate of interest paid on money invested in bonds of the City of Springfield as 3.7%, it would require $16,500,000 of bonds to earn $612,000, which is 50% of the Springfield Street Railway Company's gross earnings from operation in the year ending Sept. 30, 1906. That would be the price the city would have to pay according to the Nashville scheme if it desired to take over the street railways, whereas the total permanent investment of the

[1] Laws of Nashville, 1908, p. 907.

Springfield company as set forth in its own report for the same year was only $3,860,000. There is not much curtailment of monopoly profits in a reserved right to purchase the property for more than four times what it cost.

Another feature of the purchase clause to which special attention should be given is the method of naming the appraisers or arbitrators. Sometimes the city is to appoint one, the company one, and these two a third. But if the two first appointed cannot agree, then what? It may be that on the application of either of the principal parties in interest, any judge of the Circuit Court or the Superior or the Supreme Court, as the case may be, is authorized to appoint the third arbitrator. Such a plan would leave it open for the company to instruct its representative not to agree, and in consequence of such disagreement be enabled to get some favorite judge out of his bed at midnight to appoint a friendly third appraiser, who with the company's own representative could render a majority report and bind the city to the valuation fixed by them. If the third appraiser is to be appointed by a court, notice and a hearing should be required, and if there are more judges than one in the court, then appointment should be made by majority of the judges. A peculiar trick appears in an electric light franchise granted by the town of Flushing in 1897 just before its annexation to New York City. In this case the franchise was granted for a period of 25 years with the right of renewal for a similar period at an appraised revaluation. One appraiser was to be appointed by each of the parties, but if these could not agree on a third, the company was authorized to name the president of some bank or trust company, who in turn would have authority to appoint all three appraisers, and the town bound Greater New York to accept the decision of the majority of the appraisers who might be appointed in this way. It would only be necessary for the company to select the bank president whose institution had guaranteed the company's bonds.

Another trick of the franchise-seeker is to consent to the city's reservation of the right to purchase, but to fix the terms so that the city will have to pay the full value of the property and then pay the outstanding mortgages on it too. Look out for the purchase clause!

58. Reversion of the property to the city at the expiration of the franchise.—The advocates of compensation for franchise grants have in some cases gone so far as to urge that the property of the franchise holder should revert to the city at the expiration of the grant without compensation. This plan, if practicable, would result in the city's coming into possession of fully-equipped public utility plants, free of debt, at the expiration of the original franchise periods. Of course, this would not be possible unless the plants had been expected to pay for themselves out of earnings in the meantime. This scheme is in some respects superior to the common practice of granting limited franchises without making any provision whatever for the disposition of the plant at the expiration of the franchise. There are two objections urged against the plan, however. One is that the company will almost inevitably let its plant and property run down toward the close of the franchise period, so that the public will suffer from bad service and the city will come into the possession of an out-of-date equipment, needing immediate and complete rehabilitation. This condition runs counter to reason and good public policy with reference to public utilities. In the second place, the plan of paying for the entire plant out of earnings within a comparatively short period may necessitate higher rates than are consistent with public welfare and justice to the present generation. This objection is not as strong as the other one, for experience shows that the necessities of urban government tend to increase even more rapidly than population. While it may seem an injustice to require this generation to make a present to the next one of a fully-equipped gas plant or street railway system, nevertheless it is a much greater injustice for this generation to saddle upon the next one a debt for a public utility plant that has been used up or has gone out of date or is so inadequate that it has to be rebuilt. The future always has new burdens that are not foreseen, and it may not be amiss to adopt the principle of paying for "permanent" public improvements in each generation, leaving to the future the responsibility for the new burdens that time will create. Most American cities have followed the same profligate policy that has been followed by public utility corporations in this country, namely, the policy of piling up obligations and duplicating capitaliza-

tion, always deferring to the future the unpleasant necessity of paying for what this generation uses. While for the first reason given, the plan of requiring the company to turn its property over to the city free of charge at the end of a fixed period is not a good one, substantially the same result might be accomplished by requiring the company to set aside each year a certain percentage of its gross receipts or a certain fixed amount to create a sinking fund to be used by the city in buying in the company's bonds and paying its stockholders the net appraised value of the plant minus the amount of its debts.

The value of franchises in great centers of population is much less than it was at one time believed to be. A perpetual franchise for a railway in the streets of Manhattan Island seemed to Wm. C. Whitney and his fellow-dreamers to be of practically unlimited value. They appeared to think that it could not be overcapitalized. The extension of transfer privileges, the decrease in the value of five cents, the increase in the expense of construction and maintenance, the imposition of franchise taxes by the state and many other changes have burst the bubble. Various regulations and conditions may reduce the value of a franchise to nothing. Nevertheless, it would not be unjust to require a franchise-holder to devote a portion of his earnings to paying for the plant for the benefit of the city, even though such a requirement should necessitate somewhat higher rates than would otherwise be essential.

59. Profits induced by creating special demands for service.— Thus far in the discussion of plans for limiting the monopoly profits of franchise-holders we have had in view primarily the profits derived from the rendering of the services demanded by the necessities of the community. It is to be expected that a public utility corporation will use means to extend its business by inducing people to ride more on the street cars, to burn more gas, to use more water or electricity, to put in more telephones, as the case may be. The difference, as compared with the efforts of a competitive enterprise to increase its business, is this, that a public utility company having a monopoly can only increase its patronage by increasing the total consumption of its commodity or service. It cannot profit by outwitting or outserving its

rivals and getting their patrons away from them: for it has no rivals. It is perfectly legitimate, however, for a public utility company to strive to increase the total demand for its service. Its advantage lies in the certainty that it will get the entire benefit of this increase no matter how great the increase is. This great advantage, which is the backbone of the monopoly, leads to a special advantage in certain cases. A street railway company, for example, may establish amusement parks and provide popular entertainments at points which are inaccessible to the public except by the company's car lines. A company may, as a side issue, work up excursions, expositions, conventions, civic fêtes, etc., which in the nature of the case will compel the people who take part in these enterprises to ride on the company's cars. In like manner a gas company may induce builders to instal gas ranges instead of coal ranges in the houses they construct for sale or rent, with the result that the occupiers will be practically compelled to use the company's gas for cooking. While in other utilities the devices for fastening necessity upon the public may not be so obvious, it is clear that any increase in the demand for a public utility resulting from coercion brought about by conditions which the franchise-company had a hand in creating, is an especially obnoxious advantage pertaining to monopoly. Provisions to prevent a company from reaping this advantage are especially desirable. The matter cannot easily be attacked directly. In relation to transportation service, it may be required, however, either that excursion and amusement crowds shall be handled at lower rates or that seats shall be provided for all or that only those who get seats need to pay. In general, this difficulty can best be met through regulation of rates and service, so that the company shall not be permitted to take unusual advantage of a necessity which it has created.

60. Profits from auxiliary enterprises.—One of the greatest evils of the transportation business as conducted in the United States has been the mixing of the business of a common carrier with that of a mine owner, a warehouse or elevator proprietor or a timber or oil producer. Congress attempted to eliminate this evil by the enactment of the "Commodities Clause" of the Interstate Commerce Act, requiring railroads to dispose of their auxiliary businesses.

Public utility companies operating under urban franchises do not so frequently as the steam railroads attempt to increase their monopoly profits by controlling auxiliary enterprises through which profits can be concealed and regulation escaped. The most notable exception to this rule is in the case of politics, a business in which many franchise companies invest large sums for the purposes mentioned. There are other less important exceptions. In New York City the building of electrical conduits was given as a monopoly to two companies many years ago. While these companies are supposed to give space to all accredited applicants on equal terms, it has developed in recent years that the majority of the shares of capital stock of one is controlled by the New York Telephone Company and of the other by the New York Edison Company, and independent companies have not found it any easier to get space in the conduits by reason of this condition of affairs. Reference was made in the preceding paragraph to the establishment of amusement parks by street railway companies for the stimulation of traffic. Fortunately these institutions are not usually profitable in themselves. Of 22 street railway companies in Massachusetts maintaining amusement parks in 1906, nine reported no receipts at all from this source, ten showed an excess of expenditures over receipts, while three showed a slight balance the other way. For the whole twenty-two, park expenses amounted to $181,000 as against receipts of $101,800.[1] It is obvious from this record that no special restrictions in franchises or laws are required to limit the direct profit from the operation of these transportation sideshows. Their primary purpose is to create a demand for street car rides. While it might not be amiss for various reasons to prevent street railway companies from operating amusement resorts, the problem can perhaps be solved by the city's furnishing adequate parks and amusement places at various points within easy reach of the people without the help of the street cars. Where the local circumstances warrant the precaution, it is desirable to insist by franchise conditions or otherwise that no public utility company shall invest in the stock of an auxiliary concern such as an electrical conduit company.

[1] Figures compiled from returns published in the Fortieth Annual Report of the Massachusetts Board of Railroad Commissioners.

61. Profits from the sale of accessories.—Many public utility companies furnish house fixtures free. But the gas consumers usually have to buy lamps, burners and stoves. The gas range may go with the house. Meters are furnished free except that a minimum or "meter" charge is often made in the case of small consumers. Electric lamps are sometimes sold to the company's patrons and sometimes furnished as a part of the service. We do not know of any street railway company that charges extra for straps, but there are doubtless many riders who would be willing to pay for them at the rush hours. There are various office telephone fixtures which may or may not be furnished with the service or which may or may not be sold by the telephone company directly. It is sufficient to say that although under competitive conditions and while the use of the service is being stimulated, public utility companies are likely to follow a liberal policy in regard to fixtures and accessories, a gas pressure regulator furnished by parties not connected with the gas company should "run and hide" when the company's meter reader or repair man finds his way into the consumer's cellar. A company having general charge of the installation and maintenance of its services has many opportunities to "knock" the accessories furnished by somebody else. It is not easy to devise a franchise provision that would effectually limit the opportunity of a franchise company for brigandage of this kind. It might possibly be worth while to provide that the company shall not sell or rent any fixtures whatever, but shall furnish a certain minimum as a part of the service, leaving the consumer to buy all extras from independent sources. It is probably sufficient, however, if the consumer is guaranteed the right to attach fixtures purchased in the open market to any public utility service.

62. Profits from the sale of by-products.—Incidental to the manufacture of gas, large quantities of coke, coal tar and ammonia are produced. Electric light and power companies frequently have a certain amount of exhaust steam which can be sold for heating purposes. Street railways have advertising space for sale and sometimes carry the mails and do a little express and freight business incidental to passenger service. These companies also furnish observation cars, funeral cars, and other special cars to meet particular needs

outside of the ordinary traffic. All these things may be termed the by-products of public utilities. The profit gained from these sources is in addition to the monopoly profit derived directly from ordinary operations under the franchise. The Boston Elevated Railway Company got $98,000 from advertising in cars and stations in 1906, or about three-fourths of one per cent of its total income.[1] In 1907 the gas companies of Massachusetts got nearly $600,000, or about six per cent of their total income, from residuals—coke, tar and ammoniacal liquor.[2] In the same year the electric light companies of Massachusetts received $37,600 for steam heating, or somewhat less than four tenths of one per cent of their total income.[3] While these are comparatively small sums, they are not too small to attract the attention of the companies, and unless care is exercised in drafting the gross receipts clause of a franchise, it will be found that the tax to be paid to the city does not include a percentage of these miscellaneous receipts. In view of the extra burden on the streets arising from the operation of mail cars and other special cars—ordinary freight cars are used in Brooklyn—it might be reasonable to impose a special license tax on them. A similar excise could properly be placed on street car advertising. As for coke sold for fuel by the gas companies, it comes into competition with other fuels and cannot be said to yield a monopoly profit, though in many cities practically the entire supply of coke on the local market is manufactured by the single gas company that operates there. In regard to steam heating furnished by the electric companies, the case is different, as its distribution requires a special franchise. Steam heating is a public utility by itself, although by no means so well-developed or so generally supplied as the more important utilities we are discussing. While there may be a decided advantage to the public as well as to the electric company in giving the latter a limited franchise for marketing its surplus steam, care should be taken not to allow the company to preëmpt the field without imposing upon it the obligation to supply the service to the full extent of the

[1] See Twenty-Eighth Annual Report of the Massachusetts Board of Railroad Commissioners, p. 214.
[2] See Twenty-Third Annual Report of Board of Gas and Electric Light Commissioners, Massachusetts, p. 102.
[3] *Ibid*, p. 149.

public demand. In handling the problem of by-products in a franchise, care should be taken that at least everything in any way connected with operation in the streets should be brought under the gross receipts tax, if there is one. The receipts from by-products such as advertising space, which cost the company practically nothing, may well be subjected to a heavy special tax. It would not be unjust, indeed, to require the company to pay over to the city one-half of its receipts from such sources. There is no particular reason for taxing the sale of such by-products as coke and tar, which have no direct relation to the exercise of the franchise either in manufacture or in distribution. Special cars operated by street railway companies, if their use adds a special burden to the street and involves special inconvenience and danger obnoxious to the public should be taxed heavily enough to discourage their use or to compensate for the damage they do.

63. Profits from the sale of incidental privileges and surplus services.—A steam railroad company having access to the heart of a great city may be in a position to charge enormous rentals to another company desiring to use its tracks, or indeed may shut such a company out altogether. A street railway company occupying the main streets in the heart of a city or a strategic point at the entrance to it, may keep rival companies out entirely or may exact from interurban electric lines exorbitant tribute for terminal privileges which, in the public interest, the interurban companies should have at a fair rental. In like manner a local telephone company may refuse the use of its poles to a long distance telephone company or may force the latter to pay an unreasonable price for connecting its through lines with the local exchange. An electric power company, having impounded the water power of a whole region, may practice extortion when it comes to sharing its privileges with cities or companies engaged in the distribution of electric light. A gas company having an enormous plant capable of producing more gas than its own patrons demand may refuse to sell its surplus to smaller companies operating under more difficult conditions, or may charge them too much for it. In such cases as these the monopoly given by a franchise may prove most damaging to the public interests and most profitable to

the franchise holder even though the rates to the public are not exorbitant and the service rendered is not inferior. It is extremely important that in franchises and legislation precautions should be taken to protect the public interests at this point. The public authorities should always retain the right to compel a company holding a railroad or street railway franchise to permit other companies to use its tracks upon payment of reasonable rental. No telephone company should be in a position arbitrarily to refuse local connections with a long distance service or vice versa. Water rights obtained for the manufacture of electrical energy should not be held by one company except subject to the right of other companies to share in their use, so long as there is a surplus, on payment of a fair proportion of the cost of development.

Electric light and power companies may often be operated with economy in connection with water supply works and electric railways. An electric light plant is compelled to maintain generating machinery of capacity sufficient to meet the maximum demand less a certain allowance for storage. This means that during the greater part of the twenty-four hours the machinery is idle, although it could be used to advantage to develop energy to operate the pumps of the water works or to furnish current for street railways and other power users. The electric light franchise should reserve to the city the right to compel the company to furnish at reasonable rates to the water works, the street railways or other public enterprises this surplus power. In other words, the city should remain the master of the general public utility situation with power to correlate the various interests and compel them to work together for the public benefit by such interchanges of service as may be necessary to bring about possible economies and lower the costs of all the utilities to the public.

64. Profits from the exploitation of real estate.—It is quite possible for public utility magnates operating under liberal franchises and having knowledge of the future plans of their companies to invest in real estate in advance of extensions and reap for themselves individually or for the companies large harvests by using the franchise privileges to further private ends. This is especially true in the case of

utilities which have the right to make extensions but are under no obligations to do so. The most striking opportunities are connected with the extension of street railway and rapid transit lines, but fortunately in these enterprises the obligation to build within a certain limited time usually goes with the right to build, the right being forfeited if the obligation remains unfulfilled. Even where this is the case, however, real estate in the vicinity of a proposed extension can be boomed by the promise of the company to build. After the insiders have unloaded their landed holdings at a big profit, the plans for construction may be abandoned or changed. The power unjustly to increase monopoly profits in this way is so obvious unless special provision is made against it, that we need only concern ourselves with finding an adequate means to curtail it. The best means, clearly, is the stipulation in the franchise that the company shall extend its lines whenever public necessity or convenience as determined in definitely prescribed ways demands it. Another means for preventing the company and its officers from using the franchise to bolster up their real estate deals is to forbid the company itself or any of its officers to hold real estate in the vicinity of its unconstructed franchise routes, except so much as is necessary for the conduct of the company's business. This prohibition could hardly be extended to stockholders and directors, who are only secondarily engaged in business under the franchise, and whose manifold other interests might necessitate the holding of real estate for various purposes, and render difficult to prove the diversion of their franchise powers to the special benefiting of their own property. Some people may think that in attempting to regulate the buying and selling of land by public service corporations and their officers, we are going altogether too far toward interference with private affairs. The answer is that there is nothing more vital to the general welfare of a community than the manner in which public franchises are exercised. It should be our aim to eliminate favoritism absolutely to the last detail, so that an honest franchise holder will exercise his extraordinary privileges with the same circumspection that is characteristic of an honest public official. A franchise should not in the remotest way carry with it a special privilege for exploitation. In street railway and rapid transit franchises,

when specific streets are named, there should be no exception to the rule that the road must be built within a definite period or the franchise be absolutely forfeited. An intolerable situation has arisen in many cities where franchises have been held many years unused, and where there is no clearly defined self-executing forfeiture clause in either franchise or statute. Under such conditions, it may require years of litigation to determine whether a franchise is dead or alive. Such a situation is the result of well-nigh criminal negligence on the part of public authorities in the past.

CHAPTER IV.

INJURIES TO INDIVIDUALS, AND WAYS OF PREVENTING THEM.

65. Injuries to persons and property made possible by the possession of special priviledge.—In the preceding chapter we have considered those elements of monopoly which give the holder of a franchise a special advantage over his fellowmen in the matter of making profit out of his business, and have discussed various provisions of franchise contract or regulatory act tending to curtail or take away this advantage. We have now to consider certain other incidents of public utility monopoly that demand careful attention in the drafting of franchises and public utility legislation. Partly on account of the nature of the business and partly because of the absence of competition, a public utility company is placed in a position where it can inflict serious injuries on the person or the property of an individual, without his being able to escape by his own unaided efforts. For example, in a city where well water is not obtainable or where wells have been closed for sanitary reasons, the citizen is compelled to take water from the public water works, or from the water company if the supply is under private control. Through the carelessness of the company the citizens may drink down the germs of typhoid fever and bring disease and death into their homes. While it is true that every householder could

boil his drinking water and thus avoid the risk of contracting this disease, it is unreasonable to expect the average citizen to incur the expense, trouble and discomfort of first boiling and then cooling again every drop of water that he drinks. Unless he does so, however, or unless certain precautions are taken in franchise or statute to insure purity in the water supply, he may suffer irreparable loss. The citizen cannot escape the danger by transferring his trade to another company offering better guarantees of the wholesomeness of the commodity; for there is no other company. Or we may take an illustration from the telephone business. A subscriber may depend upon his telephone connections for the opportunity to close up an important financial transaction at a definite time. If just at that time his telephone service fails or the secrecy of his telephone conversations is not protected, he may receive great financial injury. Complaints of poor service are likely to be disregarded as long as it is known that the subscriber must continue to patronize this particular company no matter whether the service is good or bad. In the gas or electric light and power business, one man may have his chance for profit wiped out by discrimination in rates. Another may have his office or house rendered unsanitary by gas leakage. Or a property owner's fine shade trees may be cut down or mutilated to make room for electric light, telegraph or other wires. The electric company may be careless and leave its wires in a dangerous condition by reason of improper insulation. The street cars may strike a man down in the street or make such a racket in front of his house that he cannot sleep or even converse with his family or friends while the cars are going by. In a hundred ways the private citizen is at the mercy of the public service corporations. He is shut out from his natural remedy. He would like to "quit" the company, but he cannot. Indeed, he may suffer great danger from the company's operations even if he does not patronize it at all.

66. Property owners' consents.—One way of protecting the citizen against undue injury to his property by franchise holders, is to require that a street railway shall not be constructed or electric light or telephone poles erected in front of his property without his consent. In the case of street railways, it would be quite unusual to call for the consent of

every property owner along the proposed route, but the consents of the owners of the major part of the property on the street, measured either by frontage or by assessed valuation, may be required. Furthermore it may be required that the consents shall be secured anew for every change in motive power, or even for the renewal of the franchise or its transfer to another company. The consent provision enables each property owner to dicker with the company for compensation for injury to his land. He may even try to force special concessions in regard to service. It is said that in Cleveland, during "consent wars" between rival companies, property owners have been paid $2, $3 or $4 per foot of frontage for consents. Indeed, sometimes they have been paid by one company to cancel their consents to another company. At City Island, New York, where for more than twenty years two street railway companies have maintained themselves for the joint operation of a horse car line about three miles in length, the last extension of the road was consented to by a cautious property owner on the express condition that the time required to go from a point in front of his residence to Bartow Station at the other end of the line should not exceed 27 minutes. While it is not usual for the property owner to have the right to refuse absolutely to permit the erection of poles in front of his property, it is not uncommon for him to have authority to designate their location, or at least to prevent them from being placed where they will inflict special injury upon him. The consent of abutting property owners is seldom, if ever, required for the laying of gas mains, water pipes or electrical conduits in the streets. While there is an element of justice in the theory of property owners' consents, yet on the whole the plan is a bad one. Public utilities should be extended and operated primarily with reference to the general interests of the community. While it would be just to assess property owners for benefits conferred and to compensate them for damages inflicted by reason of the construction of public utility fixtures in the streets adjacent to their property, it is not in accordance with good public policy to permit individuals to veto the extension of railways and pole lines. If property owners' consents are required at all, an alternative should be left open to the franchise holder, if he fails to get the necessary number, to appeal to some judicial tribunal, as is done in New York, for

permission to occupy the streets with his fixtures. The consent law of Ohio has been a desperate failure and has tended to intrench existing companies in defiance of the public will.

67. Requirement of public approval for location of works.— Injuries to individuals may result not only from the operations of a franchise company in the streets but also from the proximity of its central plant. The presence of a gas-works in a residence neighborhood is particularly obnoxious and generally results in a great slump in land values. While it might be difficult to prove that the odors emanating from a gas-holder have a directly injurious effect upon the morals of the individuals who inhale them, there can be little doubt that the presence of a gas-holder results in the deterioration of a neighborhood. There is something so offensive about such an institution that naturally its immediate environs are depopulated of clean, wholesome, self-respecting, law-abiding people, and the flotsam and jetsam of civilization gravitate toward the place. This tendency is illustrated by the "Gas House" district in New York which is Charles F. Murphy's own bailiwick. Here even under the unusually favorable conditions that prevailed in 1908, it was publicly reported that an election officer who protested against a repeater's vote was slugged in the presence of many witnesses, was sent to the hospital as a victim of "alcoholism" and died a few days later from a fractured skull.[1] The people who knew about the affair were reputed to be so terrorized by the "Gas House" district gangs that they were unwilling to give evidence against the criminal. It is safe to say that the neighborhood of a gas-house is not a good place in which to live. A gas franchise should require that the location of the gas-works be subject to the approval of the public authorities. It might be required specifically that the works should not be placed in a residence district or that the company should maintain open land around its plant to keep its nuisance on its own premises. The location of the car barns and storage yards of an electric railway company should also be subject to the approval of the public authorities. While a car barn is not generally as offensive as a gas plant, the screeching of the cars as they retire at all times of night and come out at all times in the morning is likely to disturb the sleep of the neighborhood.

[1] New York Times, Nov. 12, 1908; New York Evening Post, Nov. 12, 1908.

68. Civil damages.—While it is true that anyone suffering a direct injury at the hands of a public service corporation may sue it for damages, as he could sue any other corporation or person, the fact that the company is operating under a public franchise and performing a public function may under certain circumstances alter the status of his case. It is, therefore, desirable that the extent of the company's liability for various classes of injury should be fixed by its franchise or by general law. Companies are often required to give bond to save the city harmless from damage suits resulting from the company's negligence. Such a provision is necessary because of the close relation between the operations of the company and the functions of government performed directly by the city, especially in matters pertaining to the care of the streets. While the detailed regulation of the responsibility of public service corporations may be left to general legislation, the franchise itself may properly contain clauses fixing penalties upon the company for failure to fulfill its obligations to individuals. Failure to give transfers or other privileges to which all patrons of a street railway are entitled, wanton destruction or injury of trees in the street in front of property, interruption of service, injury to abutting property by the maintenance of a nuisance in the street, or the obstruction of free passage from the street to such property,— any or all of these and many other unjust things frequently done by public service companies may be made the subject of special franchise provisions that will make the bringing of civil suits by the injured parties more worth while. It would hardly be practicable, however, to fix in a franchise a scale of damages for personal injuries or general damages to abutting property by reason of the maintenance of the utility in the street. The amount of such damages can better be fixed by courts and juries following the usual processes of civil suits.

69. Special service for discommoded patrons.—When a street railway company establishes an amusement resort of its own at the terminus of a regular line of car service or when it merely connects its lines with parks or suburban resorts owned by private parties or by the city, the regular patrons of the cars are likely to suffer great inconvenience. The cars may all be crowded with through passengers when they

reach the points where the local passengers get on. A person selecting his residence for convenience to car service may suddenly find that by the establishment of a new resort, he has been crowded out of his accustomed seat. A franchise might well provide that in such cases, in addition to the through cars for accommodating the crowds, the company should maintain a local service especially for its local patrons. In the case of a gas company, it is necessary to maintain a higher pressure at the center of distribution in order that there may be adequate pressure in the more distant mains. The natural result is that consumers living in the vicinity of the holders are likely to have their gas pushed through the burners at so high a rate as to prevent complete combustion and thereby diminish the quantity of light furnished while at the same time the amount of gas consumed is largely increased. Provision should be made in the franchise requiring the gas company to install and maintain pressure regulators for the benefit of the consumers so unfortunately situated. In general, it may be said that wherever the regular service to the ordinary patron of a public utility is rendered especially unsatisfactory by unusual conditions over which he has no control and which result in advantage to other consumers or in profit to the company, special service should be provided for him, if possible.

70. Elimination of noise, dust, noxious odors, and other nuisances. — While the authority of the Legislature or the Common Council to regulate the service rendered by a franchise holding company under the police power is, in theory, ample to provide for the abatement of the nuisances of noise, dust, disagreeable odors, etc., it is well enough to cover these matters in the franchise itself. If that is done and the company accepts the franchise, there will be less likelihood of prolonged litigation in the Federal courts over attempted regulation that is displeasing to the company. The noise nuisance is one of the outrages of inefficient street car service. It can be prevented, or at least the noise can be greatly lessened, by requiring heavy rails laid upon a solid road-bed and specially supported and tied at the joints. On street car lines the continual thumping caused by cars falling from one rail on to the next can be heard for many blocks. When a heavy interurban car comes pounding down a fine residence

street at two o'clock in the morning, it has an unwholesome effect upon citizenship. Street railway road-bed and track construction are a permanent part of the street. There is no economy in cheap or hasty construction. Every city should reserve the right to supervise this work and compel its renewal whenever necessary. Nothing but the best should be tolerated. Heavy rails properly laid will not only prevent injury to the general public using the street but will go far toward correcting the noise evil. Useless noise is also made by cars whose trucks are not enclosed and by those that are out of repair. The remedy for this is to reserve to the city and the state the right of inspection and approval of street railway equipment and the right to compel repairs when needed. Street railways are also great dust breeders. During dry weather the swift movement of the cars keeps the dust constantly stirred up. The franchise should require the company to sprinkle its road-bed and a strip on each side as often as may be necessary to keep the dust down. Poisonous fumes from escaping gas may be for the most part suppressed by requiring the company to provide an adequate system for discovering and stopping leakage. The company's own interest, unless those in control are mere exploiters, will make it watchful for leaks in the mains, where every foot of gas that escapes is a direct loss to the company, but leaks in houses are likely to be viewed with complacency by the company inasmuch as the gas lost runs through the consumer's meter and is paid for by him. In the telephone service a nuisance is often created by the carelessness of operators in calling wrong numbers or cutting off subscribers in the midst of their conversations. Or the wires may roar because there is something wrong with the apparatus. Such annoyances cannot be guarded against with absolute effectiveness in the franchise, but the company should be specifically required not to maintain a nuisance and should be obligated to give an efficient service.

71. The furnishing of service made compulsory.—A company furnishing a public utility would often have it in its power to inflict irreparable injury on particular individuals simply by refusing to supply them. The opportunity to punish enemies in this way would be too great a temptation to tyranny to be lodged in government itself, to say nothing

of a private corporation. It is one of the fundamental requisites of a franchise that it should compel its holder to supply all applicants for service within its territory at the regular rates and on the regular conditions. A public service is not a private business. A franchise holder must know no friends and no enemies in its relations to individual citizens. But the refusal of a company to furnish service when demanded by a responsible citizen may be based not upon caprice or personal reasons, but upon the fact that the company's lines do not yet extend to the applicant's premises. In such cases, the question involved is one of expansion to meet the needs of the people. We have already discussed the requirement that lines should be extended into territory not yet profitable as a means of curtailing a company's monopoly profits while at the same time conferring public benefit. The question we are now considering is somewhat different. On account of stupid management or on account of inadequate financial backing a company may often neglect to extend its lines where it could unquestionably have a profitable business. The results are extremely damaging to individual citizens whose residences or places of business do not happen to be located in the district or along the streets already exploited. Whatever requirements are dictated by public policy in the matter of extensions of plant and fixtures in undeveloped and, for the time, unprofitable territory, there is not the slightest question but that the franchise of any public utility should be forfeitable if its holder fails either through incompetence or through wilful neglect to extend its lines and supply service in every place where the demand is sufficient to make it possible to do so without loss.

There are several possible ways in which extensions may be required. Gas, water and conduit companies may be required, as a matter of general policy, to place their fixtures in the streets in advance of permanent paving. This would often be in advance of demand for service, especially in the sections where real estate is platted for high-priced residences and street improvements are made in advance. In other sections, where population precedes paving, such a requirement would at least prevent still further delay in supplying any particular utility after the paving stage has been reached. If the question of probable profit is to be considered in con-

nection with the requirement of extensions, it is to be noted that the greater cost of construction after the paving is down may make unprofitable what otherwise would have been a very profitable extension. A franchise holder should not be permitted to take advantage of his own negligence in such cases, to the injury of would-be patrons. It is manifestly proper to require an extension for the purpose of supplying an individual applicant who is located within a certain fixed distance of already existing lines. This would apply to central heating companies and overhead telephone and electric light companies as well as to gas, water and conduit companies. Extensions of any public utility might be required when ordered by the city council, or the proper administrative officer of the city, or when the necessity and profitableness of the venture have been determined by a court or by means of arbitration, or when population in the district to be supplied has reached a certain density, or when the applicants are willing to guarantee sufficient business to protect the company from actual loss by reason of the extensions. In certain unusual circumstances individuals are even willing to pay the original cost of the extension in order to get the service. Certainly, under such conditions, the extensions should be made without further question. The extension of a telephone system to meet the demands of a multitude of possible patrons may be secured by requiring the company to adopt a schedule of rates, based on actual or estimated number of calls, that will lend itself to the development of the general use of telephones. In this case, injury to individuals by refusal to supply the service is to be prevented by a regulation of rate schedules rather than by a direct requirement to extend its lines.

72. Discrimination in rates forbidden.—In the preceding section it has been suggested that a public utility should be supplied to all applicants at established rates. This rule would not only prevent a refusal to supply particular applicants, but would prevent discrimination as between individual patrons. To begin with, we can certainly agree that rate schedules should be public so that every applicant for service shall be on the same footing as every other applicant in similar circumstances. Where this is not the case rank injustice is likely to be the result. Under the exigencies of competition, where there are rival companies in the

same field for a while, or when a new utility is first being developed, secret contracts are sometimes made to give service to certain influential persons or certain large consumers at special rates. Such practices should be absolutely forbidden and should work a forfeiture of the franchise. The enforcement of this condition will be easier, if the franchise provides for publicity of the accounts of the company, giving the proper city authorities on their own motion or on the complaint of any patron of the public service corporation, the right to examine all the books, documents and vouchers of the company relating to contracts and payments for service.

The difficult problem of discriminating rates as between different classes of consumers, based upon various theories of public policy and cost of service, has already been discussed to a certain extent in section 52. In this place we need only to emphasize again the public aspect of public utility business and the consequent importance of fixing rates, not entirely for the benefit of revenue and not entirely from the standpoint of cost of service, but from the standpoint of social necessities. It is profoundly important to the city and the state that the opportunities of all citizens should so far as possible be equalized. For this reason, there is a powerful argument in favor of a uniform flat rate for every consumer, or in cases where measured rates are necessary, a uniform rate per unit of use to all consumers alike. In a decision handed down October 6, 1899, Justice Mitchell of the Supreme Court of Pennsylvania, took the position that a company organized for the purpose of supplying natural gas to consumers for heat and light, was not authorized to charge different rates according to the uses to which the gas was put.[1] "The gas is brought by the company," said the Judge, "through the same pipes for both purposes and delivered to the customers at the same point, the curb. Thence it goes into pipes put in by the customer through his premises according to his convenience. The regulation in question seeks to differentiate the price according to the use for heating or light. It is not claimed that there is any difference in the cost of product to the company, the expense of supplying it to the point of delivery or its value to the company in the increase of business or other ways. The real argument seeks

[1] See the case of Rogers vs. Fayette Gas Fuel Co., 193 Pa. State Reports, 175.

to justify the difference in price solely by the value of the gas to the consumer as measured by what he would have to pay for a substitute for one purpose or the other if he could not get the gas. This is a wholly inadmissible basis of discrimination. The implied condition of the grant of all franchises of every quasi-public nature is that they shall be exercised without individual discrimination in behalf of all who desire" service.

The Massachusetts Board of Gas and Electric Light Commissioners in 1907 undertook an inquiry into the rates charged by the Edison Electric Illuminating Company of Boston, and the rules according to which this company worked out its schedule of charges to different classes of consumers.[1] The company had been attempting to base its rates upon "the cost of service." In its conclusions the Board stated that two considerations vitally affecting the relation of the company to its consumers had not received proper attention from the company. One of these considerations was that "a kilowat hour is now the established unit for measuring electricity," representing the definite amount of electrical energy that will do exactly the same amount of work for one customer as for another. The second consideration which the Board called to the company's attention was the fact that during the past two decades the use of electricity for light and power had increased with great rapidity and that to serve the needs of the community and to promote the public welfare and convenience the company had been given substantially exclusive privileges to extend its lines throughout the territory supplied by it. "The company has therefore a public duty to perform," said the Board, "and is bound to discharge this duty for the equal benefit of all. It is also to be remembered that it has but one service to render its customers, namely, to supply them with electricity. The company conceded that it cannot, consistently with its duty to the community, supply A and refuse to supply B, both being within reach of its lines. It is equally clear that to charge A one price and B another for the same service under like conditions is a violation of duty. In a proper conception of the nature of this duty mere difference in size of customers

[1] Twenty-fourth Annual Report, 1908, pp. 20–50.

does not in itself constitute such a difference in conditions as to justify a difference in price. * * * *

"If all the customers of a company were dependent upon it for a supply, it is believed that there would be little occasion to discuss or attempt to justify differential rates, and that a uniform meter rate determined by reasonable operating costs and a fair return on the investment reasonably necessary for the public convenience, would prevail universally. It may be conceded that, if the uniform meter rate prevailed, there would be some unprofitable customers. This may be predicated with truth of any system of rates for a public service. The Board is of the opinion, however, that this view of such a rate is exaggerated, and that in any event it is likely to result in no greater amount of injustice than the attempt to make every customer theoretically, if not actually, profitable. There can be no more desirable requisite for every public service charge than that it shall be simple, definite and readily understood and applied."

The Board then took up the question of so-called "non-contract lighting rates," which prevailed in the case of customers who could readily supply themselves with light or obtain power from some other source than the company. "To such customers the value of the service furnished by the company," said the Board, "will depend to a considerable extent on the probable cost of supplying themselves. If the company is to supply them, it is subject to the ordinary rules of business competition,—it must meet prices established by conditions which it does not create and cannot control, or not do the business. The prices which an electric light company must thus meet or not do business are determined not by an open market, but largely by individual conditions which differ widely with different customers. * * * * The question arises whether or not the existing practice of the company in respect to its prices for business of this character is so far inconsistent with its recognized duty to serve all without discrimination that it should no longer be tolerated.

"In considering these questions it must not be forgotten that the advantage enjoyed by a customer whose use of electricity will warrant the installation of his own supply of electricity or power is one which the company cannot prevent. It is equally to be remembered that there is always a strong

temptation to the manager of a public service, if unrestrained, to maintain a high rate for business which he controls while making disproportionate concessions to get that which can take care of itself. Experience is also making more and more evident that the duty of one who undertakes a public service must necessarily deprive him of the right to base his policies upon many practices common to and even commendable in private business.

"In reaching out for additional business by making concessions from the average rate, it is plain that the only justification for permitting the continuance of such a policy is that this additional business will be for the benefit of the large body of customers who must pay the regular rate. For it is not the advantage of the few but rather the advantage of the many which should be the controlling test."

The Board concluded that in the present development of the company's business it might be of substantial advantage to the average consumer to permit the special rates necessary to enable the company to secure the business of the large consumers, although recognizing "the danger of abuse in permitting concessions to some customers not granted to all." The Board nevertheless recognized as existing "certain economic conditions attending the sale of elecricity which, in the interest of the many whose needs and convenience the company should serve, seem to warrant continuance of certain differences in prices, not as a permanent policy, but until the uniform rate recommended can from time to time be safely reduced so low as to be in itself an encouragement to the unrestricted use of electricity for all purposes."

73. Inspection of meters and records of use.—A flat rate is usually charged for street railway transportation, the fare being payable in advance. In the larger cities, however, there is a slight tendency toward the so-called "zone system," and in cities both large and small the tendency toward universal free transfers has not always prevented double fares being charged where there are two operating companies, although both companies may be controlled by the same interests. It is only on the steam roads and the interurban lines that rates are charged approximately in proportion to the distance traveled. For these reasons it is unnecessary to provide any special device for measuring the service rendered

to each particular patron of a street railway. The same is true of telephone service in the smaller cities where flat rates prevail, and of water supply where rates are fixed according to frontage and number of fixtures. However, when it comes to gas and electricity for light or power, or to telephone service in the larger cities, some measuring instrument or recording device is required in order to show what the company should charge its patrons in their monthly, quarterly or semi-annual bills. So far as telephony is concerned, each subscriber can, if he takes the trouble, keep track of the number of calls given through his instrument and the number of conversations had. In this way he can check up the company's count. Nevertheless, it is a great deal of trouble for him to do so, and he would much prefer an adequate recording device which would itself keep the count without being subject to successful manipulation by the company. Efforts are being made to supply devices that will come as near to meeting this requirement as the nature of the business permits, but the whole matter is still in the experimental stage. In the case of water, gas and electricity, however, the individual consumer has no means of measuring the amount of the commodity he uses. He must depend upon the company's meter. A meter is a delicate instrument subject to derangement at any time and therefore needing comparatively frequent inspection. The meter is furnished by the company and remains the company's property. It is set, read and maintained by the company. The consumer has no means of knowing whether it is registering properly the amount of the commodity consumed by him except by comparing his bills with those of other people or with his own at some previous time. He can only roughly estimate the amount he uses. It is manifest that the consumer's interests need to be protected, for inevitably the power of one party to the contract to fix his own compensation under it will sometimes be abused. It is necessary therefore to provide in franchises and regulatory statutes, that the types of meters to be used by the public service corporations shall be subject to the approval of the civic authorities. It should also be provided that any citizen believing himself aggrieved shall have a chance to appeal to some public authority for a testing of the meter. There are doubtless many complaints the only excuse for which

is in the consumer's own carelessness. To limit the expense and bother of attending to such complaints, the simple device is sometimes adopted of requiring the consumer who wishes his meter tested to pay a fee of fifty cents or a dollar which will be returned to him if his meter is found to be more than a fixed amount, say two per cent, fast. It is one of the humors of the business that consumers whose meters prove, on testing, to have been slow sometimes become very anxious to get them back. It is also sometimes provided that all meters shall be individually inspected and sealed by the public authorities before being set for use.

74. Standard quality of service required.—One of the readiest faults of monopoly is that, freed from the disagreeable stimulus of competition, it will lapse into carelessness about the efficiency of the service it renders. This lack of efficiency may take any one of a thousand forms. If it is the telephone business we are dealing with, the "hello" girls may become insolent or heedless; connections may be cut off before conversations are finished; lines out of commission may not be promptly repaired; lines may be reported as "busy" when in reality it is the operators who are busy; the company may refuse to supply adequate fixtures, and so on. Such delinquencies cannot be prevented by a few words in a franchise unless those few words are directed toward reserving to the city the right to supervise service and compel corrections where complaints are found to be justified. One very important item in good telephone service is the rule that the operator should notify the subscriber as soon as another subscriber's line with which he desires connection ceases to be busy. In Chicago, the Special Telephone Commission of 1907 found that 42,000 telephone inquiries for the "time of day" came into "central" within twenty-four hours. It is doubtful how far such inquiries should be encouraged, but it can readily be seen that an exacting public might set the standard of good telephone service very high. It is desirable that the telephone company should be prepared to render all possible assistance in transmitting calls to the city fire department, to the police, to physicians and to hospitals.

On street railways the standard of service may be forced up by a multitude of different regulations, such as through routes, transfers, more frequent service, seats for all, more

rapid transit, better heating and ventilation of cars, courtesy on the part of conductors, a smooth road-bed and tracks kept in repair, muffled wheels and other devices to lessen the grinding, shrieking noises of the trolley line. Some of these requirements can be provided for specifically in the franchise grant, but many of them can be secured only through constant regulation and supervision.

In the supply of gas and electricity, the companies may inflict injury upon individuals by furnishing poor light or intermittent service. Perhaps in the case of gas the pressure may be too great for the lamps or too little for the gas range. Such difficulties may be met by franchise requirements or ordinance regulations fixing the candle-power of the gas or the electric current; by regulating the pressure and heat-giving qualities of the gas; by requiring duplicate machinery to provide against a break-down in the supply of electricity or water as the case may be. In general, the franchise should provide for continuous service and high-grade efficiency.

75. Safety regulations made and appliances required.— After all, though the patrons of a public utility may be seriously inconvenienced and even financially injured by inadequate service and corporate indifference, the danger requiring the most careful attention is the danger of killing people or maiming them as an incident to the performance of the service. Indeed this danger is not limited to patrons of the utility, but extends to the general public as well. While it is true that an infected water supply will not directly injure anybody who does not drink of it, yet the universality of the uses of water and the free way in which it is distributed practically make it impossible for any citizen to be sure of avoiding infection if the general water supply of the city is laden with typhoid germs. It is still more obvious in the case of electric railways and systems of distributing electric light and power that the danger has little or no relation to the question of use of the service. A broken wire in the street will electrocute a man if he touches it whether or not he has electric light in his house. A two-year old baby who never gets farther from home than the other side of the street is as apt to be run down by a passing car as is the workman who boards the car twice a day going to and from his work. "Dead Man's Curve" and "Death Alley" in New York did

not receive their names from the risks passengers run at these points. On the other hand, the telephone user has an extra risk, not shared by the public, of being shocked or killed when the wire comes in contact with a high tension wire through somebody's carelessness. In 1902, there were 1218 persons killed and 47,429 injured by street and electric railways in the United States.[1] These unfortunates, if established in a colony by themselves, would make quite a city-full. Of the 1218 killed, only 265 were passengers and 122 employees; while of the 47,429 reported injured, 26,690 or considerably more than half were passengers. These figures would indicate that there is more likelihood of accidents being fatal where cars strike people who are on the tracks than there is when the injured are riding on the cars. There are two or three primary requirements for safety in connection with street railway transportation. Fenders or wheel-guards must be provided to pick people up or throw them off the track and prevent them from being ground to death under the wheels. Speed must be limited, especially in narrow or crowded streets, so as to give people time to get out of the way. Brakes by the use of which the cars can be stopped very quickly, must be provided. The writer's attention was once called to the statement of an experienced motorman in a large city to the effect that the air brakes with which the cars were equipped were often out of repair so that only one, or two, or three of the four brakes would work at all. He explained that motormen got censured for sending their cars to the repair shop if only one or two brakes were disabled. He asserted that with all four brakes in good order a car could be stopped in its own length, while as a matter of fact with a part of the brakes not working, it took the motormen half a block to stop. The state of affairs described by this motorman is criminal.

With electrical companies, the thing to be provided for is proper insulation and a sufficient number of poles, if overhead construction is used, to minimize the danger of the breaking of the wires. As in many other things we have discussed, so in this matter of safety appliances and regulations, the only thoroughly effective way to handle the problem is

[1] "*Street and Electric Railways, 1902*," issued as a special report of the Bureau of the Census, p. 15.

not by elaborate franchise provisions, but by reserving to the public authorities the right of regulation to be exercised from time to time as occasion may require. It is also important that in the matter of high tension wires construction work be subject to inspection and approval by the proper city official. Types of fenders, brakes and other safety appliances should be subject to public approval before they are generally installed.

76. Requiring underground construction.—The removal of overhead wires from the streets has advantages in two directions: safety and civic beauty. The presence of a network of telegraph, telephone, electric light, electric power and trolley wires suspended above the streets in a great city is a constant menace to individual safety. If the wires break or get crossed or through any mischance a person comes in contact with them, serious personal injury or even death is likely to be the result. Furthermore, the presence of the overhead wires in the street in front of a building is likely to hamper the firemen in using their apparatus to put out fires, and may therefore be responsible for the destruction of the building. A movement to force the wires underground in congested centers of population began nearly thirty years ago at the time when the heavily charged electric light wires began to multiply. This movement did not succeed until after a tremendous struggle with the companies. It is now a well-established policy, however, in large cities and cities that hope to be large to include in new franchise ordinances to telephone, telegraph and electric light and power companies a clause requiring the grantees to put their wires underground within certain specified districts. The franchise may fix the date before which this work must be done; or it may simply provide that the work shall be done when required by resolution or ordinance of the city council; or it may reserve to the council or the administrative board or officer in control of the streets the right to require the wires to be put underground in additional districts to be delimited from time to time. Sometimes the policy adopted is for the city itself to build conduits and force the companies to use them on payment of a suitable rental. In other cases a special conduit franchise is granted to a company which is required to furnish underground space for the use of all wire

companies occupying the streets. The placing of wires underground is an expensive operation, especially in streets where excavation is difficult or where the soil is already occupied by a miscellaneous aggregation of underground structures. Sometimes the space under the sidewalks can be used for this purpose, although in other cases this may prove impracticable because the city has already given to abutting property owners the exclusive use of this space for area ways and storage vaults. This leads to the observation that such grants to property owners should always be revocable at the pleasure of the city authorities, or at least should reserve to the city the right to use the space so far as needed for the installation of conduits by itself or by a company to which a conduit franchise has been granted or which is required to place its wires underground. A much more difficult problem is presented in the removal of overhead trolley wires and the substitution of the underground electric system for the propulsion of street cars. For this change separate conduits in certain definite locations provided with slots and extra iron work in the surface of the streets are required. This system of construction is so expensive that it has never been enforced on a large scale in this country except in the city of Washington and on Manhattan Island in New York City. While it is not considered necessary at the present time to enforce the adoption of the underground system for street railways except in the most congested centers, care should be taken in granting any street railway franchise that is to run for a considerable period of years, not to authorize the continuance of the overhead system for the whole period without regard to future exigencies. The hardship involved in the extra cost of original construction where wires are placed underground is somewhat mitigated by economies in maintenance where the wires are safely housed in conduits and there are no poles to rot or be blown down.

77. Special training of employees required.—It is a common thing for street railway companies to be required by their franchises to employ prudent and careful motormen and conductors. Telephone companies might well be required to employ skilful and courteous "hello girls." In general the interests of the companies and of their patrons are identical so far as the desirability of the employees being

skilful and courteous are concerned. If the companies are controlled by men primarily interested in rendering the service for which the franchise is given rather than in looting the property and building up great personal fortunes by manipulation of securities according to the approved method of grand larceny or as Mr. Bryan has termed it, "glorious larceny," there will be very little need of detailed franchise provisions or regulations by law or ordinance describing the qualifications necessary for street railway motormen and telephone girls. Nevertheless, until the holders of a franchise really get it into their heads that they are conducting a public business and are responsible for its conduct to regularly constituted public authorities, there will always be a chance that a conductor may start a car while passengers are getting off or on, or that a telephone operator will cut a subscriber off while he is in the midst of a conversation, or that an electric light lineman will "butcher" a beautiful shade tree in order to put a wire through. For the construction and operation of public utility plants, the highest grade of skilled service, with reference to the nature of each particular piece of work, is required. In the organization of modern society, each individual is compelled on many occasions to place his life or his property in the power of persons over whom he has no direct control. It is the business of the city or the state, in granting franchises and regulating their use, to protect the individual citizen against the danger of injury at the hands of incompetent, careless or capricious persons employed to occupy these positions of trust. In the nature of the case the multiplication of the agencies of danger in modern life, coupled with the inevitable carelessness of some members of the public and the helplessness of others, will result in many tragedies. It is intolerable that the number or seriousness of these should be increased by corresponding carelessness or inability on the part of those directly charged with operation of these agencies of danger. It is well, therefore, that the natural interests of a well-ordered public service corporation should be bolstered up by specific franchise provisions requiring the employment of only skilled men to occupy positions requiring skill. This is all the more necessary, as aldermen and politicians sometimes try to bring under their own control the patronage of public service

corporations. Indeed, the importance of this matter would justify, if deemed necessary, the establishment of civil service rules and the preparation by a publicly constituted commission of lists of eligibles for appointment to places in the service of the public utility companies operating under franchises.

78. Easy identification of responsible company required.—Public service corporations, especially street railway companies, are undoubtedly made the prey of numberless petty lawyers who make it a business to work up damage suits against them. Possibly it is this fact that has led operating companies in some cases to cloud the evidence of their responsibility by a tangled web of paper agreements and intercompany contracts. For example, most of the street railway mileage of Brooklyn, as well as a number of old steam roads now operated by electricity, are owned by companies whose stock is held by the Brooklyn Rapid Transit Company, a business corporation that has no right under the law to operate a car. As a matter of fact there are seven operating companies in the Brooklyn Rapid Transit System, besides a subsidiary company which furnishes power and equipment for the operating companies. The caps of conductors and motormen on all the lines are marked "B. R. T." and the cars are marked in large letters "Brooklyn Rapid Transit." In some cases the initials of the company owning a particular car may be found on it, painted in small letters in an inconspicuous place, but even this designation has no reference to the actual responsibility for the operation of the car, for it may be at the time in use by an entirely different company. To make matters worse, on through lines, both elevated and surface, from the Brooklyn Bridge to Coney Island, responsibility for operation is transferred from one company to another without any change of cars or employees and absolutely without any sign to notify passengers of their transfer from the custody of one corporation to that of another. If a person receiving an injury brings suit for damages against the wrong company, his case is thrown out of court. The situation in other parts of Greater New York, though not exactly the same, is similar. Indeed, the confusion extends to the gas and electric companies, which, though maintaining many separate organizations, are for the most part controlled

and in some cases are actually operated, by certain big central companies. Such a condition of affairs is intolerable from any reasonable standpoint. A clause should be inserted in every public utility franchise requiring that the grantee, on pain of forfeiture, should place on record with the proper city authorities the proof of any assignment of the franchise or of any lease or contract for operation under it. This clause should also provide that every employee engaged in the operation of a public utility or in the maintenance or repair of a public utility plant should carry in a conspicuous place on his person the name of the company employing him and upon which the public may place responsibility for his acts. It should also be required that every car in operation, every pole maintained in the streets, every meter used and every other important instrument used in connection with a public utility should bear in a conspicuous place the name of the company that is legally responsible for its operation, maintenance and repair. In the case of passenger cars, along with the name of the operating company, its official address and the names of its president, secretary and general manager should be given. A franchise should also provide that in case of its assignment to or ownership by any person or company holding other franchises covering part or all of the same territory for the same kind of service, the owning or operating company shall file with the city authorities from time to time a statement of exactly what fixtures are constructed and operated under each franchise held by it. The purpose of these various provisions is that any citizen or public official shall be able to ascertain with the least possible trouble just what company is responsible for the operation of any particular utility at any given time and place, and just what franchises for any particular utility are outstanding, who owns them and to what extent each one of them is in use at any given time. This is a matter of such grave importance in clarifying the relations between the city and the public on the one side and the companies on the other that it should never be neglected in connection with any franchise grant of any kind.

79. Interference with other users of the streets.—The amount of space in, over or under the streets available for various uses is obviously limited. This fact constitutes one

of the chief elements of value in old franchises under which gas pipes, for instance, were laid many years ago, before the streets were crowded with subsurface structures and perhaps before expensive pavements were laid. Indeed, the physical value of gas pipes, based upon the cost of reproduction less depreciation, may be greater than it was when the pipes were laid a generation ago. This increase of value may be due in part to increased cost of iron piping, higher wages, etc., but it is also due in large part to the increased difficulty in finding a place for pipes and the increased cost of readjusting the pipes and other fixtures already laid and of cutting through and relaying expensive pavements. It is a well-established rule of franchise interpretation that in spite of this obvious advantage, the company first in the street is entitled to undisturbed possession of the space it necessarily occupies. For this reason new franchises are granted on condition that the grantees shall not unnecessarily interfere with fixtures already in the streets and shall bear the cost of relaying or rearranging them wherever they have to be moved in order to make room for the new fixtures. This rule is obviously unjust to new companies, whether they are companies proposing to compete with those whose fixtures are already down, or companies proposing to install new kinds of public utilities. The fact that gas has been in use for nearly 100 years while electricity for lighting was introduced hardly thirty years ago is no reason why gas pipes should have any preference of position over electrical conduits, or why the newer utility should bear the whole cost of finding a place for itself in the streets while the older utility enjoys an income sufficient to pay a reasonable return on the present value of its plant which has enormously appreciated just on account of the increases in the number of uses of the street. All franchise utilities which are of equal importance to the public should have equal privileges in the streets without regard to priority of time. This means that if an old gas company's pipes have to be moved in order to make room for conduits, water pipes or underground street railway construction the gas company should bear at least a portion of the expense of getting out of the way. If the city had sufficient foresight to apportion the space beneath the streets from the beginning and reserve adequate free spaces for all new uses, the problem of read-

justment would not arise. But even with the exercise of the highest degree of intelligence, foresight can make only approximate provisions for the needs of the future. The city should, of course, keep detailed maps showing the location of all fixtures under the streets. All new fixtures should then be placed in locations assigned to them by the proper city authorities, and if old fixtures have to be moved the expense should be apportioned between the old and the new companies. In order that there may be no difficulty on this point, every franchise should reserve to the city the right to determine the locations of the fixtures to be laid in the streets, and to change such locations from time to time when necessary for the accommodation of other grantees having rights in the public ways, the cost to be borne in the manner already suggested. Every company should be required as a matter of course to settle for any wanton, careless or unnecessary damage it does to the fixtures of another company already in the street. Special attention should be given to the matter of electrolysis. The injury inflicted upon underground pipes by the passage of heavy electrical currents along them is so gradual and so difficult of discovery that it is not sufficient to require the company whose current does the damage to pay for it when the extent of it has been ascertained. In addition to this requirement provision should be made to prevent the injury by the proper binding of the rails of electric railways and for other devices calculated to confine the return electric current to the channel provided for it by the company to which it belongs. A stray current of electricity dodging around through the ground finding its way back home as best it can is a decidedly dangerous factor in the underground world. In the case of electrical conduits a company receiving a franchise first is sometimes required to construct more ducts than it needs for its own use and to reserve the excess number for the use of the city or another company which may receive a franchise later. In case another company uses them it is required to recoup the first company for their proportionate cost. The duplication of street railway tracks in any particular street is seldom admissible. A new company receiving a franchise would not be justified in constructing new tracks that would interfere with the use of tracks already there. To provide against

such a contingency two or more companies are sometimes given the right to construct the tracks jointly and use them in common, or one company is given the right to use the other company's tracks upon payment of part of the cost of construction and maintenance, or the city reserves the right to permit other companies in the future to use the tracks upon payment of a proper rental. In like manner a company when authorized to establish a line of poles in the streets may be required to make provision for the wires of the city or of other companies. It is undisputed that the number of independent structures in the streets should be kept down to the minimum dictated by the uses to which they are to be put. It is, therefore, a matter of importance that every franchise should provide for the joint use of fixtures wherever possible and should reserve to the city the right to extend such joint use in the future as new companies or new utilities are admitted to the streets.

Before closing this section we should speak of the relation of street railway companies to the owners of ordinary vehicles. While it is entirely appropriate that a street car should have the right of way on the street railway tracks as against all other vehicles, it is unfair to truck-men, cab owners, etc., to admit street railway tracks to any street that is too narrow to permit the passage of ordinary vehicles on either side of the tracks without interference from the cars. In other words, while a special use naturally limits the general use of a street, it should not go to the extent of making the general use impossible. In like manner, poles should not be permitted in streets where they would obstruct the passage of ordinary vehicles. There is a way in which street cars may get around this difficulty of an obstructed passageway. The particular means referred to is sometimes used in the down town streets of New York City, where the horse car still survives the impact of modern civilization. When one of these horse cars finds its tracks occupied by a particularly persistent line of trucks, the driver warns the passengers to hold fast, swings his team out to one side and makes a detour with his car away from the tracks, bumping along over the pavement, till he is past the obstruction, when he swings in again to his ribbons of steel. Street railway tracks, if improperly constructed, are likely to cause great damage to

ordinary vehicles by catching their tires in the groove of the rail or by causing the wheels to slue around when crossing the tracks diagonally if the rails are not "flush" with the pavement. A franchise should among other things reserve to the proper city authorities the right to approve or disapprove the type of rails to be used and the manner of laying them in the streets. To summarize this whole problem, no person or company should be granted an absolute privilege in the street to be used without reference to the rights of the general public or of other special users of the street, present or future. Injustice cannot be prevented except by preserving to the city the continuing right to readjust and harmonize all these special and general uses.

80. Limitation of obligations that may be imposed upon consumers.— Gas and electric light companies are sometimes unable to collect their bills for light furnished to houses occupied by transients. This difficulty has led to the requirement of deposits in advance from their new patrons. While this plan has been devised to meet a real grievance, it often happens that the deposit required is so large as to cause inconvenience and injustice to poor men who can ill afford to tie up the money in advance of the use of light. Sometimes the deposit requirement is remitted to applicants who are introduced by financially responsible parties. It is desirable either that the amount of the deposit which a company may require of its consumers should be limited in the franchise or that the power to limit and prescribe the conditions relating to it should be reserved to the city. In all cases the company should be required to pay interest on these deposits.

Another source of trouble to patrons is the requirement by the company, before the service will be installed at all, of a contract to use the service for a certain minimum period, perhaps a year. The American people are frequent movers and many of them are unable to foretell with any degree of certainty where they will be living at the end of a year. While it is true that a service installed for a few months and then removed is likely to be a loss to the company, it is likely on the other hand that a service once installed in a building will continue to be used indefinitely, even though the personnel of the occupants of the building changes many times.

Except in unusual circumstances and where extraordinary expense is involved, the company should not be permitted to require a contract for any definite period, at least not for any period extending beyond, say, three months. In telephone service, paid for at so much per call, the subscriber is often required to guarantee and pay for a minimum number of calls each month. If a subscriber's calls run far below the average for a month or two, on account of his absence from home or other cause, upon payment of the minimum guarantee he should receive a credit to apply on calls which he may use in excess of the minimum in succeeding months. The same policy may be followed with reference to minimum or "meter" charges for water, gas and electricity, although the injustice of the opposite policy is not so glaring in the case of these utilities, for the reason that the companies have to go to the trouble of reading the meters, or attempting to do so, whether the amount of the commodity consumed is great or small. Public utility companies should not be permitted to impose obligations upon the consumers, either by requirement of excessive deposits, by onerous contracts or otherwise, that will do substantial injustice to any class of consumers rich or poor. Every utility should be conducted in such a way as to encourage the widest reasonable legitimate use of it among all classes of the people.

81. A tribunal for hearing complaints.—Every active public service corporation comes into direct relations with multitudes of people who as shareholders in the city that granted the company's franchise, have the right to receive first class service at reasonable rates. While it is possible in the drafting of a franchise to foresee and provide against many difficulties that would otherwise arise to plague the company and its patrons, there are many other difficulties requiring minute adjustment that cannot be foreseen. As the relation between the companies and their patrons is a continuing one, and as the burden of protecting the latter from the effects of the monopoly created by the city or state rests continuously upon the public authorities, it is practically essential that some administrative office or tribunal should be established where the people's complaints may be heard and adjusted. In some of the commonwealths special commissions have been established for this purpose.

In Seattle a local utility commissioner has been appointed with certain powers in this direction. In the absence of such authorities established by statute or ordinance independently of the terms of existing franchises, it might be well in all new franchise grants to make provision for a board of arbitration or some other properly constituted authority to which patrons of the company operating under the franchise may take their grievances. If this plan is embodied in the franchise as one of the conditions of the contract the decisions of the tribunal so established will be more readily enforced than they can be where the tribunal is established without the consent of the company. If the tribunal takes the usual form of a board of arbitration where one member is appointed by the city, one by the company and the third selected by these two, the city should reserve the right to withdraw its representative and substitute a new one at any time, but in case of any such change, the third arbitrator, if not satisfactory to the city's representative should be removed and replaced by another appointed in the same way as the one removed. This precaution is necessary on account of the well-known fact that occasionally the official representatives of the city turn out to be unduly sympathetic with the claims of the corporations upon whose affairs they are required to pass, while on the other hand it is practically an unheard-of thing for the official representatives of a company to betray their employer's interests on account of a secret leaning toward the public's side of the matters in dispute. Moreover, the companies enjoy the right to displace their representatives at will. It would be better, however, to have the third arbitrator appointed by some impartial authority, such as a court or the governor of the state or a state administrative body.

CHAPTER V.

TEMPTATIONS TO PUBLIC WRONG, AND WAYS OF OVERCOMING THEM.

82. Activities of public service corporations that run counter to the general welfare.—"Graft is treason," said Joseph W. Folk, after prosecuting the St. Louis boodle cases. He had discovered that public service corporations seeking franchises in a great city and aldermen having power to grant them often yield to the temptation to conspire together as public enemies for private profit. It is of the very essence of treason to permit sordid private interests to outweigh a citizen's loyalty to the general welfare of his country.

We have discussed at some length the various ways in which companies holding monopoly franchises, unless carefully restrained, may inflict injuries upon the persons or property of individuals. We have also suggested certain provisions of franchise and statute by which these injuries may be prevented or remedied. It now remains to consider the various ways in which persons and corporations holding franchises are likely to act contrary to the general welfare of the community. A tragic story might be written of the

temptations of public service corporations. The temptations of Adam and Eve were nothing as compared with these. Organized for profit and thereby adopting the ruling passion of a sordid age as the sole guiding motive of their activities, these corporations have found themselves relieved of the restraints of conscience and personal feeling which often hold in check the greed of individual men. Left in this defenceless condition, these corporations have been led to view all their relations from the standpoint of those who, craving money alone are keenly alive to the power which money has to secure objects not to be had through persuasion and appeal to lofty motives. Under these conditions, it is hardly surprising that public utility corporations have come to be regarded as one of the main instruments of municipal corruption and inefficiency. Upon this point I can quote no higher authority than Mr. Walter L. Fisher, of Chicago. He says:[1]

"The attempt to control and regulate street railways, gas, electric light and telephone companies has, on the whole, been unsuccessful, because of the powerful special interests which have either controlled or strongly influenced the governing party in power in the community. The chief sources of corruption in American cities are necessarily public contracts, and the granting of special privileges or exemptions. As a matter of fact the latter has been the most important contributory cause. There have been many and great abuses in connection with public contracts, but the most serious scandals have almost always been connected with, or centered around special privileges, and chiefly public utilities. Those who seek special privileges have been most likely to offer illegal inducements to the public official who has power to grant these privileges. They have been the most obvious and alluring victims of the predatory 'grafter.' They create and maintain a continuing lobby —always defensive and frequently offensive—because they have a constant incentive through their necessary relations with the public authorities. A contract or the securing of a contract on unfair terms invites occasional corruption; a franchise usually involves the continuous maintenance of a 'sphere of influence' in the city government.

"Not only is this true, but the corruption of city government for the purpose of obtaining valuable special privileges at little cost has had the effect of demoralizing municipal government for other purposes. Public officials who can be relied upon by special interests to give away franchises or other privileges, cannot be relied upon by the people to provide an effective and honest police force, or high grade street paving, or adequate street cleaning, or any other elementary function of city government. On the other hand, aldermen and city officials who can be relied upon to furnish strong and energetic administration of public affairs, cannot be relied upon by the corporations or individuals concerned to grant special privileges upon terms unduly favor-

[1] "*The American Municipality*," published as a part of the Report of the National Civic Federation Commission on Public Ownership and Operation, Part I, Volume I, p. 38.

able to them. Since it is practically impossible to isolate the different departments of city government, the contamination of one has tended to affect all the others. In any study, therefore, of the relations between the American city and the public utility corporations, it must be borne in mind that one of the reasons for the weakness of American city governments has been the very action of these very special privilege interests themselves."

With these words ringing in our ears, we may proceed to take up in some detail the various evil tendencies of franchise-holding companies, and ways in which these tendencies may be checked, so far as the remedies are germane to a discussion of municipal franchises.

83. Opposition to decency and public order.—Mr. Fisher names public contracts and public franchises as the two principal sources of municipal corruption in this country. In a somewhat different way, working through the police, the prosecuting machinery and the local courts, the organized liquor interest in connection with organized gambling and vice has been an equally important factor in the corruption of American cities. At any rate, the hiatus existing between the laws on the statute book regulating the sale of liquor and prohibiting vice and gambling on the one side, and the actual manner in which these interests have been treated by the public authorities charged with the enforcement of law has been an open door to corruption and disrespect for law and order. Indeed, the question of the "open town" has more often than any other been recognized as the dominant issue in municipal politics in America. Without attempting to decide here whether or not the laws and ordinances whose enforcement has been so bitterly resisted are wise regulations, we may at least affirm that their presence on the statute-book attended by their non-enforcement has been a calamity of the first magnitude. On this issue of law-enforcement, it is frequently observed that many large business interests in a city lend their influence more or less directly in favor of a so-called "liberal" policy, otherwise designated as the policy of the "open town." It seems to be the feeling of these business interests that a strict enforcement of the laws closing saloons at 11 P. M. or midnight and all day on Sundays, holidays and election days, and a consistent effort to stamp out gambling and organized vice, tend to "hurt business." The members of the sporting fraternity are

recognized as good spenders, and what business men desire, of all things, is a city full of people who are free with their money. Then it has been argued by the business interests that excursions do not come as readily to a puritanic city as to one where "high jinks" are being performed all night and all day, seven days in the week and twelve months in the year. There is no doubt that on many occasions in many cities the "open town" policy has developed into a scandal and a disgrace, corrupting to citizenship and to officialdom alike.

The public utility corporations are everywhere influential factors in the business world and especially influential in politics because of the close relations they bear to the public authorities through the operation of franchises in the streets. For certain financial reasons some of these corporatons are frequently found to be in sympathy with the "wide open" policy. A street railway has to be operated seven days in the week and in the larger cities all night long. The profits of the enterprise depend largely on the stimulation of traffic at odd hours. A crowd of people in town of a Sunday means profit to the street railway. A bunch of revellers going home in the wee small hours makes the "owl" cars profitable. A resort on the outskirts of the city where people go in throngs evenings, Saturday afternoons and Sundays is a wonderful asset for the railway. Gas and electric companies also find that saloons and public resorts, open all night, consume a great deal of light at those hours when few other places want any light and consequently the service can be rendered cheaply. There is no way in which the companies can be directly prevented from throwing their political and business influence in favor of the policy which they may deem most profitable to them. It is possible, however, to curtail the temptations of street railway companies by a franchise provision stipulating that they shall not have any interest directly or indirectly in the establishment or maintenance of amusement resorts. Such a provision could probably be made reasonably effective with full publicity of corporation accounts. The companies may exert their influence in favor of a general "liberal" policy by contributing to the campaign funds of "liberal" candidates and by bringing pressure to bear on employees to support such candidates.

Where the old caucus and convention system is still in vogue the companies may influence nominations by the devious ways so often pursued in such matters. Furthermore, through their financial connections the companies may bring great influence to bear in shaping the policies of newspapers and business organizations. How to prevent such activities will be discussed in later paragraphs.

84. Bribery of public officials.—The extent to which public service corporations have debauched officials and deadened the public conscience by means of direct bribery will never be known. This is a secret offence and both parties to it are guilty of a crime. They keep still about it except under extraordinary circumstances. But the actual confessions and convictions of bribers in New York, St. Louis, San Francisco, Grand Rapids and other places, and the knowledge that similar conditions have apparently prevailed at one time or another in practically all large American cities, have satisfied the public that direct bribery in connection with franchise-grants has been in many localities at many times an established policy of public service corporations. The story of the Broadway franchise scandal in New York City twenty-five years ago and the decision of the New York Court of Appeals to the effect that the franchise secured by the wholesale purchase of aldermen could not be abrogated by the legislature, but remained a valid grant even after the dissolution of the company that secured it, still remains a conspicuous milepost in the shocking annals of corporate corruption and judicial acquiescence. The mind cannot be reconciled to it. It is unnecessary to dwell further upon the extent of bribery or its poisonous effects upon the body politic. "Graft is treason" expresses the dreadful character of the crime.

How can bribery be prevented? Indeed, if bribery is at work among the aldermen, there is no need of discussing what clauses may be inserted in the franchise to prevent bribery. An alderman with his "price" in his pocket and the guilt on his soul will not be likely to take any interest in suggestions as to how he may protect the interests of the city he has already betrayed. But it often happens that some honest men vote for a franchise which is passed with the help of purchased votes. In any franchise there can be inserted a clause to which honest men do not desire to object, and which

rogues dare not openly oppose. I refer to a clause providing that the franchise shall be forfeited in case bribery is ever proven in connection with its passage or in connection with operation under it. Such a clause in a franchise or still better such a provision in the general law concerning the grant of franchises would help to undo the evil done by the New York Court of Appeals in the Broadway case and would take away the strongest motive for the purchase of votes in connection with a franchise grant.

Another plan tending to eliminate bribery by making it ineffectual is the inclusion in each franchise or in the general law relating to franchise-grants, of a clause reserving to the electors the right to pass upon the grant, either absolutely or on condition that a certain number of citizens petition to have the measure submitted to popular vote.

Another means of preventing bribery is the insertion of a clause in the franchise providing for complete publicity of the grantee's accounts. If this provision is sufficiently comprehensive, corrupt expenditures can at least be traced to the point of suspicion.

As a matter of general policy to be embodied in the general law, not in the franchise, it might even be a good thing to grant immunity or a minimum punishment to either party who "informed" on the other. Such a law would tend to divide the interests of the two parties to the crime and make them suspicious of each other and afraid to consummate the transaction.

85. Free service to public officials.—Many public officials whose standards of ethics would cause them to repel with indignation any attempt on the part of a public service corporation to bribe them directly, are eager to accept free services from these same companies. Such officials usually resent the inference on the part of their constituents that such little things as free passes on railroads and street cars, and telephone franks might have an influence upon their official action. Contrasting the "ungenerous" criticisms of the voters with the kindness and deference shown by the companies, these officials find themselves gradually becoming cynical about the interests of the "dear people" and more and more friendly to the honorable and sensible men who treat them like gentlemen by giving them free rides and

letting them partake of the blessings of other public utilities without cost. Most men endeavor to justify their actions. So an alderman argues that he is required to travel around a great deal on public business and that as long as the city doesn't pay his car fare it is all right for the company to give him free transportation as a partial compensation in an indirect way for the privilege of using the streets. This feeling becomes so strong at times that a legal provision compelling public service corporations, particularly transportation companies, to serve public officials free, is advocated. After the people of Oregon passed an act under the Initiative prohibiting the giving of franks and free passes to officials, the Legislature of that state passed a law requiring the railroad companies to carry public officials free. This act was vetoed by the people under the Referendum. In cities it is frequently the established rule of law or well recognized custom that policemen and firemen in uniform shall be carried on the street cars free. On the whole, it is better to make everybody pay for the rides he takes, unless tickets are purchased by the city and furnished to its officials for necessary use in connection with public business. This much is certain, free services as special favors to be granted or withheld at the pleasure of the franchise holding company should be ruled out. The subtle influence of little favors is often irresistible. It is a law of human nature for a person to like those who are "good" to him. When Rudolph Spreckels went on the board of directors of a San Francisco gas company he found that it had been following the cowardly policy of remitting or never attempting to collect the accounts charged on its books against influential politicians. That such a policy was unnecessary and short-sighted he soon demonstrated, but in order to get it changed effectively he had to appeal to the stockholders and with their assistance get a new board of directors. Thorough publicity of accounts will help clear out the dark corners and will help to bring favoritism to an end. An effective method of correcting or preventing many abuses, including this one, is the insertion of a clause in the franchise providing for its forfeiture upon proof that the practice of which we are speaking has been followed. There should be no hesitation about adopting whatever measures may be necessary to protect the public life of the city from the peculiarly subtle poisoning that results from this indirect

bribery which in many cases appears to be little more than the cultivation of friendly relations. Free services to officials should either be required or be prohibited.

86. Distribution of patronage and business favors.—A public service company is usually one of the great business institutions of the city where it operates franchises. In 1907 the United States Census Bureau found the average number of paid officers and employees of street and electric railways in this country to be over 221,000 and their salaries and wages for the year in excess of $151,000,000.[1] A comparison of the activities of the Detroit United Railway and the City of Detroit made a few years ago showed the two corporations to be of very nearly equal importance as measured by the magnitude of their operations. Indeed, so far as capitalization is concerned the Detroit United Railway could show stocks and bonds outstanding aggregating about six times the par value of the city debt. A general comparison of the corporate activities of cities and of the public utility companies operating in their streets would doubtless show the latter to be fully as important as the former in respect to number of employees, amount of stocks and bonds outstanding, gross earnings, corporate assets, etc. Moreover, in the gift of offices and jobs the companies are not usually "hampered" by civil service regulations, publicity of accounts or the necessity of winning the people's votes, and the salaries and wages paid are not fixed by statute. Moreover the companies do not have to award their construction contracts to the lowest bidder after public advertisement. As a natural consequence of these conditions, delectable from the standpoint of the farmers of patronage, public officials who have a bent that way are not slow to reach out for the control of contracts and appointments to positions of profit under the corporations. Indeed, a company desiring a renewal of its franchises on favorable terms or desiring easy standing relations with the city government whose consent it must secure from time to time for its various undertakings, has no more powerful leverage upon the politicians in control of the city's destiny than its opportunity to favor them with patronage and contracts. Sometimes the companies go to the extent of

[1] Preliminary Report on Street and Electric Railways, Bureau of the Census released Jan. 18, 1909.

placing aldermen themselves on their pay-rolls or giving them contracts directly, or of helping to elect as aldermen men who are already employed by them or under obligations to them. There are an infinite number of ways in which a powerful public service corporation can reach public officials with rewards or punishments for their official acts. Through the control of a bank, a company may extend a loan to a needy alderman who is friendly or foreclose a mortgage on the home of an alderman who is unfriendly. There is nothing in the conditions of public life to-day so terrible as this power of corporations existing by favor of the city to debauch the character of the public servants by subtle, multiform and almost irresistible business pressure. It is true, to be sure, that a company which on its own motion or in response to the demands of politicians, turns its business over to the spoilsmen in any considerable measure, invites disaster and will probably be wrecked in the long run by the partnership it enters into. Both the debauchery of the official service and the wrecking of the utilities are disasters of great magnitude from the standpoint of the public welfare. What can be done in franchise-grant or regulatory statute to prevent or correct these insidious evils? Publicity of accounts, the extension of civil service regulations to public utility employees and the requirement of the approval of construction contracts by the proper municipal authorities will help. The evils growing out of the relations between the companies and the public authorities are aggravated, where they are not caused, by secret and devious methods. "Bring everything into the light", should be the first principle of franchise-drafting. It might be desirable to go so far as to stipulate that a company's franchise will be forfeited if it employs or has special contractual relations with any public official. It is difficult to prevent by direct prohibition the sharing of patronage and yet a clause might be inserted in the franchise providing for its forfeiture or for a heavy fine in case it is proven that the company has appointed, promoted or discharged any officer or employee at the personal solicitation of a public official.

87. Interference in political nominations and elections.— The power of public service corporations over the official acts of public servants is often secured neither by direct

bribery nor by patronage and business favors given directly. The companies may attain their ends by using as an intermediary the political boss and the party organization. Where conditions are such that a United States Senator, a collector of the port, a chairman of the city committee, a leader of some Tammany Hall organization, or just a plain private citizen, possibly even a blind one, can dictate nominations and deliver the votes of legislatures and aldermen, a company that desires to get on smoothly in the path of exploitation naturally goes to him and contributes its mite to the perpetuation of his power. What he needs is money and to be let alone. A liberal contribution to the party campaign fund may satisfy him. Or he may require that the criticisms of the newspapers over which the company has influence shall be stopped, or that money be loaned to his private enterprises by the company's bank. In the use of political machinery for the furtherance of their ends the companies are nonpartisan. They may find, as suggested by that celebrated expert, Mr. Thomas F. Ryan, that it will be to their advantage to have Republican principles prevail in the state and Democratic principles prevail in the city at the same time. They may even find it to their advantage to have a Republican alderman elected from one ward and a Democratic alderman from another. Indeed, it is often apparent after the nominations have been attended to, that a company's only reason for regret is the impossibility of having the candidates of both parties elected in the same districts. This relation of the companies to the boss system and party machinery is one of the very cornerstones of the system of corruption that has disgraced American cities. To break it up entirely the coöperation of the election law and the criminal law with wise franchise provisions is required. From the franchise standpoint, publicity of accounts stands out again as a most efficacious remedy for the evil. Here also the penalty of forfeiture of its franchise should attach to political campaign contributions on the part of a public service company. It might also help, if it were stipulated in the contract with the city that the company should not permit its officers or employees to qualify as delegates to conventions for the nomination of aldermen or other public officials who will naturally be required in the performance of their official

duties to pass upon franchises or other matters involving the special interests and privileges of the company.

88. Jury fixing.—Street railway companies have to defend a great many damage suits. The killing and maiming of people is an incident of street railway operation. In crowded streets, which serve as the children's only playgrounds, and at congested crossings, accidents are comparatively numerous. There is undoubtedly a general feeling among the people that the company is a rich robber and that it should be compelled to pay for injuries even though they may have been due solely or principally to the carelessness of the persons injured. It is indeed pitiful that mere children must always be careful when they step out of their homes, or run great risk of being killed. But whatever the merits of the case may be, the fact remains that one of the chief burdens of a street railway company is the payment of claims for injuries or the expense and trouble of getting out of the necessity of paying them. There is no doubt a horde of unscrupulous lawyers who work up flimsy cases on a percentage basis. Doubtless it is the difficulty and expense of meeting this situation, which is rendered worse by the prejudices of the average juror, that induces companies to resort to the desperate practice of "jury-fixing". There can be no worse crime against political society than this and its comparative frequency has been an important factor in the break-down of the jury system and in the development of the passionate hatred against the companies shared especially by the poorer classes. There are several ways in which this dastardly practice can be made dangerous and futile. From the law side conditions will improve with better regulations governing the selection of jurors and talesmen. From the franchise side, the forfeiture clause and the requirement of publicity of accounts can accomplish a great deal. Let every franchise become void, if the company holding it is convicted of tampering with a jury. One of the last points to be yielded from the company standpoint in regard to publicity of accounts is publicity of expenditures to satisfy damage claims. This is so because the lawyers for the company attempt to settle out of court every case where they can induce the claimant to take less than they think he would be likely to get if the question were put to a jury. By taking advantage of the

ignorance, timidity and need of each claimant individually they are able to save their client large sums of money by this process of secret dickering. In a particularly bad case with an intelligent and stubborn claimant, the company may be willing to pay a large sum to keep the matter out of court. If all these facts were made known through a detailed public audit of accounts, the backbones of the weaker and more necessitous claimants would be stiffened, and the company would find it harder to settle with them. This cruel method of adjusting awards for injuries inflicted in the performance of a public service in the public streets is so monstrous that instead of weakening the argument for publicity it strengthens it immeasurably. If the public authorities have the guaranteed opportunity to trace the expenditures of the company to the last penny, there will be comparatively little danger of money being spent to bribe jurors or silence witnesses. Another desirable franchise requirement is that the company shall, upon the occurrence of any accident in connection with its operations, immediately report the matter to some designated public official authorized to investigate such matters. An even more effective means of preventing interference with juries as well as the injustice of present methods of settling cases out of court would be the establishment of a special court of arbitration to which should be referred the question of responsibility for accidents and the determination of the amount of damages to be paid to individuals by the companies. The officer to whom accidents are reported should be required to report the result of his investigations to this court, and no private settlement of claims should be permitted even with the consent of the claimants. Every award should be fixed by this court or be subject to its approval. Appeals from its decision might be permitted under strict limitations, but in cases of appeal by the company the public lawyers should be charged with handling the case in the higher courts without expense to the claimant.

89. Influencing the judiciary.—It is coming to be well understood that the judiciary is the chief bulwark of large property interests in America and that the legal profession, from which the judiciary is recruited, is primarily engaged in the defense of property for pay, and that the ablest mem-

bers of the profession are engaged in the defense of the largest properties, which, naturally, can pay most. Public utilities represent great concentrated masses of property and privileges, which are, at the same time, in the class of interests which are most open to attack and accordingly are most in need of defense. Accordingly, a public service corporation's first move is to retain influential attorneys practising in the community in which it proposes to operate. Then after operation has commenced and damage claims, franchise litigation and restrictive legislation of various kinds develop, the company organizes a regular "army of defense" composed of lawyers who are willing to brave the public wrath and resist the onslaughts of public officials without flinching. At critical periods in their affairs the companies aim by special retainers to enlist the active coöperation or at least the silence of certain "bright, particular stars" in the profession, whose employment by the city or active leadership in popular movements would be likely to be effective as against the interests of the companies. It is in accordance with the "ethics" of his profession that a lawyer's mouth may be honorably opened or shut by a fee. With these facts in mind, we can readily see how the companies may have extraordinary success in influencing the courts. The stakes are often very great. It may be a question of the validity of franchises or of their interpretation, or it may be a regulation of rates or service that is involved in the litigation. A decision on the meaning of a few words in franchise or statute may involve millions of dollars one way or the other to the companies. Under the Fourteenth Amendment any of this litigation involving property rights may be transferred from the state to the Federal courts. It is accordingly to the interest of the companies that the judges in municipal, state and Federal jurisdictions, especially the last, should be friendly to corporate interests. One of the most generally effective ways of influencing judges is simply through the methods already described of dealing with the legal profession. By training the ablest lawyers in corporation habits of thought and then seeing that only such men are nominated for judicial positions or appointed to them, the companies fortify themselves in a most effective way. Furthermore a judge who has any expectation of ever returning

to private practice understands perfectly well that fat fees lie in the direction of friendly relations with great property-interests. In some cases judges may even be induced to become stockholders in public service corporations, perhaps not in the particular ones upon whose affairs they must pass, but in others whose interests are practically identical. An offensive and defensive alliance between the companies and such political forces as the Ruef organization in San Francisco, Tammany Hall in New York City, and the dominating machines in Denver, Cincinnati, Philadelphia and other cities, great and small, enables the companies to name the local judges in advance, and through the Senatorial system of appointments to dictate on many occasions who shall be judges in the lower Federal courts. The possession by the companies of this extraordinary leverage on the judiciary makes it doubly important that franchises should be clear and unmistakable in their provisions and that the door to litigation should be shut as tightly as possible. The power to influence judges can be curtailed only indirectly by specific franchise provisions. While by general laws, judges might be forbidden to hold stock in any public utility corporation or to accept retainers from such a company within a certain fixed period after they have left the bench, and lawyers might be made ineligible to judgeships for a fixed period after quitting the employment of public utility companies, about all that can be done along these lines in a franchise grant is to require publicity of the names of all stockholders and of the names and salaries or fees of all counsel employed. The elimination of campaign contributions directly by statutory prohibition or indirectly by publicity of all expenditures would strike a serious blow at the alliance with political organizations, which select judges.

90. Overcapitalization.— Of all the policies followed by public service corporations contrary to the general public interests, there is none that has been more generally condemned than the policy of overcapitalization. This evil is to a very great extent the outgrowth of the monopoly principle coupled with inadequate public supervision. The capital stock of a company frequently represents only the promoter's reward or the bondholder's bonus, and represents no actual investment of money. Many stocks which have never paid a

dividend and have no immediate prospect of doing so, still have a considerable market value based either on the hopes of the future or on their value as carrying the control of the operation of great properties that are ultimately owned by the bondholders. Indeed, the "water" in a company's securities is not always confined to its capital stock, as even the bonds issued by it sometimes represent in part the profits of manipulators rather than actual investments in the plant. It is well known that mergers and consolidations of formerly competing companies have been attended in many instances by an inflation of capital representing the proposed advantages of the merger. The capitalization of franchises and other intangible "property", so-called, has frequently been carried to grotesque extremes. The first result has been the unloading on the public of a great mass of securities with nothing substantial behind them, with immense profit to the insiders, but with no advantage to the business being done under the franchise. By getting these securities scattered about among "innocent investors", the original promoters of the company give color of truth to the claim that the owners of the property have put a great amount of money into it and that the "widows and orphans" who depend on the dividends paid cannot with justice have the value of their holdings diminished by public action. In this way, by floating just as many securities as possible a double advantage is gained by the promoters. First, they "line" their own pockets with organization profits. Second, they deceive the public as to the actual amount of investment, make the profits of the enterprise look small and thereby ward off legislation designed to reduce rates or improve and extend service. The essential dishonesty of the issuance of stocks and bonds bearing on their face the imprint of value to the amount of a certain number of dollars when this imprint bears no relation to actual investment or to actual value is evident. The floating of securities for the public to buy, when the basis of these securities is intangible and evanescent, works a great injustice upon the public, which under modern industrial conditions is compelled to look to stocks and bonds as a principal avenue for investment and saving. The instability of value attaching to these securities founded on dreams and hope is a constant menace to business conditions

and commercial integrity. Furthermore, by the increase of capitalization until dividends are nominal or non-existent and without publicity of accounts to reveal the fraud, companies are often enabled to keep up their rates to an unreasonable point and refuse to improve service to the point of efficiency that may be justly expected of them. Indeed, the bonds of public utility companies secured by property and rights in the streets become semi-public obligations and should be counted in with the municipal debt in any estimate of the burdens one generation is saddling upon the next for public improvements.

Overcapitalization can be checked or prevented by various provisions that should be inserted in franchises. Irrespective of any general law requiring companies to apply to the proper public authorities for the approval of their issues of stocks and bonds, such a provision should be inserted in the franchise itself. It should also be provided that no securities shall be issued except for actual investment of cash to their full par value. Franchises should never be capitalized except to the amount paid to the city for them in money when they are first received. In Massachusetts there is a general rule that bonds of gas and electric companies may not be issued in excess of the amount of capital stock subscribed and paid in at par; and the indebtedness of telephone and telegraph companies is limited to one-half the amount of their paid-in capital stock.[1] Possibly these limitations may be too stringent, but certainly public utility companies should not be permitted to mortgage themselves for a greater proportion of the value of their tangible property than the maximum proportion which conservative loans bear to the value of the real estate against which they are placed. Otherwise the operation and control of the public utility plant are in the hands of adventurers who are using other people's property and have no sufficient interest in anything but schemes for paying themselves high salaries and speculating in other people's rights. The issue of bonds or capital stock against a public utility operating under a franchise should be scrutinized as carefully by the public authorities as is the creation of new bonded debts by the city. If consolidations and mergers of

[1] See General Laws of Massachusetts relating to the Manufacture and Sale of Gas and Electricity, compiled by the Board of Gas and Electric Light Commissioners, 1906, p. 5; also Laws Relating to the Work of the Massachusetts Highway Commission, 1906, p. 46.

companies is permitted, it should be on condition that there be no increase in capitalization over the aggregate amount of the capitalization of the companies before the merger. One way of limiting capitalization indirectly is by the grant of short term or indeterminate franchises so that the companies will not be able to deceive the public by the claim of perpetual rights of enormous value. While it may be admitted that inherently there is no reason why a public utility company should not be able to double or treble the value of its invested capital by the cultivation of good will, the development of efficient business organization, and the appreciation of real estate, just as any other kind of a corporation may do under existing laws, there is nevertheless this difference, namely, that a public utility is in a special sense a public business which should be conducted primarily with a view to its effect upon the welfare of the community. If in granting franchises the city reserves the right to purchase the plant and obligates itself to do so whenever the franchise is terminated, the business becomes one of limited risk and should be satisfied with limited profits. Consequently, rates should be reduced and the service extended and improved so as to absorb practically all the increment of value over and above the original investment. In other words, the aim should be not only to prevent the issue of stocks and bonds of par value in excess of the actual cash investment, but also to keep the market value of these securities as close to their par value as possible. Finally, publicity of accounts, most pregnant of reforms, will enable reasonably prudent investors to guard against the fraudulent or rainbow-tinted representations of promoters and make it increasingly difficult to float paper securities. In granting a franchise a city should also stipulate that no bonds be issued against the property running past the expiration of the grant, if the grant is for a definite term, and ample provision should be made to insure that the plant will be kept up to its full value until all bonds are paid off. Otherwise the city might buy the property at an appraised valuation less than the par value of the bonds outstanding against it. In that case the bondholders could foreclose their mortgage and take possession of the property unless the city raised its bid for the property to the par value of the bonds.

91. Looting the utility through financial jugglery.—One of the natural results of overcapitalization and especially of overbonding, is the failure to provide a depreciation fund and the skimping of maintenance and repairs. The way in which the financial jugglers who formerly controlled the street railways of Chicago and New York ravished the properties they held in order to keep up as long as possible the fiction of enormous values and to complete the discomfiture of investors is one of the most dastardly offenses in the long list of crimes of negligence and looting charged up against public and semi-public agencies in American cities. The expected increment of franchise-value to be wrung from the ever-increasing necessities of the ever-increasing millions of people was counted on to offset the depreciation of plant and equipment and the charges of the junk-heap. And so, when through the franchise taxes, transfer requirements, changes of motive power and other improvements which were to be expected with the increase in population and the elimination of competition, the grand collapse came, the receivers found in the plant, a servant that, like the serf of a brutal overlord, had been robbed of property and credit and left starved and emaciated to perform the Herculean labor of transporting the city's millions. The hardships of inadequate or abandoned service, doubled or trebled fares, routes cut in two and systems dissolved affected the public as vitally as the cancellation of leases and default on interest affected stockholders and bondholders. In view of these possibilities, it is essential that every franchise for street railways or any other public utility should make adequate provisions to insure the up-keep of the property. More important than low rates, more important than compensation for franchises, more important even than a seat for every passenger, and far more important than dividends on watered stocks, is the simple and absolute requirement that the plant of any public utility shall be kept up to the highest state of efficiency, representing in actual, undiscounted value every item in its inventory. There is no room for fictitious assets and long lists of brokendown cars, and horses that have been dead these many years. Here again publicity of accounts, thorough and far-reaching, will do yeoman's work. But other specific provisions are required. A certain percentage of gross receipts should be set aside, under franchise

provisions, for repairs and renewals, and another definite percentage for depreciation. Power should be reserved to the city or some supervising authority to compel particular expenditures for maintenance and up-keep when necessary to protect the public interest. In case one company leases its property to another, the lessor company should be compelled under its franchise to require the lessee to maintain the plant and equipment to be turned back at the expiration or forfeiture of the lease intact in quantity and unimpaired in value. The whole scheme of inter-company guarantees of bonds is calculated to confuse the investor and cheat him in the end. A company whose property is leased to another and its bonds guaranteed has no sufficient incentive to insist on the maintenance of the integrity of its property while the bondholders are lulled to sleep by the guarantee of the other company, which is generally a more important one. The result is likely to be neglect, depreciation and in the long run ruin. It is pathetic to see long-term leases held by the Metropolitan Street Railway Company of New York cancelled one by one at the behest of the United States District Court and the roads of the lessor companies returned to them wrecked and in some cases practically stripped of equipment.

92. Running a school of theft.—"Thou shalt not steal! Every passenger who does not pay his fare—steals. Every conductor who does not turn in fares collected—steals. Thou shalt not steal!" This is the legend that was posted in the cars of the Third Avenue Railroad system in New York City by the receiver when he began to operate the property early in 1908 after its lease had been cancelled by the Metropolitan interests. In the face of the revelations then recent, these words read like a mockery. The receivers for the Metropolitan system at about the same time estimated their annual loss from the dishonesty of conductors and passengers at between one and two millions of dollars. Street railway companies everywhere complain of the abuse of transfer privileges by unscrupulous passengers and not infrequently conductors and motormen are found to be involved in conspiracies to rob the company. Whatever the cause of these delinquencies may be, it is certainly an evil of tremendous import to have public service corporations conduct-

ing their business under such conditions as to make thieves wholesale. We suspect that the cheating of companies on a large scale, either by their employees or by their patrons, is largely the result of the bad reputations of the men at the top. With the scandals of stock jobbery, financial manipulation and robbery in the millions of dollars, on everybody's lips until they have become almost a tradition, it requires a very tender conscience to keep a conductor from protecting himself against losses that would result from his mistakes in ringing up fares. Having gone thus far, he is not likely to mourn if he finds a few extra nickels in his pocket at night. Furthermore, a passenger who has frequently been outraged by abominable service and been compelled to ride home after a hard day's work jostled and almost crushed by a strap-hanging crowd can hardly be expected to hunt up the conductor who has passed him and pay his nickel which he has reason to believe will be expended in large part, not in improving the service, but in bolstering up the fictitious securities out of which millionaire highwaymen have made their fortunes. No doubt, for his own sake, every passenger should pay his fare and every conductor should scrupulously account to his employer for every penny collected, steadfastly refusing to learn at the school of theft conducted by the bandits organized under the name of a street railway company. The opportunities for cheating by employees and patrons are not the same in other public utilities as in the street railway business. Dishonest methods by those in charge have a similar effect, however, upon the general attitude of mind toward them. In the case of the telephone service the "school" conducted by a negligent company is generally one of bad manners and untruthfulness rather than of theft. In some cities the telephone girl is a symbol of impudence and discourtesy. There can be no doubt that this results from the bad conditions under which she is required to work. It may be that her pay is inadequate, or her hours too long, or her duties too onerous or her overseers too much like slave-drivers. It is difficult to provide against these evils in franchise grants except indirectly by the various means already suggested to secure good service and to limit dishonesty and recklessness in corporate management. There are various devices such as pay-as-you-enter cars, strict transfer rules,

the employment of spotters and the use of cash registers into which each passenger puts his fare with his own hand, by the use of which cheating on street railways may be reduced to a minimum. It would not be possible to stipulate in detail concerning these devices in a franchise-grant. The city is primarily concerned in seeing that the company itself sets a good example and in coöperating with it as far as necessary to secure the payment of every fare due and the accounting for it. The city has a double interest in this matter. Not only is it important to eliminate the special temptations to dishonesty in the case of a large body of citizens, but it is necessary that all fares be collected in order to make improvements in service and reductions in rates possible. It is also desirable that when the city buys the property, if it does, the utility should not be hampered by habitual losses of income.

93. Destroying the safety, comforts and beauty of city life.—In preceding sections the special classes of injuries inflicted by public service corporations upon individuals, whether patrons, employees or other citizens, have been briefly discussed. Some of these injuries have a public as well as an individual side. The network of wires that hinders the work of the firemen in fighting to save one man's property, increases the general fire hazard of the city. The poles and wires that interfere with access to the land of a particular individual are part of a general system that destroys the beauty of the streets. The mutilation of a particular citizen's shade tree is typical of a practice that helps to make the city ugly. The noise and dust from the street cars that depreciate the value of the land belonging to a certain definite citizen are a part of a general nuisance. The dense smoke belching from the stacks of the street railway power house, the water works pumping station or the central electric light plant spreads gloom and dirt over an entire neighborhood. The beauty and comfort of life of the city should not be unnecessarily sacrificed to utility. Placing wires underground is a great step in advance. Requiring that the poles in the streets shall be of uniform shape and height and neatly painted is a help. The designs of lamp posts and electric signs may well be made subject to approval by the proper city authority. The trimming of shade trees by telephone,

telegraph and electric light companies should certainly be subject to the supervision of the city forester or some other competent official. Water companies may be required to design their reservoirs and standpipes so that they will be ornamental as well as useful. The sprinkling of streets, the laying of heavy, well-jointed rails flush with the pavement on a firm road-bed, the painting of cars and keeping car trucks in repair, and other methods already suggested of improving street railway service and making the street car company perform its natural obligations as a special occupant of the streets, will tend to reduce the noise and dust that generally make the presence of cars on any particular street disagreeable to residents there. An active smoke inspector supported by a franchise requiring the installation of smoke-preventing devices may have considerable success in mitigating the public service corporation smoke nuisance.

Perhaps the most serious way, however, in which franchise holding companies tend to disturb public comfort is in the constant tearing up of the streets for the construction or repair of underground fixtures. It often seems astonishing that business can continue to be done in spite of these long-drawn-out and frequently-recurring interferences with the ordinary uses of the city highways. The trouble can be greatly lessened by franchise provisions and ordinance regulations requiring the companies to place their fixtures under the streets in advance of the original paving or at the time of repaving. This requirement would be reasonable in almost all cases where water or gas pipes or electric light or telephone conduits are involved. It is also desirable that the companies, when compelled to open a street for the purpose of repairing their fixtures, should complete the work and replace the pavement within a certain time fixed by the public authorities in connection with the granting of a permit for the opening. Better still, wherever it is feasible, is the requirement that as many fixtures as possible shall be placed in conduits or pipe galleries where they can be repaired or from which they can be removed without breaking up the surface of the streets. The use of the space under the sidewalks may sometimes be required to advantage.

94. Interest in opposing improved building regulations.—In a city like New York or Chicago, where office buildings

are high and tenement and dwelling houses are built up almost solidly, the difference between good housing and bad represents a great difference in the demand for artificial light. Where lofty buildings housing tens of thousands of people engaged in high-class work are crowded together in a congested center, dark rooms and corridors call for a very large use of gas or electric light during the hours of the day when there is the least demand elsewhere, and consequently when gas and electricity can be furnished with most profit by lighting companies. The same is true where hotels, apartment houses and tenements are built so high and so close together that it is impossible to let the sunshine into all the rooms where people live. One of the worst curses of New York has been the dark bedrooms. The resistance to regulations limiting the height of buildings and especially to tenement house regulations limiting the proportion of the lot which may be covered with buildings and requiring adequate provision for light and fresh air in the dwellings of the poor, has been extremely tenacious. It is a marvel of modern civilization that the conditions existing in New York and to a less extent in many other great American cities should ever have been permitted to grow up even at the dictates of greed. The writer is not aware that the companies engaged in supplying artificial light have actively contributed to the forces opposing proper building regulations in any city. It is clear, however, that the conditions which enable the lighting companies to reap rich profits from the misfortunes of the community are such as to offer serious temptation at critical times. According to the standards of citizenship still prevailing in this country, which do not require a citizen to sacrifice his own financial interests for the benefit of the state excepting on extraordinary occasions, it could not be expected that the gentlemen engaged in supplying gas and electric light to a great city would heartily join in a movement for fewer dark places where people live and work.

95. Competition vs. monopoly in public utility enterprises.—Our entire discussion thus far has been based on the hypothesis that, generally speaking, every franchise establishes or adds to an essential monopoly. This hypothesis is not entirely borne out by the facts, however. The idea that competition may bring relief from the poor service and exor-

bitant charges of an unregulated monopoly is slow to yield to the facts of experience. Every city has tried to secure competition in public utilities, thereby confessing its impotence properly to regulate monopoly by direct action. Even Tom L. Johnson, himself a successful railway organizer and a keen thinker in politics and economics, chose competition as the best weapon available to club the Cleveland street railway monopoly into submission, but only as a temporary expedient to be abandoned as soon as he could effect a suitable settlement with the old company or drive it out entirely. About thirty years ago there were several actively competing gas companies in New York City, whose fierce competitive struggles forced the price of gas down to 75 cents per thousand cubic feet, but the companies soon formed a pool and put the price back to $2.25. A little later actual consolidation took place. In the early days, it was not so apparent as it is now that the street railways of a city should be operated as a unified system. When horses and mules supplied the only motive power, it was quite usual to grant a separate franchise for each principal route. A multiplicity of companies was seen in every city, until gradually they were gathered together into one ownership or at least brought under one control. It is a curious fact that at the present time there is apparently more competition in the telephone business than in any other public utility, and this in spite of the fact that of all public utilities the need of monopoly is greatest in telephony. Of the great American cities, Philadelphia, St. Louis, Baltimore, Cleveland, Buffalo, Pittsburg, Detroit, Minneapolis, St. Paul, Louisville, Indianapolis, Kansas City, Seattle and perhaps others maintain two telephone companies each. In Portland, Oregon, the people showed their abiding hope in competition by granting a franchise for a second telephone system in 1906 under the Initiative. But after all, competition brings forth a new franchise only to see it devoured by monopoly. It is a sad thing to see how the numerous progeny of hope are found to perish almost as soon as they are born.

96. Monopoly limited by indirect competition.—All of the outstanding franchises for any particular utility may be held by a single company, and still the rigors of monopoly will be somewhat mitigated by indirect competition. Surface

street railways, just when their promoters are figuring on golden harvests from perpetual monopoly franchises, are compelled to meet the competition of subways, elevated roads, and high speed electric or suburban steam roads. This competition can hardly be said to cut down the demand for surface street railway transportation, but it does prevent it from increasing as rapidly as it otherwise would. Moreover bicycles, motor cycles and automobiles provide means of transportation that absorb a considerable portion of the demand. It is not inconceivable that at some future time aerial transportation lines may compete to an appreciable extent with street railways. Gas and electricity, unless joined together into a single monopoly, are serious competitors both for light and for power. So far as light is concerned both of these utilities have to compete with kerosene oil and acetylene gas. In some communities, natural gas brings disastrous competition to manufactured gas and greatly reduces the consumption of electricity. For power electricity and gas have to compete with gasoline and denatured alcohol. For fuel they must compete with coal, coke, wood and oil. Just now the wits of the world are being focussed on the problem of perfecting apparatus for producing gas directly from coal in every separate manufacturing plant and thereby cutting down the cost of light and power enormously. It is possible that what now seem to be the best-intrenched and most profitable monopolies may suddenly find their colossal economic structures falling to pieces by reason of their having been undermined by new processes. Telephones are not at present seriously threatened with new forms of competition, but the telephone itself has come in as a competitor of the telegraph and the mails and the street railways. The telegraph is threatened by the telepost, and the Morse system by the wireless of Marconi. Express monopolies, which ordinarily are not classed as municipal, are likely to have to meet the competition of the parcels post and the pneumatic tube service. And so all the way through the list, there are limitations upon the power of monopoly which tend even under exclusive franchises to make it easier for the city to regulate public utility companies than it would be if they did not have to meet either direct or indirect competition.

97. Monopoly strengthened by alliances.—Gas and electricity are natural competitors, but the laws of the state and the franchises of the city frequently permit them to form alliances. When the gas company owns the electric light company and Standard Oil interests own the gas company, it can readily be seen that there is a lighting monopoly hard to beat. On account of the large use of electrical energy to propel street cars, there is a tendency for street railway companies and electric lighting companies to consolidate, or at least to harmonize their interests. Electric and water plants, though not natural competitors, find economies in consolidation. Telephone and telegraph companies are likely to affiliate and control messenger companies. Street surface railways, subways and elevated roads seem naturally to drift toward a common control, and in some communities the steam railroad interests have absorbed the electric railways. In Connecticut more than four-fifths of the electric railway mileage is either owned or leased by the New York, New Haven and Hartford Railroad. The surface, elevated and subway lines of Boston are under monopoly control. Most of the surface, all of the elevated and part of the old steam roads of Brooklyn are affiliated under the paternal care of a single holding company. The New York Subway and the Manhattan elevated lines are operated together. In 1908 there was much talk of the organization of a monster company to consolidate the street surface, and elevated roads and the electric light and power interests of Chicago. Thus we see that if two utilities begin to compete, they promptly consolidate. What franchise utilities lose by actual or threatened rivalry is quickly made up by wider alliances and more gigantic consolidations. This tendency is aptly illustrated by the name under which New Jersey utilities are for the most part operated. It is simply "The Public Service Corporation".

98. Monopoly advantages limited by increase in cost of service.—Even with the indirect competition of substitute services eliminated by combination and alliance, the strength of monopoly is likely to be somewhat impaired in unlooked-for ways. It is a principle of commerce and manufacture that the larger the business the more cheaply it can be done per unit. This rule is subject to serious modifications when applied to public utilities. It is true that gas and electrical

energy can be produced more cheaply at large central plants than in small scattered ones. But the congestion of a great city adds tremendously to the cost of construction and maintenance of the fixtures in the streets. This is due primarily to two reasons. In the first place the presence of multifarious fixtures in the limited space available makes it more difficult to find a place for a new one. The process often involves the rearrangement of fixtures already laid, which is usually difficult and expensive work. In the second place, the heavy traffic on the street makes it necessary to do construction and repair work by night or at other inconvenient times or to suffer constant interruptions and delays while doing it. With street railways, the speed of cars is diminished and the wear and tear of tracks and pavement multiplied by street congestion. Furthermore, as the city grows bigger, the regular rides grow longer while the fare usually remains fixed. Land for car houses, repair shops, power stations, gas works and central administrative offices costs much more as cities grow larger. In the telephone service especially, as the number of subscribers increases the cost of the service rendered to each one increases. Every new subscriber means a new connection possible for every other subscriber. Soon the company is compelled to divide its territory into exchanges and provide for a double service where a subscriber in one exchange calls another subscriber in a different exchange. The average length of the telephone wire that the company must supply and keep in repair becomes greater as the city grows. The failure to anticipate properly the inevitable increase in the cost of service has doubtless been responsible for many of the blunders shrewd men have made in the management and manipulation of various public utility properties.

99. Influence of the Junk-Heap on Monopoly Advantages.—All in all, the advantages of an exclusive franchise to furnish a public utility are held on a precarious tenure. It is not to be wondered at that public service corporations clutch greedily at immediate profits and often neglect wise provision for the future. One of the greatest drawbacks in the whole business is that the demand for improvements is constant. The old horse railway lasted many years. It was more than thirty years after the introduction of street railways before the feasibility of using electricity for motive power

was thoroughly demonstrated. The industry could hardly complain when the ancient horse cars and worn out tracks were sent to the scrap-heap. There had been ample time to get the original investment back in earnings. The new motive power promised only advantages. The greater amount of capital needed to begin with was more than offset by economy in operation. Greater speed, larger and more comfortable cars, cleaner streets, more travel were the promises for the future. These promises were realized. But just before electricity came to be accepted as the motive power of the future, in an evil day some unlucky enemy of the race invented the cable system of traction. This system was installed in many cities, involving enormous expenditures of capital which soon were seen to be wasted. Cables had to be abandoned in a few years. They left a tremendous load of dead capital on the shoulders of the street railway business. In the meantime costly experiments with compressed air and storage battery motors were being carried on. Even after electricity won as the motive power the question arose as to whether the overhead or the underground system should be adopted. Overhead construction is comparatively cheap and so, nearly everywhere, overhead trolleys carried the day. But there is no telling how soon in any great city, the companies may be compelled to abandon their overhead wires and go to the enormous expense of installing the underground system. When that is done the trackless trolley may appear on the scenes and turn the costly roadbeds and tracks into waste. The history of other utilities has been similar. Telephone, telegraph and electric light wires have been driven underground; patents essential at first have become useless, old processes and old machinery have been discarded, gas and water pipes that have been found to be too small have been replaced by larger ones, and so on. The demand for better fixtures and more expensive service has gone hand in hand with improvement in the arts. The public service men have hardly had a chance to catch their breath and earn a dividend before they have been forced into some new reconstruction and addition to fixed charges.

100. Advantages of monopoly affected by fluctuations in the value of money.—It is next to impossible for a company operating under a franchise to raise its rates. This

is due partly to the fixing of maximum charges in franchise and statute law. It is also partly due to the tremendous popular resistance that manifests itself when rates and charges are increased. Five cents has always been the standard street railway fare in this country and three cents has been the fare for which the radicals have contended. Meantime, in the course of the long-drawn-out dispute, there has been a tremendous increase in the production of gold. This has meant a sharp advance in the prices of all other commodities and a corresponding decrease in the purchasing power of a nickel. If this process were carried far enough we might get "three cent" fares without any decrease whatever in the nominal rates. The process by which the value of money appreciates is so silent that the battle for lower fares is apt to go merrily on as if nothing had happened until the swollen values of franchises gradually disappear and the companies, hard-pushed, go into the hands of receivers. Under these circumstances the strength of monopoly is undermined by the course of events. But the people keep on striking after their foes are down. These same considerations hold good in relation to other utilities, though there is no other standard rate so nearly universal as the five-cent fare. Evidently, it is the part of wisdom to get away as rapidly as possible from a fixed maximum charge to be enforced without regard to local or temporary conditions. Rates should be based upon the cost of the service. For the sake of stability a certain amount of leeway may be allowed "for lean years", provided that some practical scheme is devised by which the public may absorb the surplus in prosperous years. In describing the program upon which the Chicago Traction ordinances of 1907 were based, Miss Tarbell says:[1]

"It meant that if the companies accepted it, they recognized the principle that *public utilities are henceforth out of the field of exploitation.* It meant that if the Chicago public accepted it, they recognized the principle that *capital honestly invested in a public service is entitled to a fair return and to an assurance of the security of its investment.*" When these principles are fully accepted, rigid maximum flat rates will not be necessary, and readjustment to marked changes in the value of money will be possible.

[1] American Magazine for December, 1908, p. 132.

101. Fundamental principles generally agreed upon.—There have been established in the hard school of experience certain fundamental principles relating to the problem of public utilities. With due regard to modifying circumstances and minor limitations it may be fairly said that these principles are generally recognized as sound by men who have thought upon this problem. These principles are—

(1.) That a public utility requiring special and permanent fixtures in the streets cannot be operated with a high degree of success from the standpoint of either its managers or the public except as a monopoly.

(2.) That on this account a franchise grant, no matter to whom it is given or what provisions it may contain against consolidation, will either remain unused or establish a monopoly or add to the privileges of a monopoly already existing. There are many apparent exceptions in the early history of franchises, but as the years pass on every live franchise seeks the warm bosom of monopoly.

(3.) That public utilities whose importance justifies the granting of special franchises in the streets render services of general interest to the people living adjacent to the streets traversed by such utilities.

(4.) That the interests of the public demand continuous, uninterrupted service, extending over as wide an area as practicable and constantly expanding as population increases and spreads out.

(5.) That the absence of competition or its inadequacy as a force for regulating rates and service renders it necessary for the public authorities to maintain on behalf of the public a constant supervision over the exercise of a special franchise.

(6.) That aside from the inherent necessity of public control for any particular utility, the demand upon the streets for general, varied and increasing uses makes it imperative for the public authorities to maintain a continuing control of the public highways, undiminished by any irrevocable or perpetual special franchise.

The present and future welfare of many millions of American citizens is intimately concerned with the intelligent application of these principles.

102. The elimination of special franchise values.—Still

another principle may be deduced from experience and a just consideration of the public welfare. It is this:

(7.) That public utilities, whether operated by the city or by private companies, should be so regulated as to render good service at cost, including in cost a sufficient amount for operating expenses, maintenance, depreciation and a fair return upon the amount of capital actually invested. It may be desirable to make rates high enough to retire the investment within a fixed period of years. In other words all the monetary value should be regulated out of franchises, except that proper allowances may be made for fluctuations in earning power. Under such conditions there would be no franchise values to tax except in unusually prosperous years.

This principle is based upon the theory that the possession of a special privilege to use the streets in a special way should not be made the occasion for the exploitation of those who ride in street cars or who use telephones, gas or electric light. The street should not pay taxes either for the enrichment of privilege-holders or for the relief of landowners. The streets should be open and free to all comers. The idea of private highways or highways exploited for special private interests is repugnant to the idea of democracy. It should be carefully noted that this statement is not a declaration in favor of public operation as opposed to private operation of street railways or other utilities. It is simply a declaration that whoever operates the utilities should be required to do so without the enjoyment of any of the peculiar profits of monopoly. Under private ownership this result can be best obtained by the recognition of the principle of limited risks and limited profits, with compensation to the city foregone for the benefit of lower rates and better service. Under public ownership it would mean that utilities should not be operated for the relief of tax-payers. Failure to grasp this principle has led in some cases to the peculiar anomaly of limiting the suffrage on franchise referendums to direct tax-payers. It should be clearly recognized that the streets, so far as they are devoted to public travel, transportation and communication do not belong in any sense to the tax-payers as such, but to the general public. To permit the direct tax-payers to control public utility policies is to invite the exploitation of the great mass of those who own and use ease-

ments in the streets by a special class of citizens. It is true that the value of land is intimately affected by the nature and efficiency of the public services available to those who live on it. But under an equitable system of taxation the benefits would be absorbed by the public, and the special damages would be borne by the public by means of the remission or reduction of the taxes levied against the land. "Good service at cost," is the slogan.

PART II.

PIPE AND WIRE FRANCHISES.

CHAPTER VI.

ELECTRIC LIGHT, HEAT AND POWER AS A PUBLIC UTILITY.

103. History and growth of the utility.—The first central electric station operating arc lamps was installed in San Francisco in 1879, using the Brush system.[1] The Edison system of incandescent lighting was first put into operation in connection with a central station in 1880.[2] It appears, therefore, that electric lighting as a public utility has had a development of about thirty years. The growth of the industry has been extremely rapid. The Bureau of the Census, in its special investigation of this industry in 1902, found a total of 3,620 central electric stations in operation. By 1907, this number had increased to 4,714. This utility extends, not only to the great cities, but to towns and villages having only a few hundred inhabitants. While it is true that over 20 per cent of the investment in this utility and nearly 25 per cent of its gross income in 1902 were found in the six cities having a population of more than 500,000 each, on the other hand it is to be noted that there were, at that time, 2,714 central electric stations in places of less than 5,000 inhabitants. This number constituted 75 per cent of the total number of stations in operation. It is significant that less than 23 per cent of the gas plants in operation in

[1] Special Reports, Bureau of the Census; "Central Electric Light and Power Stations; 1902," p. 90.
[2] *Ibid.*, p. 95.

1900 were found in these small towns.[1] The total cost of construction and equipment of the stations in operation in 1902 was upwards of $500,000,000, and the gross income for the year was more than $85,000,000.[2] These figures grew in the next five years to nearly $1,100,000,000 and $176,000,000 respectively. The output per day in 1902 was 6,960,000 kilowatt hours, or nearly 9,300,000 horse-power hours.[3] The year 1907 showed an increase of 133.8 % over these figures. The total amount of stock issued by private companies operating central electric stations was, in 1902, just short of $373,000,000, and the outstanding funded debt amounted to $254,000,000, making a grand total of $627,000,000, outstanding at that time.[4] Here, also, five years wrought wonders, for in 1907 the total of outstanding stocks and bonds had grown to the enormous aggregate of $1,342,000,000. The importance of the industry from another standpoint is shown by the fact that the average number of wage earners employed in connection with electric light, heat and power plants was 23,330, in 1902, and 34,642 in 1907; while their wages amounted to nearly $15,000,000 in the former year and $23,700,000 in the latter.[5] The wage earners included foremen, inspectors, engineers, firemen, dynamo and switchmen, linemen, mechanics and lamp trimmers, as well as unskilled laborers and clerical employes.

104. Uses of electrical current.—The first use of electricity as a public utility was for arc and incandescent lighting. Its use has since been developed in many ways. Electrical current is now supplied for running street cars, for charging automobiles, for operating stationary machinery, for the operation of elevators, for electric heaters, for electric fans, for steel drills and many other uses. Electrical current is even supplied for the operation of dentists' apparatus, for electroplating and for the quick production of photographs and engravings. "The refinement of modern conveniences in the utilization of current from central station sources of supply", says the census report,[6] "can best be understood by

[1] "Central Electric Light and Power Stations," *op. cit.*, p. 14.
[2] *Ibid.*, p. 6.
[3] *Ibid.*, p. 81.
[4] *Ibid.*, p. 16.
[5] The figures for 1907 are taken from the *Preliminary Report* released by the Census Bureau January 12, 1909; and from information furnished by the Director of the Census July 1, 1909.
[6] "Central Electric Light and Power Stations," *op. cit.*, p. 103.

seeing, in the modern city house, the elevators operated by electric motors, electric cooking apparatus and flat-irons in use in the kitchen, incandescent lamps and fan motors in the living rooms, and electric curling irons, foot-warmers and electrothermic pads in the bedrooms, all connected by flexible cords and wall plugs to circuits that are brought to them by means of interior conduits which run back to the main cut-out box in the area vault, where the circuits are tapped off from the street mains." Perhaps the most spectacular use of electrical current is for electric signs, the illumination of buildings and other advertising purposes. In fact, electrical illumination in the streets and public buildings, on bridges and towers, and at pleasure resorts, constitutes one of the most glittering attractions of modern city life. These varied, interesting and necessary uses have made this utility one of the most important of those which are dependent upon public franchises for successful operation.

105. Electrical equipment.—A plant for the generation and distribution of electrical current includes many kinds of equipment. In the first place, there must be the machinery for supplying the primary motive power and for transforming this power into electricity. The primary machinery consists of steam engines, water wheels or gas engines, according to the source of power used in a particular plant. The machinery for transforming primary power into electrical energy consists of dynamos of various types. In the second place, there must be storage batteries to supply the extra current needed at times of greatest demand, and transformers to reduce or increase the voltage to suit the uses to which the current is to be put. The installation and operation of the kinds of equipment already mentioned do not, for the most part, involve the use of the public streets; and, accordingly, are not so directly subject to municipal regulation as are other parts of the equipment. The distributing system of an electrical plant consists of overhead wires stretched on poles or underground wires placed in conduits, with service wires, lamps, motors, etc., attached. So far as pole lines, main wires and feeders are concerned, ownership is always vested in the operating company. Underground conduits are sometimes owned by the operating company, sometimes by the city, and sometimes by an independent conduit com-

pany. Moreover, pole lines are frequently used in common by different companies, so that the particular poles used by a company are not necessarily owned by it. So far as service wires and incandescent and arc lamps are concerned, there is no invariable rule of ownership. Meters are now in general use and are always owned by the company. There are still some instances, however, in which the charge for lighting is a flat rate, so that no meter is required. Electric motors, including machinery for the operation of ventilators, elevators, hoisting apparatus, etc., are not usually owned by the operating company. It is in connection with the distributing system, the erection of poles, the stretching of wires, the construction of conduits beneath the surface of the streets, the wiring of buildings, the installation of lamps and the operation of meters, that municipal control is usually exercised.

106. Patents, licenses, and parent and holding companies. —The development of the electrical industry and its control by municipal and state authorities, have been largely affected by the license system. The various inventions for the utilization of electricity for light, heat and power, have been patented by their inventors. These patents have usually been held by "parent" companies, whose policy has been to manufacture the necessary apparatus and license local companies in the different cities to use it in the operation of public utility plants. To begin with, the parent companies received from the licensee companies a proportion of the full paid capital stock and bonds of the latter companies in return for the right to use the former companies' patents. The license was usually accompanied by a contract which bound the licensee company to purchase its apparatus or a certain proportion of it directly from the parent company at fixed prices. This system naturally led to the capitalization of patents and licenses, which in the course of time, as exclusive rights expired, became of little or no value. Control by the parent companies has been largely maintained, however, through contracts for supplying apparatus. In recent years there have grown up a good many holding companies, which make it their business to buy up, in various parts of the country, lighting plants that are not financially prosperous.

"When plants are thus brought under one management", says the

census report,[1] "all the supplies for them are bought in common and consequently are cheaper; the employees are subject to sharper discipline, and the engineering supervision is more careful than in the separate plants; therefore, the plants, as a whole, are likely to be in much better condition and also much more progressive than they were as scattered units in struggling communities".

It may be added that companies of this kind, while undoubtedly tending toward more efficient service, at the same time render control by local authorities more difficult, and increase the possibility of the exercise of undue political influence on the part of the group at any particular crisis in the affairs of any local company. The holding company, having brought a large number of small plants under unified control, is able to concentrate the financial and political resources of the whole combination at any particular point where the interests of a company may be in jeopardy from unfavorable political action.

107. Combination with other industries.—The manufacture and distribution of electricity is inherently the least monopolistic of public service utilities. It is less monopolistic than the telephone, because it makes no difference to the consumer of electricity whether his neighbor gets current from the same central station or not. It is less monopolistic than street railways, the gas industry, or the water supply, for the reason that there is less waste in the duplication of wires, and more salvage when they are removed from their original locations, than in the case of street railway tracks, gas pipes or water pipes. Largely for this reason, city councils have probably looked to competition for relief in the electric lighting and power business more frequently than in any other industry dependent upon franchise grants. Nevertheless, the inevitable tendency toward monopoly has shown itself everywhere. In 1902, there were 253 electric railway companies that were engaged in the sale of electrical current for light and power, and a considerable number of electric light and power companies that were supplying electrical current for the operation of railways.[2] About 40 per cent of all the central electric stations covered by the special census report for 1902 were carried on in conjunction with the manufacture of gas, the operation of water works, the

[1] "Central Electric Light and Power Stations," *op. cit.*, p. 19.
[2] "*Ibid.*," *op. cit.*, p. 6.

production of ice, or other industries.[1] Naturally, electric lighting is furnished in sharp competition with gas and other means of artificial illumination. The disadvantages of competition, from the standpoint of the companies, have been so great as to lead to the combination of gas and electrical interests in many cities. The tendency toward combination between lighting and power interests is well illustrated by the experience of New York City. In old New York the electric lighting business is entirely dominated by the Consolidated Gas Company, while throughout the Greater City all of the more important gas and electrical companies are controlled, through stock ownership, by Standard Oil interests; so that there is practically no competition among the vendors of the various illuminants anywhere in Greater New York. Another striking illustration of the tendency toward combination with other public utilities, is found in the case of the Public Service Corporation of New Jersey, which controls practically all of the street railway business of northern New Jersey, and of the gas and electric lighting business over a still wider area. The activities of this corporation extend to Newark, Jersey City, Hoboken, Elizabeth, Bayonne, the Oranges, Camden, Trenton, Paterson and other towns. The gas and electric light industries have also been consolidated in Baltimore, St. Paul, Denver and other great cities of the country.

108. Municipal and private plants.—Municipal operation of electric franchises is more widely extended than municipal operation of any other utility except sewers and water works. In 1902, out of a total of 3,620 central electric stations, 815, or 22.5 per cent, were owned and operated by cities.[2] The municipal plants, however, averaged much smaller than the private plants, and were in the most important cases confined to public lighting. The cost of municipal stations was only $22,000,000, or 4.4 per cent of the total cost of all the stations. The income of municipal stations was only 8.1 per cent; the expenses, 7.7 per cent; and the horse-power capacity of their dynamo plants, 9.4 per cent, of the total. The municipal stations gave employment on the average to three wage earners each, while the private stations gave employ-

[1] "Central Electric Light and Power Stations," *op. cit.*, p. 14.
[2] *Ibid.*, p. 6.

ment to 7.4 wage earners each. Among the great cities, Chicago, Detroit and Allegheny furnished the most conspicuous examples of municipal electric light plants. In the 38 cities having more than 100,000 population, in 1902 there were 10 municipal plants and 93 private plants, while in towns having less than 5,000 population, the number of municipal plants was 671 as against 2,043 private plants. The development of municipal ownership has been especially rapid in Massachusetts and some of the North-Central states. Wherever the general laws of the states or the special charters of the cities give the local authorities the right to establish electric light and power plants, either for public lighting or for a general commercial business, the possibility of the exercise of this right is an important factor in the granting of franchises to private companies.

109. Special conditions affecting this public utility.—In preceding chapters we have discussed at some length the various conditions which affect the operation of public utilities generally. It is necessary briefly to point out some of the peculiar conditions surrounding the manufacture and distribution of electrical energy as a public utility, which have an important bearing upon the granting of franchises. In the first place, the distribution of high tension electrical currents by means of wires suspended in the streets and connected with the houses, is a source of great public danger. Both life and property are in jeopardy unless extraordinary precautions are taken to prevent the escape of current from its established channels. The principal recognized danger to property from overhead wires and from the wiring of buildings, is the danger from fire. If wires are placed underground in conduits and are properly insulated, there is little danger of the destruction of other sub-surface structures through the escape of current. In early franchises, however, particular precautions were taken to prevent the laying of these conduits less than a certain distance from gas and water pipes. Although the dangers of electrolysis are recognized chiefly as arising from the operation of electric railways, there is a possibility that modern skyscrapers, with their steel frameworks, might have their strength eaten away by stray currents of electricity due to defective wiring in connection with the supply of light.

This utility is also peculiar, to a certain extent, because of the development of water power in connection with the production of electrical energy, inasmuch as the use of water power usually involves the transmission of electrical current over long distances and the supplying of several cities and towns from a single source. The industry, therefore, becomes interurban or state-wide in character and not easily amenable to local control.

Still another peculiarity of this utility arises out of the fact that, in order to supply the demand for current at the time of maximum use, an equipment must be maintained which under ordinary conditions would remain idle during most of the twenty-four hours of the day. This circumstance makes the development of special uses of electrical current of the utmost importance to the business and creates a complex situation with reference to the regulation of rates and the prevention of discrimination, which is extremely difficult to handle with justice to all parties concerned.

110. Competitive grants.—There is hardly a city in the country that has not granted several general electric light franchises. Indeed, competition was so thoroughly recognized at the beginning of the industry as proper and possible that in some cases general franchises were granted to all companies desiring to supply electric light and power. Sometimes these general franchises were granted by the legislature and did not require the consent of the local authorities, while in other cases the local consent was required only for the purpose of determining the particular location of the pole lines of the various companies. As an example of general grants by local authorities, we may cite the following resolution adopted by the council of the city of Denver on February 3, 1881[1]:

"Resolved, that permission be granted to any company desiring to supply the city with electric light, to erect posts and such other appliances as may be necessary to successfully carry on their business; provided, that said companies do not obstruct the public thoroughfares."

In New York City in 1887 a franchise was granted to six different companies by the same resolution. In other cities the policy was followed of granting a franchise to any com-

[1] "Franchises and Special Privileges as granted by the city and county of Denver," 1907, p. 107.

pany that might apply for it, or of granting franchises to different companies for different sections of the city. Perhaps even more frequently competing franchises have been granted for the purpose of forcing down the rates or improving the service of the company or companies already in the field. Sometimes new grants have been made for the purpose of getting wires underground or for the purpose of getting an adequate supply of electric power or an extension of the public lighting system.

In the report of the National Civic Federation, relative to the municipal and private operation of public utilities, the Federation's investigator gives a list of forty-seven electric franchises granted by the City of Chicago or the local authorities of municipalities now a part of Chicago.[1] "There may be some franchises not included in this list", he says, "but a search for them through the scattered records of the city would not be profitable." Twenty-seven of these franchises were granted by the city itself, though only a few of them covered the entire city. When the Chicago City Council passed an ordinance, March 23, 1908, prescribing the rates to be charged for electric light by the Commonwealth Edison Company, it enumerated in the ordinance twenty-three different franchises which were "understood to have been owned or claimed" by this company or its constituents, in addition to the two principal franchises under which it was operating.

In Denver, after the consolidation of all the gas and electric interests, the city granted a competing electrical franchise. The city had been paying $120 a year per arc lamp for public lighting, and the people were charged 15 cents per kilowatt hour for incandescent lighting. The new company agreed to light the streets at $90 per arc lamp and to furnish incandescent lighting at 5 cents per kilowatt hour. The result was a fierce competition in rates between the companies. The old company reduced its rate as low as two and one-half cents per kilowatt hour, and finally succeeded in forcing its new competitor to sell out. The old company, having forced its rival out of business, then went into bankruptcy, had a receiver appointed and got a friendly court to

[1] "Municipal and Private Operation of Public Utilities," *op. cit.*, Part II, vol. 1, p. 719.

order the cancelation of all contracts which the company had entered into at the low competitive rate, so that it might be able to continue business as a monopoly at a profit.[1] These instances tell the tale of competing electric light franchises.

111. Putting wires underground.—Most early franchises and many recent ones authorize the stringing of wires upon poles in the streets or alleys. However, low tension wires for incandescent lighting were early placed underground. Referring to Mr. Edison's experiments at Menlo Park in 1880, where for the first time he operated a system of 425 sixteen-candle power lamps to light the houses, streets, laboratory and machine shop, the special census report for 1902 says[2]:

"The circuits were underground conductors, a system to which Mr. Edison has always adhered, not only because of the obvious difficulty there would be in carrying overhead the large mass of copper necessary for low voltage constant potential lighting, but because he believed that with the conductors underground there would be attained a constancy of service without interruption, which is obviously necessary for all central methods of artificial illumination."

The multiplication of telegraph wires had, prior to 1880, constituted a considerable nuisance in the streets of great cities. With the addition of telephone wires and high tension electric light and power conductors, the overhead system became not only a disfigurement to the beauty of streets, but a positive menace to the public. It became apparent, therefore, in the decade following 1880, that all electric wires in the principal streets of large cities would, sooner or later, have to be placed underground. In fact, many of the early franchises, even in cities of no considerable size, reserved to the public authorities the right to require the companies to bury their wires. While the stringing of wires upon pole lines in the streets is a comparatively inexpensive process, the building of conduits and the placing of wires in them, underneath the surface of the streets, is very costly. In the early days, before the methods of conduit construction were perfected, the process was not only expensive but difficult and for a time uncertain. It can be readily seen, therefore, that the amount of the original investment required for the

[1] See "The Economic Struggle in Colorado", by J. Warner Mills, published in *The Arena*, November, 1905, pp. 488-492.
[2] *Op. cit.*, p. 95.

construction of a distributing system for an electric light plant, varies enormously, according to whether the overhead or the underground system is used. This fact brings serious complications in relation to capitalization, extensions, competition and rates.

112. Peak loads and special rates for different services.— As long as electric current is used for lighting only, the demand during the summer months, when the days are long, will be comparatively slight, except for arc lighting on all-night service. A further exception should be made in the case of modern skyscrapers and other buildings so poorly constructed or so closely crowded together that artificial light has to be used constantly during working hours. In the winter, on the other hand, when the days are short, the demand for lighting in office buildings and stores in the late afternoon overlaps the demand for light in residences, so that between four and six o'clock we have what is called a "peak load", which means that, if a curve were drawn showing the demand for light at different hours of the day, the demand curve at this particular time would show a peak. The increase of the demand at the beginning of this period is very abrupt; and the decrease at the close of the period, while not so abrupt, is nevertheless very marked. Unless provision is made for the storing of electrical energy produced during other hours of the day, it is necessary to maintain generating and distributing equipment of capacity equal to this maximum load. This condition, of course, adds very greatly to the expense of supplying current.

If an electric light and power plant also supplies current for the operation of street railways, these conditions are likely to be still further emphasized. While the demand for current during the bulk of the day is considerably increased, the heaviest demand, during the rush hours at night, comes at the same time as the heaviest demand for lighting. Under these conditions the development of the use of electric power for the operation of various kinds of machinery, has been of extraordinary benefit to the industry.

"Electric motor service," says the special census report for 1902,[1] "whether for factories or for electric railways, is required from early daylight until dusk and often through the night hours, whereas lighting, except in the case of street arc light circuits furnished all night, is

[1] *Op. cit.*, p. 12.

normally restricted to a few hours in the evening and possibly one or two hours in the morning during the winter. Many critics and authorities are of the opinion that, successful as the electric lighting industry has proven to be, it could hardly have survived and certainly could not have attained its present proportions in so short a space of time if the electric motor had not come to the support of the electric lamp."

The gross income of central electric stations operated by individuals or private companies for the year 1902, showed the following distribution of earnings: from arc lighting, $22,091,800; from incandescent lighting, $41,297,484; from other electric service, $13,960,465.[1] Discussing rates for motor service, the special census report says[2]:

"From the fact that power circuits connected with central stations draw their supply of current in the daytime, when a large proportion of the generating machinery would otherwise stand idle, a great many central stations have felt that they could make concessions and inducements in the way of special rates for current. These lower prices have enabled them to build up a new class of customers, and as a result of the increased income caused thereby they have been able to employ their machinery and operating staff a greater number of hours of the day and at a higher level of efficiency, as well as to employ more competent men and to pay better wages. So long as a company was restricted to a few hours of lighting, its resources and income were limited; but with a business maintained not merely for a few hours of darkness, but carried on almost throughout the twenty-four hours, and with a fair proportion of the apparatus always in use, a large number of the stations were put into a better condition financially, and were enabled to carry out the developments and extensions that have been so marked a feature of the electric lighting industry during the past ten years. In fact, without the help of motors there would have been comparatively little incentive to introduce the many modern features which place electric current at the command of the consumer for all purposes, day and night."

The income from stationary motor service in 1902 was a little over 12 per cent of gross earnings from operation. About $2,300,000 was derived from supplying current to electric railways. This amounted to approximately 3 per cent of gross income. From electric heating there was derived about $39,000; and from the charging of automobiles, about $30,000, amounts that were comparatively insignificant. Nearly half of the income from charging automobiles was secured in the District of Columbia, and most of the rest in the State of New York. Nearly two-thirds of the entire income from electric heating was derived from the State of Minnesota. It should be noted that, in addition to

[1] "Central Electric Light and Power Stations," *op. cit.*, p. 28.
[2] *Ibid.*, p. 38.

the sale of electric current, a small income is derived from miscellaneous sources, including sale of electrical supplies, the rental of electrical equipment, the sale of surplus steam for steam heating, etc. Those sources of income are, however, comparatively insignificant. In 1902, they amounted to less than 2 per cent of the gross receipts.[1]

113. Development of water power and interurban transmission of current.—The use of water power at Niagara for the generation of electrical current to be transmitted to Buffalo, Rochester, Toronto and other cities in the United States and Canada, has given a great stimulus to the development of water power elsewhere for similar purposes. As early as 1902 there were 312 central electric stations operated exclusively by water power. Of these, 29 were in California, 37 in New York and 35 in Michigan. There were also 329 stations operated by steam and water power combined. The total number of water wheels in use for supplying primary power to central electric stations was at that time 1,390, with a capacity of upwards of 438,000 horse-power.[2] Where water power is readily available for the generation of electricity, without too great expense or loss of current in transmission to distributing points, it is much cheaper than steam power and tends to large reductions in rates, especially if current can be delivered in great quantities for the operation of electric railways or for municipal or other lighting plants. The Massachusetts Board of Gas and Electric Light Commissioners, in its report for 1907, takes cognizance of the rapid development of water power in connection with electric light and power stations.

"So much progress has been made in the solution of the various problems incidental to the transmission of large volumes of electric energy over long distances", says this report,[3] "that large sums of money have been expended in the development of water powers in a number of states for the generating of electricity and its transmission to a distant point, there to be used for the supply of electric light or of power in units of large size. Enterprises of this character are obviously attracted to places where the streams are of considerable size and most regular in their flow. As yet there has been no important development of this kind in this state, but conditions in this respect appear to be rapidly changing.

"In 1904 the Turners Falls Company, theretofore essentially a water

[1] "Central Electric Light and Power Stations," *op. cit.*, pp. 39, 40.
[2] *Ibid.*, pp. 48, 49.
[3] Page 4.

power company, was authorized to generate, sell and distribute electricity, and has since utilized its water power to a certain extent for that purpose. In January, 1907, the Connecticut River Power Company was chartered under the general law for the purpose of 'generating, manufacturing, transmitting, selling and in every fashion dealing in electricity for power, and in general engaging in and conducting the business of an electric power company within the Commonwealth'.

"A corporation created by special legislative acts in the States of New Hampshire and Vermont as the Connecticut River Power Company, but having, as we understand, no commercial relations with the Massachusetts company of the same name, is now investing a large sum of money in the development of a water power on the Connecticut River but a few miles north of the Massachusetts line. The avowed purpose of this company is to generate electricity and to sell and distribute the same for power purposes. There is every reason to believe that the most attractive and principal market for this power will be within this Commonwealth. A company will doubtless be organized under the general law in this State for distributing and selling power from this concern.

"Any effort to make cheap power available to manufacturers in this State is one which should be welcomed and encouraged in every way consistent with the general public interest. Although a company may be organized for the supply of electric power only, yet, owing to the fact that electric light is only one form or manifestation of electric energy or power, and that such energy or power may with great facility be made to appear as light, such a company may in fact, and possibly unintentionally, become virtually engaged in the business of furnishing electricity for light as well as power. In any event, it is likely to occupy to a greater or less extent the public streets and highways for the successful and economical construction of its lines, resembling in this and many other respects companies avowedly engaged in the manufacture and sale of electricity for light and power.

"Under the existing provisions of law the local authorities in granting locations in the public streets for electric lines are given no express authority to impose conditions or limitations upon their grant. The appeal to this Board from their decision where a company, corporation or person is engaged in the manufacture or sale of electric light, gives to this Board no greater authority to impose conditions or limitations upon the grant of a location than is possessed by the local authorities in the first instance.

"What has been stated suggests that the time may have now arrived to consider what additional regulations, conditions or restrictions the public interest may require respecting the large authority likely to be exercised by such companies organized under the general law to sell only electric power, and by whom they may be determined and imposed, unless such regulations are to be expressly defined and required by statute."

It should be noted that the policy of conservation of natural resources, including the withdrawal of public lands containing water power sites, inaugurated by President Roosevelt in accordance with the advice of Gifford Pinchot, has an intimate bearing upon the future development of the electric light and power industry. Indeed, this utility and

the franchises governing it, are coming to have not only state-wide, but nation-wide complications. Here is being welded one of the links in the chain of interests that seems destined to bind together municipal, state and national politics at no very distant date.

CHAPTER VII.

FRANCHISE CONDITIONS IMPOSED ON ELECTRIC LIGHT AND POWER COMPANIES.

114. A blanket franchise.—Jersey City.—A franchise was passed by the Common Council of Jersey City over the Mayor's veto, October 11, 1887, granting to the Jersey City Electric Light Company the right to maintain poles and wires "for all electric lighting and uses" in certain streets described in the ordinance.[1] Poles were required to be at least 25 feet in height above the ground, "substantially straight, and dressed and painted in accordance with any general ordinance of the city on that subject now existing or that may be hereafter passed". Poles were not to be erected in front of the land of any abutting property owner except

[1] Griffiths, Revised Ordinances of Jersey City, 1899, p. 218.

in the manner provided by the laws of the state, and no shade tree or fruit tree could be trimmed or in any way injured by the company without the owner's consent. The company was to be responsible for any damage done to public or private property in connection with the construction or maintenance of its plant.

The company was also authorized to lay conduits under the streets, but they were not to be allowed nearer than three feet to any water or gas main, except at points of crossing. Before the company could open any street for laying its conduits in the first instance, it was required to notify the Board of Aldermen. If the company failed to comply with any provision of the ordinance, it was subject to a fine of $20 for each offense. An indemnity bond of $25,000 was required of the company to protect the city against damages resulting from the company's operations.

Another franchise, granted by Jersey City, September 11, 1889, is so brief and comprehensive that I shall quote it in full, as follows:[1]

"Section 1. Consent and authority is hereby granted to the Hudson County Electric Company, a corporation organized under the laws of New Jersey, to erect posts or poles, and to sustain thereon the necessary wires and fixtures, and to lay pipes, conduits and other apparatus, and run therein the necessary wires and fixtures in certain public roads, highways, streets, avenues, alleys and public places of Jersey City designated in section two following, for the purpose of supplying and distributing electricity.

"Sec. 2. All the highways, streets, avenues, alleys and public places in said city now or hereafter laid out or opened are hereby designated as the highways, streets, avenues, alleys and public places in which said poles, posts, pipes and conduits may be placed or laid and wires run. Said posts, poles, pipes or conduits and wires shall be so placed, laid and run under the supervision of the committee on streets of this board and with the least possible inconvenience to the public.

"Sec. 3. Said company shall indemnify and save harmless, the said city of Jersey City from all damages which may be awarded against said city in favor of any person or persons, corporation or corporations resulting from any act or thing done by said company by virtue of the authority and consent herein granted."

In June, 1908, a franchise was granted by the Board of Aldermen and vetoed by the Mayor, which showed a considerable advance upon the one just quoted. This grant was in favor of the Mutual Benefit Light and Power Company and was limited to a period of twenty years. The com-

[1] Griffiths, *op. cit.* p. 217.

pany was to use the underground conduit system only, and was to construct at least two miles of conduits a year and equip them for the supply and distribution of electric light, heat and power. Rates for electric current were limited to eight cents per killowatt hour, with five per cent discount on bills paid within five days from the date of presentation. The company was also to pay the city five per cent of its gross receipts. At the expiration of the period of the grant, the city was authorized to purchase the pipe and conduits in the streets "upon the payment of the value thereof, excluding franchise rights, to be fixed by arbitration, in case the city desires to purchase the same". The company was also required, before disturbing the surface of any street for laying its conduits, to deposit with the City Clerk an amount equal to 75 cents per lineal foot of conduit to be laid, as security for the restoration of the street to its former condition. In vetoing this ordinance, the Mayor suggested that certain other limitations should be imposed upon the company. He thought that the ordinance should limit the number of feet of street opening to be permitted at any one time, and that some reasonable regulation should be imposed to protect both the city and the company from the nuisance that would arise from the use of soft coal in the company's plant. He also suggested that an effort be made to prevent the company from selling its franchise or consolidating with any other company, by the insertion of the following clause:

"Said company agrees that it will not merge, consolidate or enter any agreement in restriction of competition with any other company supplying or to supply electric light, heat or power in Jersey City during the term of said franchise, and in case said company shall directly or indirectly violate the provisions of this section, then the franchise and consent hereby given shall forthwith become void."

The announced purpose of the new company was to compete with the Public Service Corporation of New Jersey, which, as already stated, has a practical monopoly of the lighting business, not only in Jersey City, but in all the principal cities of the state.

115. Limited franchises combined with steam heating and gas; efficient service; consolidation—Salt Lake City.—A franchise "for the purpose of conveying electrical currents by means of wires to be used for lighting, and also conveying

steam by means of pipes to be used for heating and propelling machinery, and for other purposes", was granted by the City Council of Salt Lake City, January 11, 1881, for a period of 25 years.[1] It was provided that poles should not be set within six feet of any fire hydrant, gas or water main or service pipe, and that the streets should be repaired by the company to the satisfaction of the City Council within a reasonable time after having been disturbed. The Salt Lake Power, Light and Heating Company, to which this franchise was granted, was made responsible for damages to persons or property resulting from the company's negligence in the exercise of its franchise rights.

Another franchise was granted by Salt Lake City on May 20, 1893, to the Salt Lake and Ogden Gas and Electric Light Company.[2] This grant also ran for the period of 25 years and included a steam heating and power franchise. It provided for both conduits and pole lines and also authorized the laying of gas mains. The use of the streets by the company was to be subject to the ordinances of the city, and all pipes, conduits and poles were to be placed "at such points and places as shall be designated by the city engineer and none other; and under the supervision of said city engineer and the board of public works, and to their approval". Electric light of "the best quality and highest efficiency" was to be furnished at prices not exceeding the maximum rates fixed in the ordinance; but the company was authorized to make a minimum charge of at least $1.50 per month. Light for hospitals and other charitable and religious institutions, and for the city, was to be furnished at a discount of 10 per cent from the maximum rates. It was specifically provided that nothing in the ordinance should be so construed as to prevent the city "at any time hereafter from changing the manner or place of setting poles and stringing wires, or from requiring said company, its successors or assigns, to place all wires or conductors under ground".

About two months later, that is to say, July 30, 1893, still another franchise was granted to one, Robert M. Jones, for the construction of pole lines and conduits equipped with wires "for the transmission of electrical currents, for fur-

[1] Salt Lake Power, Light and Heating Company's franchise, Book of Ordinances, p. 317.
[2] Book of Ordinances, p. 357.

nishing power, light and heat to the inhabitants, property owners, manufacturers and users in said city".[1] Under this franchise the grantee was required, prior to the commencement of construction, to file with the City Engineer a plat showing the proposed location of poles, wires or conduits; and this plat was to be subject to the approval of the City Council. Furthermore, the grantee agreed "to furnish electric lights to the citizens of said city, through standard types of incandescent lamps, at a price not to exceed one cent per hour for each sixteen-candle power lamp, and a proportionate charge for lamps of increased candle power". He also agreed to furnish arc lamps for lighting the streets at $10 per month for each 2,000 candle power lamp for all-night service. Still further, he agreed "to supply the City Council rooms, city offices and public library with their necessary current for lamps from the time the station started continuously during the life of the franchise, free of charge". It was provided that in case the grantee, his heirs or assigns, should dispose of the franchise to any competing company or person or "enter into any combination with any electric light, gas or power company, concerning prices to be charged for furnishing light, heat, power or signals, either to the city or private consumers", the franchise should become void. It was also stipulated "that the said Robert M. Jones, in accepting this franchise, agrees to construct the most practical device for consuming or arresting the smoke in all instances wherein coal is used for fuel" under the grant. The city also reserved the right "to levy a special tax, in addition to the ordinary property tax, upon each pole erected in any street, alley or public ground in said city, of such sum per annum as the council may deem reasonable". The city reserved the right to designate the location for conduits and pole lines, to change the manner or place of setting poles and to require all wires to be placed underground.

Another franchise, very similar to the one just described, was granted to S. F. Walker, December 22, 1893.[2] But the provision for free lighting was modified so as to include "the city council chamber, city offices, *fire station* and public library". It was also provided that any pole tax levied by the city should be uniform upon this grantee and all other

[1] Book of Ordinances, p. 364.

[2] *Ibid.*, p. 368.

persons or corporations using the streets for similar purposes.

On December 26, 1896, Salt Lake City granted a 25-year franchise to the Utah Power Company for the construction and maintenance of an overhead electric system "for light, heat, power and other industrial and commercial purposes".[1] It was provided that the company should be subject to all laws and ordinances then in force or that might thereafter be passed by the state legislature or by the city council "authorizing the fixing of rates to be charged for electricity," and also should be subject to laws and ordinances governing the construction and maintenance of fixtures and appliances for the transmission and distribution of electricity. It was specifically provided that "all poles erected under this franchise shall measure forty feet in length, fourteen inches at the butt, ten inches at the top, except in special cases wherein the city council may order the erection of larger or smaller poles; said poles shall be set, as near as may be, 132 feet apart, and not less than five feet in the ground". All poles and their cross-arms were to be "properly dressed and painted". The city reserved the right, on four months' notice at any time during the year 1897, to erect and maintain at its own expense "a sufficient number of poles with the necessary cross-arms to admit of lighting the city with 400 arc lamps". The company was to provide the city, free of charge, "with one cross-arm on each of said poles, sufficient for the proper accommodation of stringing and supporting such wires, lamps and other necessary appliances as may be owned and used by it for municipal lighting". The city also reserved the right, after five months' notice, at any time during the year 1897, to require the company to furnish the city for the period of three years "the equivalent of 300 horsepower in electric energy, or so much thereof as said city may deem necessary to be used for municipal lighting; said energy shall be in such form as may be by said city determined most suitable for that purpose, and shall be supplied continuously and regularly every night in the year between the hours of sunset and sunrise, and shall be delivered to the conductors of the city street lighting system within one block of the city and county building in said city, or such other

[1] Book of Ordinances p. 374.

place as may be agreed upon and shall be there measured, and afterwards paid for monthly by said city at the stipulated price of $25 per annum, for each electric horsepower". The city reserved to itself the right to renew this contract for an additional period of from one to three years at the same price, "or for any lower rate at which said grantee may then be selling electric energy in quantities of 300 horsepower or less in Salt Lake City". This right of the city to renew the contract from time to time was to be continuous throughout the life of the franchise. The company was required to execute an idemnity bond of $50,000 to protect the city from damages or expenses growing out of the company's operations. The following paragraph of this franchise is especially worthy of consideration:

"Said grantee shall permit any other electric light, telegraph, telephone or power company to string wires upon its said poles, under such reasonable regulations and compensation therefor as may be fixed and adopted by the city council, and shall render the service it is hereby authorized to supply, by the best available methods and practice known to the science of applied electricity, and such as will secure the least danger to life and property, compatible with the best obtainable service; and said service must be supplied on equal terms under like conditions, to every commercial user."

Still another franchise was granted by Salt Lake City, May 27, 1897, to the Pioneer Electric Power Company for a period of 25 years.[1] This grant was for pole lines, pipes and conduits for the distribution of both electricity and gas. Detailed provisions in regard to poles were similar to those contained in the preceding grant, except that the standard height was reduced from 40 feet to 35 feet, with a reduction from 14 inches to 12 inches in the required diameter at the butt and from 10 inches to 8 inches at the top. In addition to a free cross-arm on each of its poles, the company was to furnish the city without charge the equivalent of 30 horsepower in electrical energy continuously during the life of the franchise to be used for any municipal purpose the city council should deem necessary. It could be used for heat, light or power, but for only one of these purposes at once. Any additional energy required for these purposes was to be furnished "at a price not to exceed one and one-fourth cents per kilowatt hour, delivered at the place of consumption".

[1] Book of Ordinances, p. 378.

The company was also required to furnish arc lighting for street purposes at a price not to exceed $7 a month for each 2,000 candle power light for all-night service. The maximum price allowed for similar lights for commercial purposes, was $15 a month. The maximum price to be charged for 16-candle power incandescent lights, for either public or private service, was not to exceed "one cent per lamp per ampere hour". The price for lighting public buildings, churches, hospitals and schools, was not to exceed "one-half the minimum rate charged for commercial purposes". This franchise contained provisions in regard to service and the filing of an indemnity bond, similar to those of the preceding franchise.

On December 31, 1903, the city council passed an ordinance for the benefit of the Utah Light and Power Company, which had succeeded to the franchises of the Salt Lake and Ogden Gas and Electric Company, Robert M. Jones, S. F. Walker and the Pioneer Electric Company, extending each one of these franchises for an additional period of 25 years from the date of its expiration.[1] One of the conditions imposed for these extensions was that for each of the first three franchises, after the expiration of the original period of 25 years, six additional arc lights should be furnished to the city free of charge during the 25-year period of the extension, and for the fourth franchise seven additional free lights were to be given. Another condition was that the transmission wires within a specified district should be placed underground within nine years after January 1, 1905. This ordinance recited that the Utah Light and Power Company, which by a series of mesne conveyances had become the owner of the four franchises referred to, "is now engaged in building a large power station on the Jordan River and otherwise improving its power stations in Salt Lake City, and for that purpose has issued a series of bonds, due in 30 years from January 1, 1900".

The process of consolidation went still further than was indicated in the franchise just described. An ordinance was passed by the city council, August 4, 1905, confirming the transfer of the franchises of the Utah Light and Power Company, already summarized, to the Utah Light and Rail-

[1] Book of Ordinances, p. 382.

way Company and recognized this company's control of the Utah Power Company. This ordinance extended the life of all these franchises for a period of fifty years from July 1, 1905. As amended December 3, 1907, this ordinance extended the time for commencing the placing of transmission wires underground in the prescribed district from 1905 to 1907, but it was stipulated that the work should be finished by the end of 1908. The city agreed "that it will not, by ordinance or resolution, make any rules or regulations in regard to the price of lighting" different from the prices named in the ordinance, and the company was not to be obliged "to furnish light for any one for less prices," except in accordance with a special provision of the ordinance which I shall now describe. It was provided that "if there shall hereafter be any new inventions or improvements that will materially reduce the cost of producing or distributing either gas or electric energy for lighting or heating purposes", or "if there shall hereafter be any conditions which shall materially enhance the cost of producing or distributing either gas or electrical energy for lighting or heating purposes", then "in either event there shall be a reasonable readjustment" of the rates. In case of disagreement between the city and the company in regard to any such readjustment, each party was to appoint an appraiser, and in case these two could not agree they were to refer their differences to an umpire selected by them, and the written decision of any two of the three was to be binding. The expenses of the appraisal were to be borne by the city and the company, share and share alike. If the company refused to take part in an arbitration when requested by the city to do so, then the city was to regain the right to change the rates by amending the ordinance. The company agreed during the life of the franchise to furnish the city for street lighting purposes, under contracts for not less than three-year periods, arc lights giving "an average illumination of not less than the present standard of 455 watt inclosed arc lamps, all-night service, at a price not to exceed $5.00 per month". The meter rates to private consumers fixed in the ordinance of Aug. 4, 1905, were 12 cents per kilowatt hour for electricity used in arc lighting, in addition to $1.50 a month for each arc light; and for incandes-

cent lighting 11 cents per kilowatt hour with a minimum charge of $1 per month. Customers paying within the first seven days of the month for electricity used the preceding month were to get a discount of 10%, but no monthly bill was to be reduced below $1. The company agreed to furnish the city, free of charge throughout the life of the franchises, 52 incandescent lamps of 32 candle power each, for the purpose of lighting the city's portion of the public square, and also to furnish free "all the reasonably necessary light" for use in the public buildings enumerated in the ordinance.[1]

After the acquisition by the Utah Railway and Light Company of the various electric light franchises heretofore described, a new franchise was granted by ordinance of the city council approved May 22, 1906, to J. S. Manley and L. H. Curtis. The grantees were authorized to erect and maintain such poles, wires and conduits and other structures "as may be necessary for the transmission and utilization of electric energy, and the operation and maintenance of electric wires or lines and the furnishing of electric current for light, heat and power, or any other purpose to which the same is, or may be, adapted, within the limits of said city, for public or private use". The grantees were to pay 1% of their gross receipts into the city treasury for the first five years of the grant; 1 1-2% for the next five years, and 2% during the remaining period of the franchise, which was granted for fifty years. It was provided, however, that no matter what sums the percentages fixed should amount to, the payments of the grantees should not be less than $1000 for the first year; $2000 for the second year and $3000 a year thereafter. The grantees also agreed to furnish the city, on a three-year contract for public lighting, as many 455 watt inclosed carbon arc lights of standard efficiency as the city might desire at a rate of not more than $65 per light per annum, and also to furnish the city, for power purposes only, 100 horsepower of electric energy at a rate of not more than 1 cent per kilowatt hour on a 24-hour service. Arc lighting rates to private consumers were fixed at $10 per month for each standard arc lamp on all-night service; $6,50 on midnight service, and $5 on 10 o'clock service, or by meter at the rate of 11 cents

[1] The original ordinance of Aug. 4, 1905, and the amending ordinance of Dec. 8, 1907, were furnished to the writer on printed slips by the city recorder.

per kilowatt hour, and an additional charge of $1 per lamp per month for care and maintenance. For incandescent lighting a meter rate of 10 cents per kilowatt hour was fixed with a minimum charge of 75 cents a month for each consumer. The standard of efficiency was fixed at from 3 to 3 6-10 watts per candlepower. The power rate was fixed at a maximum of 8 cents per kilowatt with a minimum charge of $3 a month for each consumer. All consumers paying on or before the tenth day of each month for the electricity used in the preceding month were to have a discount of 10% from these rates, but no individual bill was to be less than a minimum of 75 cents a month. The city reserved the right to use without cost all of the grantee's poles or conduits for the purpose of stringing or laying necessary wires for use in the police or fire alarm systems, or for any other municipal purpose excepting light and power. It was stipulated, however, that these city wires should not interfere with the proper and reasonable use of the poles or conduits for the wires belonging to the grantees. It was agreed that the grantees should place all their wires underground within the paved district and extend the underground system in advance of paving as fast as additional streets were to be improved. The franchise was not to be assignable except to a corporation organized under the laws of Utah or by way of pledge, mortgage or trust deed. It was expressly provided that in case the franchise was purchased under foreclosure proceedings it should be transferred within one year thereafter to a Utah corporation. In case the grantees or the corporation to which the franchise was assigned, after constructing and putting in operation the electric light and power plant and distributing system, should desire to sell or assign it, in that event the franchise was to be non-transferable without the consent of the city "except after said corporation shall have offered to sell its entire property and privileges to said city at a valuation that would be equal to that offered by any *bona fide* purchaser for the same, or at such a price as the property of said corporation would sell for in the open market at the time said corporation should make such proposal of sale of its entire property and privileges". The grantees were required to give a bond in the sum of $25,000, or deposit a like amount in cash, to guarantee the commencement of work under the franchise within

four months after its acceptance, and the continuance of the work of installation with reasonable diligence, and also to guarantee that they would live up to the terms and conditions of the ordinance. The ordinance was to be accepted within sixty days after its passage unless the grantees should be prevented from accepting it by injunction or other legal process. In that case they were to have sixty days after the obstacles to the acceptance had been cleared away, but in no case was the franchise to live longer than one year from the date of its passage and publication unless accepted within that time.

116. Revocable grant; free lighting; painting of poles; right to purchase plant—Duluth.—By an ordinance published July 25, 1888, and amended in the following year, the common council of Duluth granted a franchise to the Duluth Electric Company, its successors and assigns, for the maintenance of pole lines on certain specified streets for use in the transmission of electric current for light and power.[1] The city expressly reserved the right to amend the ordinance "at any time after the expiration of ten years from the first day of August, 1889, and to revoke or annul the same at any time after the expiration of fifteen years from the first day of August, 1889". It was stipulated that the ordinance should not be construed as granting an exclusive franchise, and that any other company desiring to use the grantee's poles for transmitting electric currents, should have the right to do so on condition that it should not interfere with the grantee's system and should pay to the grantee annually 15 per cent of the cost of the poles and their erection and in addition assume one-half the expense of their maintenance. The grantee was required to furnish any such company desiring to use its poles "a sworn statement showing the actual cost of such poles, including painting, setting, etc.", this statement to be verified by the grantee's secretary and manager. Poles used by the company were to be at least ten inches in diameter at the bottom, not less than seven inches at the top and at least thirty feet in length above ground. They were to be "peeled of all bark, and, where set on streets or avenues, said poles shall be planed smooth and be painted

[1] Book of Ordinances, p. 256.

red to a height of twelve feet above the ground, from which point to the top they shall be painted white, the said painting to consist of at least two good coats, and the same to be renewed once each two years". The grantee was required "to furnish the said electric system or such parts thereof as may be put in use by it under the provisions of this ordinance at reasonable prices, the same to be consistent with charges elsewhere where such system may be in working order". Another provision of the ordinance required the grantee to supply "a suitable and sufficient electric light * * * * free of all cost to said city for the purpose of lighting the city hall of said city, for and during the full life of said company, its sucessors and assigns, and to furnish all apparatus therefor". Provision was also made for a free light "for each public or private park, improved and known and set apart and used as such", the light to be furnished from 8 P. M. to 3 A. M. every night in the year. The ordinance prescribed a fine of from $25 to $100, or imprisonment of from 10 to 30 days, as a penalty upon any person who should maliciously interfere with any part of the company's equipment. The city reserved the right to have the first option for purchasing the property and privileges of the company at any time after 15 years from the commencement of the grant, at a price to be agreed upon by three disinterested persons.

The City of Duluth granted another interesting franchise in 1903 to the Great Northern Power Company.[1] This company was given the right to bring water through a canal, a reservoir and pipe lines from the northern city limits to the bay and to construct and maintain pole lines and conduits for the distribution of electrical energy generated by the water power thus developed. In the provision of this franchise requiring that the company should indemnify the city for all damages resulting from operations under the grant, it was stipulated that the city should "have a preferred lien upon the plant and property of said company to secure payment of any claim existing in favor of the City of Duluth against said company". The term of the franchise was fixed at 25 years, and the maximum rate to be charged consumers within the city for water or electric power was limited to five cents per horsepower per hour; and the rate for electric lighting was

[1] Book of Ordinances, p. 363.

limited to 12 cents per kilowatt hour. Provision was also made for maximum flat rates for power users. The company was forbidden to furnish light or power "generated in whole or in part by means of the plant constructed by virtue of this franchise" at a lower rate for use outside of the city than the rate charged to consumers within the city. The company also agreed to have available at all times "at least three times as much power for power purposes in the City of Duluth as is furnished for lighting purposes in the City of Duluth". The granting of any rebate or any discrimination by the company in favor of any person or corporation competing with the city in furnishing light for the general use of its citizens, was to constitute sufficient ground for the forfeiture of the franchise, "and to prevent such rebate or discrimination, the books, papers, contracts, meters and recorders of said company, its successors and assigns, shall be open at all reasonable times to examination and inspection by any authorized agent or committee appointed by the common council of the City of Duluth". The city reserved the right to purchase, at any time after five years from the commencement of operation by the company, any portion of the company's plant constructed under the authority of this ordinance and in use at the time for electric lighting purposes, at a price to be determined by arbitration. It was provided that "in determining the value to be paid for such lighting plant and appliances upon such purchase, or upon condemnation, the franchise of said company shall not at any time be taken into consideration. Nor shall such value exceed the cost of duplication at said time of such portion of said plant to be so purchased, and ten (10) per cent of such cost added thereto". The city also reserved the right to purchase that portion of the company's plant used exclusively for distributing electricity for lighting purposes at any time during the life of the franchise when the city was ready to enter into a contract with the company to take power for operating a lighting plant. Any such contract was to be for a period of not less than five years, and the price paid by the city for power furnished was to be "not more than the lowest price that is charged at the time to any other consumer for a like amount of power under similar circumstances". In regard to the right of private consumers, the franchise stipulated that the company should "build a line for the transmis-

sion of power to any place within the limits of the City of Duluth, upon a demand being made therefor by anyone agreeing to use a reasonable amount of power under the circumstances".

117. Joint use of poles and conduits; mechanical gong in connection with fires—Richmond, Va.—Under a 30-year franchise granted December 23, 1897, to the Virginia Electric Company of Baltimore City, the council of Richmond provided that all conduits constructed by the company should be built with a capacity at least 15 per cent larger than the the company or companies then to use them should require, and the man-holes should be at least 30 per cent larger than required for immediate use.[1] The city reserved the right to authorize the use of these conduits and man-holes by other companies upon terms to be fixed by agreement or arbitration.

In a power franchise granted June 30, 1890, to R. W. Traylor,[2] the city reserved to itself the right "to require at any time, by ordinance or resolution, that the use of electricity for furnishing power by said R. W. Traylor shall cease", and in that event he was to proceed immediately "to remove from the streets all lines, poles and other apparatus" used by him for the transmission of power and restore the streets to their former condition. Authority was reserved to the officials of the fire alarm and police telegraph departments to cut the grantee's wires whenever it was deemed necessary for the protection of the city's interests, and to use the grantee's poles, without compensation, for the wires of those departments. The grantee was required to keep in his power station "an electric mechanical gong, the same to be connected with the City fire alarm service, to be used for transmitting signals when it becomes necessary to have the current cut off the wires of the said R. W. Traylor during the progress of a fire", and immediately upon receiving such a signal the grantee was to cut off the current, and leave it off until notified by the proper official that he might turn it on again.

In a franchise granted April 21, 1891, to the Traylor Electric Company, similar provisions were inserted, with the additional stipulation that whenever the city should construct and operate its own electric light plant, the franchise should

[1] "Franchises Granted by the City Council", to Dec. 31, 1899, p. 220.
[2] *Ibid.*, p. 233.

be terminated and the grantee should remove its equipment from the streets immediately.[1]

Both Traylor franchises were superseded January 17, 1898, by a franchise granted to the Home Electric Company, which was to run for a period of 30 years and was not revocable. A new feature of this grant was the provision that the city might require the company, after the expiration of five years, to remove its poles and wires from the streets and to run its wires in conduits within the limits of a prescribed territory, and to place its fixtures underground outside of these limits after the expiration of six years. But the city was not permitted to require such further underground construction more rapidly than an average of "two squares" per year.

118. No discrimination; union labor; right to inspect books — Nashville.—The original franchise granted by the City of Nashville to the Cumberland Electric Light and Power Company, April 4, 1893, authorized the company to furnish the city and its citizens with electric light and heat, "and also power produced by electricity for operating machinery and electric railways".[2] If, in the judgment of the Board of Public Works and Affairs, there were any streets on which as many poles had already been erected as public welfare would permit, this company was required to make such other arrangements for stringing its wires, subject to the approval of the Board, as to prevent the erection of additional poles in these places. The company was bound to furnish the city authorities "a complete and correct statement of the number and location of any and all poles, wires, circuits, or system of wires, and a map thereof, whenever required, that said company may have erected or in operation; also the number and location of all lamps, motors, or other appliances, that may be connected to or in operation from such wires or circuits". It was provided that "in hanging and adjusting and connecting the wires, every proper precaution shall be taken to prevent accident to person and property, and, to this end, no wire shall be so placed as to interfere with or touch the various wires that are now or may hereafter be used by the city, or the wires of any other company or companies that are now or may hereafter be erected and maintained in a legal and law-

[1] Franchises granted by the City Council", *op. cit.* p. 243.
[2] Laws of Nashville, 1908, p. 1004.

ful manner". The Board of Public Works and Affairs was authorized to require the company to remove, reset, or change, any pole, wire or other fixture, whenever such action was deemed necessary. The right was reserved to the city to grant any other company or companies having authority to erect wires in the streets, the right to use this company's poles; but the company was not required "to permit the use of its poles or fixtures for the purpose of furnishing currents for electric lighting and power in competition" with itself, unless, in the judgment of the city authorities, there were already enough poles in the streets. For the use of its poles and fixtures the company was to receive a reasonable compensation, which in case of disagreement between the parties interested was to be fixed by the Board of Public Works and Affairs. The company was required to keep its principal office for the transaction of business within the corporate limits of the city, on pain of forfeiture of its franchise. The poles erected under this grant were to be painted such color as the city authorities might select and were to be kept at all times "reasonably clean". In regard to rates it was stipulated that the company "shall furnish light, power or heat, or light, and power and heat, upon application, to all its customers and patrons (other than the city) under like conditions and circumstances, at a fixed and uniform price, and shall not impose terms upon or exact prices from any one customer or patron which are not imposed upon or exacted from any and all other customers and patrons". It was also stipulated that the company should not "require any customer or patron, or proposed customer or patron, to use any particular appliance, implement, fixture, machine or other device, or to obtain the same from any particular manufacturer or vendor". It was further stipulated that the company should make a contract with the city for the period of five years to furnish "steady burning all-night electric arc lights of 2,000 standard candle power each—that is, an arc light consuming not less than 450 volts of electrical energy—erected and maintained in such manner and at such points within the city's limits as the Board of Public Works and Affairs may, in writing, designate, at and for a price not to exceed 26 cents per light per night".

This ordinance was amended May 28, 1896, so as to require

the company to furnish public arc lights at annual prices arranged on a sliding scale, from $91.25 each for 300 lights to $75 each for 1,000 or more.[1] The company was also required to furnish the city, free of charge, current for 50 sixteen-candle power incandescent lights for use in the city offices and market houses, and other incandescent lighting required for public buildings at one-half the rates charged to private consumers. The city reserved the right, at any time after June 1, 1901, to terminate the lighting contract by purchasing that part of the company's property in use for city lighting "at a fair and reasonable valuation", the value of the franchise not to be considered. If the city did not care to purchase the plant, the right was reserved to have arbitrators appointed at the expiration of five years and again at the expiration of seven years, from the date of the contract, to decide "whether or not the price of lights furnished under this contract shall be reduced on account of any discovery, invention, or advance in the art of electric lighting, or the cost of fuel which at that time shall have reduced the cost of producing electric lights". This ordinance also fixed maximum rates to be charged for arc and incandescent lighting and electric power furnished to private consumers.

Another franchise in some respects even more interesting, was granted by the City of Nashville, July 18, 1902, to the Great Falls Power Company for the period of 35 years.[2] Under this ordinance the company was given "the right of way" in the streets of the city for the purpose of furnishing "electric energy for the operation of lamps, motors and heating apparatus and for all other uses and purposes to which electric energy is now, or may hereafter be applied". In this grant the city reserved the right to run wires on the company's poles without compensation to the company and to occupy, if it desired, the topmost position on the poles; but it was not to string the city's wires on these poles "for transmitting electric energy to private consumers, without paying to the Great Falls Power Company a fair and reasonable compensation for such use". It was provided that the company should furnish electric energy to all its customers similarly situated, other than the city, at a uniform price, which should not

[1] Laws of Nashville, 1908, p. 1015.
[2] *Ibid.*, p. 1036.

exceed, to private consumers, 7 cents per kilowatt hour for 3 hours daily use, and 2½ cents per kilowatt hour for 10 hours daily use; and to the City of Nashville, $45 per year for each arc light of 450 watts for all-night service. It was stipulated that the company should "not discriminate among its customers similarly situated, in any way, directly or indirectly, in the price to be charged for energy or in any special terms or conditions imposed upon any customers to the exclusion of other customers similarly situated". The company agreed to pay to the city, in lieu of all taxes except ad valorem taxes, an amount equal to 2 per cent annually upon the first $50,000 of its gross receipts, and 3 per cent on all over $50,000, derived from the sale of its electric energy within the corporate limits of the city.

It was stipulated that "no convict labor shall be used by said company or any person, company or corporation working for them, in any part of their work; nor shall said company use any material that is the product of convict labor". It was also stipulated that "none but union labor shall be employed in the construction and maintenance of said company's plant".

The city reserved the right "to purchase the plant constructed or acquired by said company, embracing every appliance thereof, for the manufacture and furnishing of electric energy", at any time after 20 years, upon giving 12 months' notice. The price to be paid was to be based on a fair valuation arrived at by arbitration; but it was expressly agreed that any such sale by the company should be construed as a voluntary surrender of its franchise, "and the same shall not be valued, but the arbitrators shall value the plant and appliances aforesaid as a plant in actual operation, the right to the immediate operation of which will vest upon the completion of the sale exclusively in the Mayor and City Council of Nashville". The company was also required to file with the city every year a sworn statement of the annual report made by its officers to its stockholders, "and the City Recorder or some expert to be designated by the Mayor and City Council shall have the right at all times to examine the books and accounts of the Great Falls Power Company and make his report thereon to the Mayor and City Council". This franchise was subject to acceptance by the company and

approval by the electors of the city at the general election held August 7, 1902.

119. Extensions on petition; power and heat for city buildings at cost; schedule of rates.—Rockford, Ill.—A franchise granted December 4, 1882, to the Rockford Electric Light and Power Company, authorizing the maintenance of poles, wires and other electrical apparatus for lighting purposes, reserved to the city "the right to order a discontinuation of the use of such poles, apparatus and wires, and the use of electric light produced by said company, its successors and assigns, within the limits of said city, whenever, in the judgment of its Council, the public interest requires the discontinuation of such use."[1]

By an ordinance granted February 6, 1899, to the Rockford General Electric Company, the company was permitted "to lay, operate and maintain an underground system of wires under or over or above the highways, streets, alleys, avenues, bridges, parks and public grounds, now or hereafter dedicated to public use, and under sidewalks, together with the necessary feeders, service wires and conductors, within or without the corporate limits of the City of Rockford, to be used for the production, transmission and distribution of electricity for the purpose of furnishing light, heat, motive power, and other proper purposes".[2] The company was not permitted, however, to enter upon any additional streets or public places not already occupied by it, without first obtaining, "in each instance, express authority and permission for the specific work proposed of the city council, or such officer of said city as the city council may from time to time designate". The company was made liable for damage to sewer, water or gas pipes, caused by leakage of current from its wires. It was also stipulated that the company "shall charge only reasonable and fair prices for light, heat and power, and shall be governed by the prices charged for like services in cities of equal size in the State of Illinois". The company agreed to furnish incandescent lighting for the city offices, public library, fire stations, police stations, city jail and water works at 60 per cent discount from the established rates, "during the lifetime of the franchise", or so long as no

[1] Revised Ordinances, City of Rockford, 1908, p. 301.
[2] *Ibid.*, p. 309.

other company was granted a franchise to furnish electric light and power "for lesser consideration or upon more favorable terms". It was expressly stated that "the rights and privileges hereby granted shall, at the expiration of thirty years from the passage of this ordinance, absolutely cease and determine, it being the true meaning and intent of this ordinance to grant the said rights and privileges only for the term of thirty years from its passage".

This ordinance was amended in several particulars in 1908 and its term extended to July 1, 1958.[1] By this amendment the section of the ordinance providing for extensions was changed so as to give the company the right to enter upon additional streets "whenever it shall present to the city council of said city proper and legal petition or petitions of the owners of land representing more than one-half of the frontage upon such additional streets or the portions thereof whereon such poles and equipments are proposed to be erected and constructed". The section referring to charges was amended and definite maximum rates established. For electric current furnished for power purposes, the company was not to charge more than eight cents per horsepower per hour, with the minimum guaranteed charge of $3 per month. This power rate was not to be subject to discount. The rates for commercial lighting were arranged according to a sliding scale and varied from 13⅓ cents per kilowatt hour, with a monthly minimum of 50 cents, to 8 cents per kilowatt hour, with a monthly minimum of $20, these prices being subject to a 10 per cent discount for payment of bills within ten days from the date of their presentation. The company agreed to pay to the city 2 per cent of its annual gross receipts from commercial lighting over and above $94,000, on condition that if any other company should in the future be required to pay less, this percentage should be proportionally reduced.

A heating and power franchise was granted by the City of Rockford, July 21, 1902, to certain individuals for the period of 25 years.[2] The grantees agreed to use on their plant "the most approved form of smoke consumer or consumers wherever and whenever smoke is produced in the operation of

[1] Typewritten copy of the amending ordinance, without the exact date of its passage, was furnished to the author by the Mayor of Rockford, Oct. 23, 1908.
[2] Revised Ordinances, City of Rockford, 1903, p. 314. This grant was made to J. A. Walker, Fred K. Houston and Geo. S. Briggs.

said plant". They also agreed to furnish the city any heat or power it might desire for any municipal buildings or plant within their district "at absolute cost". This franchise was amended on October 28, 1902, so as to include the right to distribute electricity for lighting.[1] The grantees were required to furnish incandescent lights for public buildings "at 60 per cent discount from the established rate in use by other companies or persons furnishing lights in said city". They also were bound upon one year's notice, at the expiration of the city's street lighting contract, to furnish the city, if it desired, 2,000 candle-power arc lights at the rate of $52 per lamp per year for all-night and every night service. It was also stipulated that the grantees should at all times, after commencing operations under their franchise, "extend their service of heat, light or power, or either of them, to any user or users within the city limits who shall make application therefor, and sign the usual contracts therefor, whenever and wherever such extensions, based upon the income arising from signed contracts, will show a net income of five per cent per annum on the necessary additional investment". One of the conditions on which the right to do an electric lighting business was extended to the grantees, was that they should not abandon or cease to do a heating business, as contemplated in their original franchise.

120. Division of net profits over fixed percentage; issue of bonds limited—Wichita, Ks.—Under the general laws of the State of Kansas governing cities of the first class, of which Wichita is one, every electric light and power company is required to pay into the city treasury 10 per cent of its net earnings "over and above 10 per cent earnings on its investment".[2] The city council is authorized to regulate rates to be charged for light, heat and power, but is forbidden to fix a rate that will prevent the company from earning at least 10 per cent on its capital invested in the city, over and above its reasonable operating expenses and the expenses for maintenance and taxes.

By a franchise granted to W. B. McKinley and associates, published December 30, 1899, the City of Wichita prescribed maximum rates for arc and incandescent lighting and limited

[1] Revised Ordinances, etc., *op. cit.*, p. 318.
[2] Section 170, of the City Charter Act; See Book of Ordinances of the City of Wichita, 1908, p. 55.

the sale of mortgage bonds upon the electric light and power plant to be constructed and operated by the grantees to "the cost of construction and equipment of said system and extensions, and the cost of the property required for the complete and full operation of said system of electric lights and power".[1] The grantees were also prohibited from cutting or trimming trees, except under the direction of the proper city official.

Under a franchise granted May 4, 1903, to the Wichita Gas, Electric Light and Power Company, the company was required to furnish light free to the city library, on condition that the amount consumed should not exceed $10 worth per month at the ordinary rates stipulated in the franchise.[2] For the remainder of the city building and for the hose houses, the company was required to furnish electric light at the rate of five cents per thousand watts. Electricity to operate the elevator in the city building, was to be furnished free of cost.

By the terms of another franchise granted April 4, 1907, by the City of Wichita, 15 cents per thousand watt hours was fixed as the maximum rate for residential lighting until July 1, 1909; 13¾ cents from that date until July 1, 1910; and 12½ cents thereafter, with a discount in all cases of 20 per cent on bills paid on or before the 15th day of the month succeeding that in which the service was rendered.[3] The maximum rate of "commercial" lighting was fixed at 12 cents per thousand watt hours, with a similar discount. For power, net rates were established ranging from eight cents per kilowatt hour for the first 100 kilowatts used per month to 3½ cents per kilowatt hour for all over 500 kilowatts used per month. Under the terms of this franchise the grantee agreed that on July 1, 1911, the city council should have its choice of receiving one per cent of the gross earnings under the franchise or 10 per cent of the net earnings over and above 10 per cent earned on investment.

121. A power franchise accepted by the people—Grand Rapids, Mich.— In the early electrical franchises granted by the City of Grand Rapids, were found many of the usual provisions relative to damages, excavations in the streets, etc.

[1] Book of Ordinances of the City of Wichita, *op. cit.*, p. 631.
[2] *Ibid.*, p. 637.
[3] *Ibid.*, p. 644. This grant was to J. O. Davidson.

The periods covered ranged from 15 to 30 years. One of the stock provisions in all these franchises was the following:

"The City of Grand Rapids expressly reserves the right to alter and amend the ordinance in any manner necessary for the safety or welfare of the public, and in case it is necessary to do so, to protect the public interests." [1]

Within the last few years there has been a considerable development of water power in Michigan in connection with the production of electrical energy. As one of the results of this development, on July 29, 1907, the city granted a franchise to the Grand Rapids-Muskegon Power Company.[2] Under the city charter all franchises were at that time subject to the optional referendum, that is to say, if 12 per cent of the electors petitioned, within 30 days after the passage of any franchise, to have it submitted to popular vote, it had to have the approval of the electors before going into effect. A referendum petition was filed in the case of the Grand Rapids-Muskegon Power Company's franchise, but the ordinance was approved by the people. This ordinance provides that the council may require the company "to make reasonable extensions of its power and light wires from time to time". It forbids the company to locate lines in the public streets for conducting electricity at a pressure exceeding 7,500 volts; but wires carrying more than that voltage may cross the streets where necessary. The particular streets in which the company proposed to place its fixtures, were designated on a map, which was approved and made a part of the franchise, with the condition that the council reserved the right to change the approved location of the company's wires in any particular instance "by approving an equivalent location reaching the same destination". No poles were to be erected less than 45 feet in height without special permission of the council. The location of extensions proposed by the company from time to time, was to be subject to the council's approval. The company was authorized, however, to acquire the existing lines of the Grand Rapids Edison Company, which was at the time of this grant the sole operating company in the city. One interesting provision in regard to the new company's

[1] See Compiled Ordinances, 1907, pp. 193, 196, 200, 203.
[2] Ordinance No. 204, printed in pamphlet form by the City.

poles, was that "the name of the Power Company shall be marked thereon in plain letters not less than one inch in height". Another interesting provision was to the effect that "whenever by reason of changes in the grade of the street, or in the location or manner of constructing any water pipes, gas pipes, sewers or other public utility, it shall become necessary to alter, change, adapt or conform the conduits of the Power Company thereto, the same shall be done entirely at the expense of the Power Company and without any claim for reimbursement or damages against the city". It was stipulated that the company should pay an annual fee of $500 to the city and should "furnish pin room on its poles for the wires of the street lighting circuits of the city, wherever the pole lines of the Power Company and the city occupy the same street, alley or public place". "It will in such case, when requested by the city", says the ordinance, "transfer such street lighting wires to and string them on its own poles, the Power Company furnishing the labor therefor. It will thereafter, from time to time, as the city may request, renew and repair such lines, the city furnishing the necessary materials therefor". Provision was also made in this franchise for the use of the company's poles by other companies, but the exclusive use of "the top 10 feet in length of its poles for its own wires and for those of the city", was reserved to the company. In case the company could not agree with other companies as to terms for the joint use of poles, the annual charge was to be fixed by the Board of Public Works.

The city reserved the right to extend at any time the limits of the district within which underground construction was required. Maximum rates were fixed in the ordinance, as follows:

For light, 8 cents per kilowatt hour, with a minimum charge of 50 cents per month, the company "to furnish ordinary carbon filament lamp renewals free to its customers".

For power, based on the horsepower load connected, 3 cents per horsepower hour for 25 horsepower or less; 2 cents per horsepower hour for more than 25 and not more than 75 horsepower; 1¾ cents per horsepower hour for more than 75 and not more than 150 horsepower; and 1½ cents per horsepower hour for more than 150 horsepower.

Unless bills were paid by the 15th day of the month following the month in which the service was rendered, the company was entitled to make an additional charge of 10 per cent as

a penalty for non-payment. It was stipulated that if the city, which owned a public lighting plant for street lighting, should during the life of the ordinance enter into a contract with the company to secure electrical power "to operate the generators belonging to the city, and used for furnishing street lights", the company was not to charge for this service, for current delivered at the city's switchboard, more than ½ cent per lamp hour for lamps of the same candle power as those then in use (1200 candle power). The ordinance was granted for a period of 20 years. Its most singular feature, however, was that it was to go into effect only on condition that the Grand Rapids Edison Company should file with the city clerk, within a given period, "its agreement in writing, accepting and agreeing to be bound by the same regulations as herein imposed on said Power Company".

122. Exclusive for certain period: cutting of wires: right to purchase—Cedar Rapids, Iowa.—A franchise granted by the City of Cedar Rapids December 5, 1890, to the Cedar Rapids Electric Light and Power Company for a period of 25 years, contained a provision that the grant should be exclusive for three years and that during this time the company should not "charge unreasonable or exorbitant rates for light or power furnished by it to any of its patrons".[1] If, in the opinion of the city council, the company was violating this provision, the right was reserved to the council to appeal to arbitration for fixing the rates. The city reserved "the right, at any time after five years, to purchase the entire plant, property rights and franchise" of the company at a price to be agreed upon, or to be fixed by arbitration. During the first three years of the franchise the company was required to furnish the city ten 32-candle power and twenty 16-candle power lights, free of charge, for use in the city hall and the police station. The city reserved the right at any time "to erect its own plant, machinery, fixtures and appliances for lighting the public buildings, streets, alleys and public places". The company was required, so far as practicable, to place its poles and appliances in the alleys, and not in the streets or parks of the city except with the written approval of the majority of the council committee on highways and the chief engineer of the fire department. Whenever it

[1] Revised Ordinances, City of Cedar Rapids, 1906, p. 331.

was necessary to move along the streets a vehicle or structure of such height as to interfere with the poles or wires, the company was required temporarily to remove its fixtures for a reasonable period of time not exceeding eight hours, to allow passage. But such removal could not be required "within two hours after sunrise or two hours before sunset, nor between sunset and sunrise, nor on dark and cloudy days", when the company's patrons "would be seriously inconvenienced by the loss of light". The officers of the city fire department were authorized, in their discretion, to cut and remove the company's wires whenever necessary for the protection of property or life and for getting control of any fire; and it was made the duty of the company "to respond to every alarm of fire with one of its skilled workmen with proper appliances for cutting electric wire when the chief or other engineers in charge of said fire shall request the same, and also furnish said city fire department one pair of insulated shears suitable for cutting said electric wires".

123. Fixtures to be removed before expiration of franchise—Atlanta.—On December 26, 1905, the city of Atlanta granted a franchise to the Southern Lighting and Power Company to use the streets for laying pipes, wires and apparatus for distributing electricity for light, heat and power.[1] Within the fire limits the company's wires were to be placed underground and the city reserved the right at a future time to require the wires in other parts of the city put underground. The franchise was for a period of thirty years from January 1, 1906, and it was expressly required that before the expiration of the grant the company should remove all of its conduits, wires, poles and other apparatus from the streets. The company was forbidden entrance to the streets to make such removal after January 1, 1936. The company agreed to pay two per cent of its gross receipts on all business done or originating in Fulton County during the first twenty years of the franchise period and 3 per cent during the remaining ten years. The company was required to file a report once a year setting forth its gross receipts, and the city was authorized to designate a committee or Board, from time to time, to examine the company's books for the purpose of ascertaining what the gross receipts were. The percentage payments

[1] See National Civic Federation Report, 1907, Part II, Volume I, p. 468.

were to be in lieu of specific registration fees and business licenses and provision was made for deducting the state tax on the value of the franchise from the amount to be paid by the company to the city. The company agreed to hold one duct in every conduit for the use of the city for municipal purposes free of charge. Public lights of 2000 candle power each were to be operated by the company at an annual charge of $65. Incandescent or series lights of 75 candle power were to be maintained at a charge of $28 per year. To private consumers the company was to furnish current for light and heat at not more than 10 cents per kilowatt hour and for power at not more than 6 cents. There was to be in either case a discount of 10 per cent on bills paid by the 10th of the following month. The company was authorized to use the pipes, manholes and poles of the Atlanta Telephone and Telegraph Company subject to the approval of the City Electrician and to further ordinances that might be passed by the city. It was required that before such joint use was made the company must submit detailed plans to the Board of Electrical Control and receive its approval. The ordinance was to be accepted within sixty days, work was to begin within ninety days and the company's system must be ready for general operation within twelve months. The franchise was to be forfeited if the company disposed of any of its rights or privileges or leased its property without the consent of the city, or consolidated with any other company or individual, or combined to raise the price or control the supply of electric current, or if it entered into any agreement looking to community of interest.

124. Map showing sub-surface structures; specifications for poles: right to purchase at stated periods—Columbus, Ohio.— In a franchise granted March 28, 1887, to the Columbus Edison Electric Light Company, it was required that the company should lay its pipes containing electric wires in a line parallel with the curb line of the street and between the curb stone and the line of the lots abutting the street "when the city civil engineer shall determine such location to be practicable, and in all cases within three feet of the curb stone, or where the curb stone should be, and to a depth not exceeding thirty inches".[1] It was also stipulated "that in all

[1] Ordinance No. 2294, now operated by Columbus Railway and Light Co.

cases where work requires the exercise of skill, as in the laying or relaying of pavements or sidewalks, said corporation shall employ none but skilled workmen, familiar with the execution of such work". It was made optional with the city authorities themselves to restore the earth and relay the pavements in the streets when taken up by the company, and collect the expense of the work from the company.

In another franchise, granted July 14, 1902, to the East Columbus Heating and Lighting Company, a provision was inserted to the effect that the company "shall not dig and have uncovered at the same time trenches of a length exceeding 1,000 feet".[1] Before making excavation in any particular street, the company was required to submit to the Director of Public Improvements, for his approval, "plats and plans * * * of the full width of the public way on the route of the proposed excavations, upon which shall be indicated all present known or ascertainable surface and underground construction, and the location desired by said company". The company was required during construction to employ and pay an inspector selected by the Board of Public Works and subject to the orders of the Director of Public Improvements. The company's conduits were to be laid at a depth of not less than six feet below the established grade of the street, unless by special consent of the Board of Public Works, and the company was required to pay into the street repair fund the sum of 3 cents "per lineal foot of streetway in which its mains and conduits are laid". The company was also required to furnish the city, free of charge, sufficient current to light all public buildings, including schools and libraries, located along the company's lines. This franchise included many detailed provisions in regard to poles and wires, of which the following is one:

"All poles shall be live, sound cedar, or other approved wood, free from shakes or knots which would impair the strength of the same; shall not have more than 10 per cent of rots in butts; shall be peeled and trimmed of knots and the size herein before referred to; shall be measured after peeled; and the bend in any direction above ground shall not exceed one-half of the diameter."

A maximum rate of 15 cents per thousand watts was established for lighting for the first twelve and one-half years

[1] Ordinance No. 19,850, now owned by the Columbus Public Service Co.

of the life of the franchise, with discounts ranging from 10 per cent to 40 per cent, according to the size of the bill, on bills paid on or before the 5th day of the month succeeding the month in which the current was used. The maximum rate for power was fixed at 7 1-2 cents per thousand watts, with discounts ranging from 10 to 30 per cent. It was provided that "in all cases the rate charged patrons of said company, under like circumstances, shall be uniform", and that the rates prescribed should be "subject to change by ordinance of said city at the end of twelve and one-half years from the date of passage of this ordinance, but if not so changed at said time, shall remain as herein fixed to the end of franchise period". The company was authorized to shut off electric energy from any consumer only in case the consumer had been in default for ten days in the payment of his bill. At the expiration of fifteen years and at the end of each five-year period thereafter, the city had the right to acquire the assets and property of the company which were located in the city, at a price to be agreed upon or to be fixed by arbitration. It was provided that in case of arbitration, "the price fixed upon by any two of the three arbitrators shall, in the absence of fraud, be final and binding" upon both the city and the company. It was provided, however, that any such purchase made of the company's property "shall be subject to all then existing contracts of said company made in the usual and ordinary course of its business; but nothing herein contained shall prevent said city from acquiring said property by the exercise of the right of eminent domain". The company was required to keep constantly on deposit with the city treasurer the sum of $250, out of which might be paid the actual cost of any work done by the city where the company was in default. This franchise was granted for a period of twenty-five years.

125. **Municipal franchises not required; regulation of rates — California.**—Under section 19 of article XI of the constitution of California, in any city where there is no public lighting plant, any individual, or any company duly incorporated under and by authority of the laws of the state for the purpose of furnishing artificial light, "shall, under the direction of the superintendent of streets, or other officer in control thereof, and under such general regulations as the

municipality may prescribe for damages and indemnity for damages, have the privilege of using the public streets and thoroughfares thereof, and of laying down pipes and conduits therein, and connections therewith so far as may be necessary for introducing into and supplying such city and its inhabitants either with gas light or other illuminating light, * * * upon the condition that the municipal government shall have the right to regulate the charges thereof".

The general laws of California governing "corporations to furnish light for public use", make more detailed provisions in regard to electric lighting companies. Section 629 provides as follows:

"Upon the application in writing of the owner or occupant of any building or premises distant not more than one hundred feet from any main, or direct or primary wire, of the corporation, and payment by the applicant of all money due from him, the corporation must supply gas or electricity as required for such building or premises, and cannot refuse on the ground of any indebtedness of any former owner or occupant thereof, unless the applicant has undertaken to pay the same. If, for the space of ten days after such application, the corporation refuses or neglects to supply the gas or electricity required, it must pay to the applicant the sum of fifty dollars as liquidated damages, and five dollars per day as liquidated damages for every day such refusal or neglect continues thereafter."

This regulation seems to be somewhat modified by section 630a, which is as follows:

"No corporation is required to construct lines for the supply of electric current for light where serious obstacles exist, nor shall such corporation be required to supply such current from a direct wire at a distance too remote from the generating station, to insure a sufficient supply; nor is such corporation required to supply electric current for light from a primary wire carrying current of high voltage, unless the applicant deposit, in advance, a sum of money sufficient to pay the actual costs of such construction and for the appliances required to supply electric current with safety at the proper voltage."

Section 632 provides that a company may shut off the supply of electricity from any person who neglects or refuses to pay for the electricity supplied or the rent of any meter or other electrical appliances furnished by the company under contract.

In commenting upon the regulation of rates for electrical service by the city council, *Municipal Affairs*, the official journal of the Municipal League of Los Angeles, in its issue for April, 1908, had this to say:

"Once a year the duty devolves upon Council, by virtue of an ordinance passed three years ago, to fix the rates charged by gas, electric light and telephone companies. To the end that an intelligent judgment may be formed as to a just rate to be established, the companies are required to submit an annual statement of receipts and expenditures and value of plant. . . . . .

"The entire proceedings in this matter have, up to date, been unsatisfactory in the extreme. The figures given were in almost every instance incomplete and not usable for the purposes which the law contemplates. For the first time, this year, an attempt was made to get an intelligent analysis of the figures, the city being so fortunate as to have the services of an expert accountant in Mr. Mushet of the auditor's office. . . . . .

"In the fixing of electric current rates, the auditor made a strong presentation in favor of the reduction of the lighting rate, contending that the light users were being exploited for the advantage of the power users. As most of the lighting companies had refused him access to their books, and as their figures were incomplete, his argument was more or less based on theory. Possibly if Council had seen fit to order a reduction of a cent or two in the lighting rate, it might have resulted in the opening of the books next year. As it is, next year's experience is likely to be a repetition of this—putting off action until the last minute, then a great waste of time and energy—and nothing done."

126. Additional facilities for city or other company; compulsory extensions of service; release of old franchises—Seattle.—A Seattle franchise authorizing the construction and maintenance of pole lines and conduits for the distribution of current "for electric power, heat and light and for any other purpose for which electricity may be used", was granted to William T. Baker, "his representatives, heirs and assigns", on August 2, 1898.[1] The grantee was required to make all poles erected and conduits laid by him, except lateral lines extending not more than 2,000 feet from the main line of transmission, of sufficient size and capacity to afford suitable facilities "for at least one other company requiring as great facilities as the grantee". The grantee and his successors were not permitted to use their additional facilities for a period of ten years, and if during that time the city began to use them "for any public purpose from which it shall not derive a revenue", it would have the right to continue such use free of charge throughout the period of the grant. The city was also authorized, upon paying a suitable compensation, to use these additional facilities during the ten-year period for the purpose of furnishing electricity "for other than public purposes", and might authorize any

[1] Charter and Ordinances of Seattle, 1908, p. 462.

other company having a substantially similar franchise to use these facilities on the same condition. In either case the compensation was to be "a just and proportionate share of the cost of construction of the poles and conduits", and of the expense of altering and repairing them, together with 6 per cent interest on this proportionate sum from the time the investment had been made by the grantee. In any case, if the city or any other company commenced the use of the grantee's additional facilities within the ten-year limit, such use might be continued upon the same terms during the whole period of the franchise. If, however, these additional facilities remained unused at the end of the ten-year period, the city would lose its right to use them or to grant the use of them to another company. There was another provision, however, requiring the grantee to supply "sufficient additional capacity to accommodate six wires of the Seattle Fire Alarm Telegraph and six wires of the Seattle Police Signal Call system", which was always to be "held ready and available for use by the city", free of charge. It was provided that the grantee should throughout the life of the franchise, "supply electricity to such an extent as the capacity of his plant and his facilities for increasing the same will permit to all persons and corporations desiring the same anywhere within the limits of the City of Seattle and situate along any of his main lines of transmission or within 2,000 feet thereof, upon their complying with such general rules and regulations, not inconsistent herewith, as he shall make with reference thereto". It was also provided that after July 1, 1904, "whenever there shall be tendered to him *bona fide* applications in writing for lighting or domestic service from the occupants of at least twenty-five separate houses or residences situate within an area of forty acres of compact and contiguous territory, the greatest distance through or across which shall not exceed one-half mile, who shall each offer to enter into a written contract to use electric current for lighting or domestic purposes at their several residences for a period of not less than one year", the grantee must within ninety days furnish the service asked for at a rate not in excess of 12 cents per kilowatt hour. In regard to power service it was provided that the grantee, whenever he had received "written applications for power aggregating

200 horsepower, to be used and paid for during not less than eight hours of each secular day, and to be furnished to not more than eight customers or consumers, and all of whom shall be situate within a radius of half a mile, from a point in any part of the city where he has not constructed a line of transmission, and the applicants shall have each tendered such grantee a written contract for such use of power for at least two years", with proper sureties, the grantee must within six months furnish the current required at a rate not in excess of 6 cents per kilowatt hour. This franchise was granted for the period of thirty-six years. It was stipulated that "this grant shall not be transferable or assignable without the consent of the city council, and said grantee shall not consolidate nor merge with any company or corporation or enter into any agreement to prevent competition or to prevent the reduction of the price of electricity without such consent; provided, however, that said grantee or assignee may include this grant in any mortgages which he or it may give to secure his or its corporate bonds".

On March 14, 1902, the City of Seattle granted a franchise for an underground and overhead electrical system to S. L. Shuffleton, with the provision that "this franchise and the rights herein granted may be assigned or mortgaged; but no such assignment or mortgage shall be valid until a copy thereof has been filed in the office of the city comptroller".[1] This franchise was granted for a period of 50 years "and no longer, and shall absolutely cease and terminate at the end of said term of 50 years". It was specifically set forth that the franchise was "intended to apply to all streets, alleys and public places of said city, now or hereafter existing", but that it was not to be an exclusive privilege for the use of any street or other public place. It was provided that if the grantee or his successors should at any time acquire the ownership of any electric light franchise theretofore granted by the city, or if this franchise should be assigned to any company owning or operating under any former franchise, or franchises, then, in any such case, the owner of this franchise should, within a certain fixed period, file with the city comptroller a suitable instrument "releasing such prior franchise or franchises so acquired, or owned, or operated, other than street railway

[1] Charter and Ordinances, *op. cit.*, p. 519.

franchises". The "intention" of this provision was explained as being that after the expiration of the time fixed, "no person, company or corporation owning or operating under this franchise shall own or operate any of such former franchises, other than street railway franchises, but shall on acquiring any thereof release the same as above provided".

127. Monopoly through consolidation; liberal franchise by vote of taxpayers—Denver.—On March 24, 1883, a franchise was granted by the City of Denver to the Colorado Edison Electric Light Company for an underground system for the transmission of electricity on condition that the right of way so granted should be used subject to general ordinances and regulations passed by the city relative to the use and care of the streets, and also on condition that the company should execute a $25,000 bond for the payment of any costs and expenses sustained by the city by reason of the grant.[1]

On August 13, 1887, a franchise was granted to the Denver Light, Heat and Power Company both for pole lines and for conduits.[2] Under this grant the company was required, upon petition of citizens, "to extend its lines for the purpose of furnishing light and heat to consumers along any street, to any part of the City of Denver, in all cases where, along the lines of such extension, an average of six consumers of such light or heat, per block, are secured to said company, and the city council may, in its discretion, order such extension upon such petition", on condition, however, that the work be not required unless the capacity of the company's plant "is sufficient to supply such consumers on such extension". The company was required to pay down for this franchise the sum of $5,000.

The Colorado Edison Electric Light Company and the Denver Light, Heat and Power Company were soon afterward merged to form the Denver Consolidated Electric Company, and the franchises of both constituent companies were confirmed by the common council.[3] The consolidated company had a monopoly of the electric light and power business of Denver for many years. On March 30, 1900, however, a

[1] "Franchises and Special Privileges" as granted by the City and County of Denver, 1907, p. 4.
[2] *Ibid.*, p. 105.
[3] *Ibid.*, p. 7, Ordinance No. 63, approved July 8, 1889.

new franchise was granted to Charles F. Lacombe for the construction and operation of "a street arc electric light and power plant, and also a commercial electric light and power plant, for the purpose of producing and transmitting an electric current for light, heat and power purposes for use by the said City of Denver and the residents and citizens thereof, and to erect, maintain and remove poles and to string wires thereon" in the streets and alleys enumerated at great length. A new franchise was substituted for this one on February 14, 1901.[1] The grantee was required to erect a "city arc lighting plant at some suitable location for trackage and water supply, either on purchased land or on land leased from the city", substantially in accordance with a detailed description contained in the franchise and having a total capacity to furnish 1,250 arc lamps of 2,000 candle power each. It was stipulated that Lacombe should expend, in the erection of this plant, $225,000, exclusive of expenditures for land, and he was to provide "trackage facilities, water supply and relay machinery, to insure absolute continuity of service". The grantee was also required to construct a commercial plant within four months of the approval of the franchise, to compete with the existing monopoly.

By the terms of the franchise the city entered into a contract with the grantee to take from him, for a period of 10 years, public lighting service and to pay therefor at the rate of $7.50 a month for each 2,000 candle power light operated on an all-night schedule. A maximum rate for commercial lighting on the meter basis was fixed at 10 cents per kilowatt hour and for power a maximum rate of 4 cents was fixed. The grantee was required to pay the city 3 per cent of his gross receipts from light, heat and power sold to private consumers. It was also provided that the city should have the right to purchase the "city arc lighting plant", at the end of any year after its completion, at a price ranging from $230,000 at the end of the first year to $40,000 at the end of the tenth year. It was stipulated that the grantee, during the ten-year term, should "keep the said arc lighting plant in as good order and condition as the same was when erected and constructed, ordinary wear and tear excepted". It was also provided that the city might buy the commercial lighting

[1] "Franchises and Special Privileges," *op. cit.*, p. 144.

plant at the end of 10, 15 or 19 years from the date of the franchise, at its fair cash value, to be determined by arbitration. The grantee was prohibited from selling or conveying his electric light and power plants or either of them authorized by the ordinance to "any person, firm or corporation now engaged in the business of providing or vending electricity for light, heat and power purposes in the City of Denver", or combining with any such concern. The franchise was granted for a period of 20 years.

The Denver Consolidated Electric Company had already merged with the company furnishing gas, to form the Denver Gas and Electric Company, having a complete monopoly of lighting interests in Denver. As soon as the Lacombe Electric Company, operating under the franchise just described, had commenced to furnish light, a "war of rates" ensued.[1] The old company reduced rates to 2½ cents per kilowatt hour, and finally forced the Lacombe Company to sell out. In the course of the rate war, in order to kill its competitor, the old monopoly had entered into many contracts with consumers to furnish electricity at ridiculously low rates. It also received many low-rate contracts from its defeated rival when the latter's property was taken over. In order to get rid of these unprofitable contracts, which had served their purpose in destroying competition, the company went into a receiver's hands, got its rates raised again to a profitable basis, and was reorganized.

On May 15, 1906, this company secured a new 20-year franchise from the taxpaying electors of the City of Denver.[2] Under the terms of this franchise the company agreed that all its poles should be kept in good condition and painted "in a manner approved by the Art Commission of the City". The company was required to extend its lines to a distance of 100 feet to supply any consumer demanding electricity who would agree to use it for at least a year. Maximum rates for incandescent lighting on a meter basis were fixed at 10 cents per kilowatt hour, with a discount of 10 per cent on bills paid within 10 days, provided that the company should receive a minimum of 5 cents per month for each lamp installed, and in no case less than one dollar per month from

[1] See J. Warner Mills, "The Economic Struggle in Colorado," published in The Arena for November, 1905, p. 489.
[2] "Franchises and Special Privileges," *op. cit.*, p. 57.

each consumer. For incandescent lighting on the "readiness-to-serve" basis on yearly contracts, the maximum rate was fixed at $9 per year per consumer, plus $1.80 per year for each 16-candle power lamp demanded, plus 5 cents per kilowatt hour for current used, with a discount of 10 per cent on the entire amount for prompt payment. Rates for arc lighting were to be made "corresponding to those for incandescent lamps, taking into consideration the relative candle power". For power purposes the meter rate was not to exceed 4 cents per kilowatt hour, with a 10 per cent discount, provided that the company should receive a minimum of one dollar per month for each horsepower connected, and in no case less than $3 per month from each consumer. The "readiness-to-serve" rate for power was fixed at a maximum of $9 per year for each consumer, plus $24 for each horsepower demanded, plus 3 cents per kilowatt hour for current used, with 10 per cent discount as in the preceding cases. The company agreed to pay into the city treasury, until the end of the year 1907, all of its gross receipts from the sale of electricity for lighting purposes in excess of an average of 7 1-2 cents per kilowatt hour; during 1908 and 1909, all in excess of an average of 7 1-10 cents per kilowatt hour; during 1910 and 1911, all in excess of an average of 6 7–10 cents per kilowatt hour; during 1912 and 1913, all in excess of 6 3–10 cents per kilowatt hour; during 1914 and thereafter, all in excess of 6 cents per kilowatt hour.

The company acquired the right to purchase the property, contracts and franchise of the Lacombe Electric Company, released from all the city's contracts, options and rights to purchase, contained in the Lacombe franchise. The company agreed to enter into a new contract with the city to furnish arc lights at the rate of $60 per lamp per year and to extend its old contract on the new basis for a period of 10 years. The company also agreed to remove all duplicate pole lines within the limits of the city. It was specifically provided that the proposal or granting of this franchise should not constitute a waiver of any of the rights or privileges claimed by the Denver Gas and Electric Company or its assignor or predecessor companies, but that all such rights and privileges should remain wholly unaffected by this franchise. As compensation for the franchise, which also included the right to

furnish gas for the same period of 20 years, the company agreed to pay the city $1,000,000 in 80 equal instalments of $12,500 each, payable quarterly throughout the life of the franchise. The company also agreed to execute a bond in the sum of $50,000, conditioned upon the full and faithful performance of all the terms and conditions of the grant and to protect the city from damages arising out of the exercise of the franchise.

128. A good franchise vetoed because it was not perfect—Minneapolis.—The City of Minneapolis has for the past three years been discussing the question of granting a new franchise to the Minneapolis General Electric Company, which now has a monopoly of the electric light, heat and power business in that city. A new ordinance was passed June 12, 1908, only to be vetoed by the Mayor.[1] This ordinance, having been drafted as the result of long investigation and study, contained many interesting features. It provided that the company should have the right, and should assume the obligation, to maintain and operate a plant for generating and furnishing electrical energy for public and private use, and for the period of 30 years should have the right "to use, to the extent necessary therefor, the streets, alleys and public places of said city, including any territory that may hereafter be added thereto", for maintaining conduits and pole lines for electrical purposes. The right granted to the company was to be subject to all reasonable regulations, by state laws or city ordinances, "relative to the rates to be charged by said grantee, to the use of the streets, alleys and public places of said city, to the making of openings, excavations and constructions therein, to the stringing of wires, cables and conductors thereon, to the laying of subways, conduits and ducts therein, to the placing of wires, cables and conductors underground, to the construction, maintenance and operation of electrical plants or systems therein, or in any way pertaining to the business of generating and distributing electrical energy in said city, which regulations, whether heretofore or hereafter made, said grantee, by acceptance of this ordinance, agrees shall be complied with by it without

[1] The ordinance was adopted and recommended to the City Council for passage, April 1, 1908, by a Special Committee appointed Nov. 8, 1907. The Mayor's veto message was published in the Minneapolis Daily News, June 20, 1908.

unnecessary delay; and all reasonable regulations so imposed by any such ordinance shall be binding upon said grantee, whether authorized by the laws of said state or not, unless expressly prohibited by said laws". It was stipulated that the company's franchise should be subject to the first and superior right of the city to use and occupy the streets "for all public purposes and for the installation, extension and maintenance of any sewer, water or other system or public utility, now or hereafter owned or operated by said city, and all appurtenances thereto", and that the company should, at its own expense, remove or change the location of any of its fixtures "whenever the public interest, necessity or safety requires such action". The company agreed to file, within six months of the acceptance of the ordinance, a plat of its existing plant, showing all its conduits, subways, overhead and underground wires, poles and other fixtures, and, before making any extensions, to file a similar plat of the proposed extension and obtain from the city council a permit definitely designating the space to be occupied by the company's new work, "provided that available space exists", and it was expressly stipulated that "no other or different space shall be used or occupied by said grantee; nor shall such space be used for any purpose or in any manner other than that designated". The company agreed to complete any authorized work of repair, construction or extension commenced by it, without unnecessary delay and to replace the street in as good condition as formerly; but the city reserved the right, either by ordinance or by resolution at the time of issuing a permit, itself to make the repair or replacement at the company's expense.

The company agreed to provide space on its poles and in its conduits for the city's fire alarm and police wires and, at its own expense, to string such wires on its poles and draw them into its conduits when required to do so by the city. The company also agreed to provide space on its poles and in its conduits, at reasonable rates, for fixtures for street lighting and power and other municipal purposes.

The city reserved the right, through an official whose duties might be prescribed by the city council, to inspect all parts of the company's plant, "including meters and apparatus which it shall furnish to its customers, and to take all proper ways

and means to test the same and to ascertain the accuracy and efficiency thereof".

The company assumed the obligation of extending its lines so as to furnish electrical energy to applicants therefor at the regular rates, but during the first five years of the grant no extension was to be ordered "unless the amount of the bills for electrical energy for which such extension is ordered, shall amount for the first year to at least 40 per cent of the cost to the grantee of such extension". After the expiration of five years, if the construction of any extension ordered by the council should occasion such an expense as to make the rates for electrical energy then in force unjust or unreasonable, the company was authorized to apply to the council to have such rates refixed; and, in the event of the council's refusal to do so, the company was authorized to appeal to the courts for a readjustment of rates.

It was provided that the company should "at all times use and exert every reasonable effort to maintain its plant at the highest practical efficiency; to adopt, as soon as it may be practicable, all available improvements arising in the course of the development of the business of generating and furnishing electrical energy; to continuously furnish an ample supply of electrical energy to all of its customers and all applicants for the same along its entire system and all extensions thereof, and to give good service".

The company was bound to establish, within a reasonable time after the prescribed rates should go into effect, and "at all times thereafter keep proper and accurate books of account and records, which shall at all times show correctly and in detail all the financial transactions, earnings and receipts of the grantee's plant to which this ordinance applies, as hereinafter defined, the quantity and classification of all electrical energy furnished to the several customers thereof, the time or times when such electrical energy was so furnished, the demand made upon said grantee's station or stations every 30 minutes and the class or classes of customers making up such station demands so far as practicable, the charges for such electrical energy, all expenses of every nature connected therewith, and the cost of all extensions and additions to and alterations of the grantee's said plant". In addition to other books, records and accounts pertaining

to the business of the company, as might be required by the council, "it was especially stipulated that the grantee should keep " a correct record of the number of kilowatt hours of use of electrical energy and the hours of the day when so used and the sum charged to each of its customers for the same, under the schedule of the several different rates, according to this ordinance and such other schedule or schedules of rates as may be in force and effect from time to time during the life of this ordinance, and also according to present existing contracts, including the percentage of output of electrical energy under each of said schedules and contracts corresponding to the different hours' use of the customer's demand so far as practicable". This data was to be tabulated and made the basis of a report to the city council whenever called for. All books of account and records of the company were to be open at all reasonable times to the inspection of the city comptroller or his authorized deputy, or to the inspection of any public accountant, expert or engineer appointed by the council. Any such representative of the city was authorized to obtain from the company's books any information which the council might by resolution require, and the company agreed to keep all its books and records at its office in the City of Minneapolis. The company also agreed to furnish any other information regarding its property and business which might be material to a proper determination of the question of rates or service. Information furnished the council under these provisions was to be in writing and certified to under oath by the company's officers.

It was provided that the rates charged by the company should be just and reasonable and "without unjust discrimination either between different classes of its customers or between different customers of the same class; that all such rates shall at all times be public and the tariff or schedule of rates to the different classes of customers shall at all times be kept by the grantee on file in the offices of the city comptroller and city clerk". It was also provided that all service except that furnished to the city, should be metered, except as designated by the common council, and that the company should "neither charge nor receive any amount or rate for electrical energy furnished by it other than the rates provided for in this ordinance, without the

consent of the city council, nor shall it pay or allow any rebate, refund or deduction, directly or indirectly, or in any manner or form whatsoever from the rates chargeable as provided in this ordinance for such electrical energy, without the consent of the city council". It was further stipulated that all existing contracts between the company and any of its customers providing for the payment of any unjustly discriminatory rate within the provisions of the ordinance, should, when so declared by the city council, "be voided by said grantee if it legally may".

A rate for public uses was established for the period of one year, to remain effective thereafter until redetermined by the common council or by arbitration. Under this rate the city was to get electrical energy for not to exceed $33 annually per horsepower for 4,000 hours' use "for 2,000 horsepowers of electrical energy, or as much more thereof as said city may desire, delivered to said city for municipal lighting, heating, power or other municipal purposes, at a switchboard or station to be provided and operated by said city and located within one mile from the city hall". The company was not to be required, however, to furnish the city with electrical energy so long as it supplied the city with street lighting. The maximum rate for street lighting, to be effective for one year or until redetermined by the council or by arbitration, was established at $65 per lamp per annum, operated on an all-night and every-night schedule for 3,650 hours per year. The council reserved the right to order reasonable changes, from time to time after the first year, in the company's existing street lighting system or methods, "having regard in exercising such right to the term for which municipal lighting contracts are made, the cost to the grantee required to make the changes ordered, the loss to the grantee on account of depreciation in value of equipment because of such changes, and the then efficiency of the grantee's system or methods of street lighting, together with all other facts which properly may be considered in determining the reasonableness of the exercise of such right". If rates for street lighting fixed by the council at any time proved unacceptable to the company, the question was to be settled by arbitration; but any such rate, when fixed by the council, was to go into immediate effect and remain in force

until redetermined by the council or by arbitrators. However, if the rate fixed by the arbitrators proved to be in excess of the one fixed by the council, the city was required to make up the difference to the company; and if the arbitrators' rate was less than the one fixed by the council, the company would have to refund the difference.

For private lighting maximum rates were also fixed, to be in effect for the first year and thereafter until redetermined by the council or the courts. The company was required to "furnish and install all service wires and apparatus, including meters, which may be necessary to supply electrical energy to the customers' premises"; but was not required, or even authorized without the special permission of the council, "to furnish gratuitously any lamps, motors or other appliances used by said customers nor shall said grantee be required to furnish gratuitously any renewals of lamps, or the recarbonizing of any arc lamp or the service of maintaining any part of a customer's installation". But the rate to be charged by the company for such service or maintenance was not to exceed a rate which had first been approved and published by the council, and was not to be unjustly discriminatory. The maximum lighting rates fixed in the ordinance were as follows:

For residence lighting, 10 cents per kilowatt hour for the first 52 hours' use per month, based on a maximum demand of 40 per cent of the customer's connected load; and 6⅔ cents per kilowatt hour for all excess current used. A minimum charge of $1.11 per month was permitted for each recording watt meter.

For commercial lighting, 10 cents per kilowatt hour for the first 52 hours' use per month of the customer's maximum demand, and 6⅔ cents per kilowatt hour for all excess current used, with a minimum meter charge the same as in residence lighting.

For power, 7½ cents per kilowatt hour for the first 52 hours' use per month of the customer's maximum demand, and 2½ cents per kilowatt hour for all excess current used. A minimum charge of $1.11 per horsepower per month on the aggregate horsepowers of all motors in use by the customer, was permitted.

On all these rates a discount of 10 per cent was to be allowed on bills paid within 10 days from the date of mailing or delivery. Quantity discounts were also to be allowed, ranging from 5 per cent on monthly bills of $50 to 25 per cent on monthly bills of $250 or more, with the proviso that

no bill for any given amount of electrical energy should be more than any bill for a greater amount in the same class of service.

The company was authorized to make other schedules of rates for lighting, power, or other purposes, "not inconsistent with or higher than the foregoing rates, and for special objects or for special occasions", and was also authorized to make lower rates than those named in the preceding schedules; but any such rates had to be filed with the city officials before being put into effect, and were to be "without unjust discrimination".

It was provided that a customer's use of current and his maximum demand for commercial lighting, manufacturing and other light or power, not including elevator power, municipal or residence lighting, were to be determined by meter readings, taken once each month. The meters installed to determine the amount of current used and those installed to determine the maximum demand, were to be subject to approval by the city council. The company was to leave with the customer a duplicate copy of all meter readings, upon which should be printed easily understood directions for determining the amount of the bill to be rendered. The company was authorized to use the "ready-to-serve" method for consumers having not more than 20 fifty-watt lamps or their equivalent. Maximum demand meters, when read, were to be readjusted for the proper record of the following month's demand, and the company was required to furnish its customers with such extra number of demand meters as might be ordered by the council. There was reserved to the council the right to readjust all these rates, not oftener than once a year, and to fix and determine the rates to be charged either as absolute rates, maximum rates or minimum rates or both maximum and minimum rates. Such rates, however, were required to be "just and reasonable, and not unjustly discriminating between different classes of users", and were "not to be so fixed as to fail to afford a fair and reasonable return or profit upon said grantee's capital investment in its plant". It was provided, however, that if the State of Minnesota should, by a commission or otherwise, regulate any of the rates to be charged by the company, then, during the period when such rates were sub-

ject to state regulation and to the extent of such regulation, action by the council in the matter should be suspended.

In case the company found the rates fixed in the ordinance or by the city council at any time to be unreasonable or unjustly discriminating, it was authorized to appeal to the proper court for an investigation and determination as to "what absolute, maximum or minimum rates, or both, are just and reasonable and not unjustly discriminating, and will afford, with all other income arising from the operation of its plant, a fair and reasonable return of profit upon such capital investment in its plant".

The right was reserved to the city council to determine, from time to time, whether or not the company should be permitted to demand meter deposits. The council was authorized also to regulate the amount which might be demanded and the conditions under which such deposits might be received and retained by the company. The city reserved to itself the right of priority, over its own citizens, in the use of electrical energy furnished or controlled by the company, The city also reserved the option, at the end of any five-year period during the life of the grant, "to have an appraisal made of, and to purchase, the plant of said grantee at its then fair and reasonable value as a going concern, having regard to its condition of repair and its adaptability and capacity for generating and furnishing electrical energy". It was provided that "in determining such value no value shall be placed on the unexpired term of said grant or on good will or on future profits, based upon such unexpired term". In case of a disagreement between the city and the company as to the value of the property to be purchased, the decision was to rest with a board of five appraisers, of whom two were to be selected by each party and the fifth by the four so appointed. It was provided, however, that if the company should refuse or neglect to appoint two appraisers, or if the four appraisers appointed by the city and the company could not agree upon a fifth appraiser, "then the full bench of the district court of the fourth judicial district of the State of Minnesota, or a majority of the judges thereof, may select the other appraiser or appraisers" upon application of either the city or the company. Such appraisers, or a majority of them, were authorized, personally or by their agents, to in-

spect the plant and all the records and documents of the company for the purpose of fully informing themselves in regard to the value of the property. The city was not to be bound, however, to purchase the plant at the price fixed by the appraisers. If it desired to do so, its determination was to be expressed by an ordinance adopted by a two-thirds vote of the members of the council, passed within 90 days after the report of the appraisal, and the city was to have three years after the expiration of the term for which the appraisal was made, in which to pay the price. Meanwhile the company was to retain possession of the plant, maintain it in good condition and operate it under the conditions of the franchise until the city paid for it. The company was not permitted, however, to make any addition or extension or enlargement of its plant after the city's determination to purchase and before the purchase was made, without the consent of the council, in which case the cost was to be borne by the city and paid in addition to the purchase price.

The term "plant" was defined as meaning "all and every part of the property belonging to or under the control of the grantee, or which is used in the exercise of the franchises mentioned in section 25 of this ordinance"—former grants under which the company was operating—"and which is within the limits of said city and which is necessarily devoted to the generating and furnishing of electrical energy or service to the city or the inhabitants, copartnerships and corporations therein, including all necessary power stations and sub-stations, lands and rights therein, buildings, machinery and apparatus devoted to such service, as well as all necessary lamps, poles, conduits, cables, wires and other apparatus installed in said city".

It was provided that no transfer of the rights derived from this franchise, or of any interest therein, should be valid until written notice stating the name of the transferee had been filed with the city clerk. It was also provided that the company should not sell the franchise or any interest in it, or any of its property, to any person or corporation "now or hereafter operating or interested in any other lighting or power or electrical plant in said city; nor make any consolidation, pool or division, with any other such person, copartnership or corporation, without the consent of the city council of

said city, except that said grantee may acquire the physical property of the Minnesota Brush Electric Company". The consent to any such transfer or acquisition required a two-thirds vote of all the members of the council. It was stipulated that the right granted by this ordinance should at no time and to no extent "be operated or used under or by virtue of any ordinance heretofore granted for use in the City of Minneapolis". It was specifically stated that the franchise should not be construed as an exclusive one or as preventing the city from acquiring, owning and operating a municipal electric lighting plant for public and private use whenever it desired so to do. The company was required to file within 30 days a written acceptance of the ordinance and its conditions, and within six months to file a surrender and cancelation of all franchises and rights owned or controlled by it, which had been granted by the city from time to time in the past to various companies.

Mayor J. C. Haynes vetoed the franchise just described. He argued that the alleged right of the council to regulate rates was offset by the company's right to claim higher rates, and that the two together meant nothing but litigation. He also urged that the purchase clause was of no practical value because the city would not be in a position to make use of it. He said that in his judgment the only thing that would be "settled for certain" by the enactment of the ordinance was "that the company will have acquired a valuable 30-year franchise in place of a 9-year permit which has been repealed". He urged that the only way to compel good service at reasonable rates was to provide for frequent renewals of the franchise, once in 10, or not to exceed 15 years. He also suggested that a gross earnings tax should be fixed, sufficient to provide for the expense incident to the examination of the company's plant and business whenever a readjustment of rates or a purchase was proposed. He also called attention to the fact, "admitted by the company, that the Taylors Falls Power Company is a separate and distinct corporation". He said it was evident that the General Electric Company "might make a high rate contract with the Taylors Falls Company, one very profitable to the latter, and saddle the expense upon the consumers here". He argued that the council should have the same right to approve any such power con-

tract between these companies controlled by the same people, as it had to determine the value of the property for other purposes. He also urged that the company should be given no considerable extension of time until the valuation of its plant had first been determined, either by agreement or by some competent authority.

As a result of this veto, the electric light situation in Minneapolis still remains unsettled.

129. A franchise with many good features—St. Paul.— The gas and electric light business of St. Paul is concentrated in the hands of the St. Paul Gas Light Company. By an ordinance approved December 26, 1906, the city granted a new franchise to the Northern Heating and Electric Company for a period of 25 years.[1] This grant was for pole lines and conduits along "the streets, alleys, bridges, parks and public grounds of the City of St. Paul, including any territory that may hereafter be added to the city". The company was not authorized to put up any new overhead construction until the council should designate the particular locations to be occupied for such purposes. For underground construction, however, "except where there is a lack of suitable space therefor", the company would need no further authorization. The company agreed to provide suitable space on all its poles and in all its conduits for fire alarm and police signal conductors and to furnish and string such wires at its own expense. This requirement, however, both as to space and as to the furnishing of wires, was limited to streets where provision had not already been made for the fire alarm and police signal systems.

The company was required to furnish electricity to all applicants without discrimination and at reasonable rates, and to "exert every reasonable effort" to furnish an ample supply continuously to all its patrons. Whenever the company desired to undertake underground construction, it was required to file a plat with the commissioner of public works, showing the proposed location, and to obtain from that official a permit accurately and definitely designating the space to be occupied. The city reserved the right to require the company to change the location of any of its fixtures whenever the

[1] The copy of this franchise consulted by the writer was the official publication in the St. Paul Daily News.

council deemed that such change was required by "the public interest, necessity or safety". Within one year after the work of construction was begun, the company was to prepare, in convenient book or atlas form substantially bound, and file with the commissioner of public works, a map of its fixtures; and it was required to bring this map up to date once each year with respect to extensions and new construction. This franchise, as granted, was expressly subject to all the conditions and obligations contained in the city charter, including the filing of a financial statement and the payment of an annual license fee of 5 per cent of its gross earnings. The city reserved the right, in case it should construct or operate a system of conduits, tunnels or subways for general accommodation, in the same streets where this company's fixtures were situated, to require the company, at its own expense, to remove such fixtures and place them in the city's conduits; and the city reserved the right to charge the company a reasonable rental for the space furnished. The company was bound to extend its lines for the transmission of electricity upon any street within six months after being ordered to do so by the council. But the council would have no right to order any such extension unless it was petitioned for by residents who would make use of it, whose houses or buildings were equipped throughout for the use of electricity and who would agree to become users of current. For underground construction there had to be an average of one such house or building for every 100 feet of extension required, exclusive of street crossings; and for overhead construction, an average of one house or building for every 300 feet. The five months from December to April were not to be counted in computing the time within which these extensions must be made. Extensions for power could not be required unless there was a demand for at least an average of two horsepower per day for every 100 feet of underground construction or every 300 feet of overhead construction.

The council reserved the right, "independent of whether or not the present provisions of the city charter in that behalf are continued in force during the life of this franchise", to regulate the maximum prices to be charged, provided that such prices be fair and reasonable. In case the reasonableness of any rate fixed by the council should be contested by

the company and carried to any court of competent jurisdiction, then, if such court upheld the contention of the company, it was required in the same action to determine what maximum prices would be fair and reasonable. The prices so determined by the court, whether greater or less than those fixed by the council, would be binding upon the company until the council had taken further action in the matter, or "until the conditions bearing upon the fairness and reasonableness of such maximum prices have materially changed and the grantee shall again dispute the fairness and reasonableness thereof and carry such question for litigation into any court of competent jurisdiction". The council also reserved the right to fix "minimum charges" for service and to regulate the amount of meter deposits which might be required by the company. Provision was made for the common ownership and the common use of poles by different companies, including the grantee. The company was forbidden to transfer its franchise or combine with any other electric company, without the consent of the council.

It may be remarked that while this franchise makes no provision for purchase of the plant by the city, fixes no maximum rates, and does not attempt to limit capitalization or to establish definitely the value of the company's property, it does embody an unusually large number of valuable provisions regulating the detailed relations between the city, the company and the consumers.

130. An up-to-date franchise ordinance regulating rates — Chicago.—An electric light franchise was granted by the City of Chicago to the Western Edison Light Company in 1887, and immediately transferred to the Chicago Edison Company. In 1897 a franchise covering the entire city, as enlarged at that time, was granted to the Commonwealth Electric Company. "The franchise of this company was hawked about the streets until the Chicago Edison Company bought it up", says the Committee of the National Civic Federation.[1] The two companies were operated separately, however, until about 1907, when they were consolidated as the Commonwealth-Edison Company. This company enjoyed a practical monopoly of all the electric lighting and

[1] "Municipal and Private Operation of Public Utilities"; National Civic Federation Report; *op. cit.*, Part II., Vol. I, p. 676.

power business in the city at that time. This was true in spite of the fact that nearly 50 different franchises had been granted from time to time, either by the city or by different towns and villages which were later annexed to the city. Most of these had been bought up by one or the other of the two companies forming the monopoly. The Civic Federation investigator found it very difficult to ascertain the exact status of the old franchises in Chicago, and to determine how far the operating companies had lived up to the obligations of their franchises. "The city electrician has too many duties", said he, "to be able to devote any real part of his time to the supervision of private companies, and, as stated above, there seems to be no official to whom this duty of supervision is specifically assigned. It is very difficult, therefore, to know whether or not the electric lighting companies of Chicago are obeying the terms of their franchises. There is no recollection of any pains or penalties inflicted upon an electric lighting company for failure to comply with its obligations, except in the case of a few small plants whose franchises have lapsed because of a failure to continue in business the length of time stipulated in their forfeiture clauses. It may be that all the electric companies are obeying their ordinances in every detail. The City Hall has few facilities for making any discoveries to the contrary".[1] Further on, the investigator states that "the city has required very few things which the companies would not naturally do of their own accord, and that with regard to other things, which the companies would prefer not to do, the city makes no adequate provision for finding out whether they do them or not".[2] He adds, however, that "the most recent franchises have been drawn with a considerable degree of care. In fact, it may be said that the art of drawing franchises in Chicago has shown enormous improvement during the last five years".

The old Edison franchise of 1887 was granted for a period of 25 years. The Commonwealth Electric franchise of 1897 was granted for a period of 50 years and provided that after the expiration of five years from the date of the grant the company should pay the city 3 per cent of its gross receipts.

[1] Special Report, 1907, *op. cit.*, Part II., Volume I, p. 718.
[2] *Ibid.*, p. 745.

The General Assembly of Illinois passed an act in 1905,[1] authorizing Chicago to prescribe by ordinance the maximum rates and charges for the supply of gas and electricity for power, heating and lighting, furnished by any individual or corporation to the city and its inhabitants. Under these circumstances, the city council passed an ordinance March 23, 1908, prescribing maximum rates to be charged by the Commonwealth-Edison Company for the period ending July 31, 1912.[2]

For "electricity for lighting, or upon an interior distributing circuit carrying electricity for lighting and also for heating or power through the same meter, to an extent not exceeding the equivalent of 30 hours' use per month of the consumer's maximum requirement", the maximum rate was to be 15 cents per kilowatt hour until July 31, 1908; and 13 cents thereafter. For additional current the rate was to be not more than 9 cents per kilowatt hour until July 31, 1908; 8 cents for the year following that date; and 7 cents for the period from August 1, 1909, to July 31, 1912. It was stipulated that these rates "shall cover and include for incandescent lighting the free installation and use of the proper supply of incandescent lamps". The company was also required to furnish renewals of worn-out lamps free, "except in cases where unusual conditions or manner of use shall materially shorten the normal life of lamps and require excessive renewals". If a customer furnished his own incandescent lamps, he was to receive an "abatement" of half a cent per kilowatt hour from the established rates.

For power "upon a power circuit to an extent not exceeding the equivalent of 30 hours' use per month of the consumer's maximum requirements", the maximum rate was to be 11 cents per kilowatt hour, with a minimum charge of not more than 50 cents per month "for each horsepower, or fraction thereof, in rated capacity of motor or motors connected". For electricity upon a power circuit other than for power to operate elevators, hoists or similar machinery, the rate on the current required in excess of the equivalent

[1] Act approved May 18, 1905.
[2] The original report of the Committee on Gas, Oil and Electricity to the City Council recommending the passage of this ordinance, was presented March 26, 1906. See Proceedings of City Council, 1906, p. 3217.

of 30 hours' use per month of the maximum requirement, was fixed at 6 cents per kilowatt hour.

All the rates described above were subject to a discount of 1 cent per kilowatt hour on bills paid within 10 days from date, and it was stipulated that "no such bill shall bear a date prior to that of its actual mailing or delivery". It was provided that every bill should "show the exact computation by which the charges are fixed". These rates were to apply "only to the usual and regular supplying of electricity" and were not made applicable to emergency use such as breakdown service. It was provided that "all rates to be charged for supplying electricity by said company shall be reasonable; there shall be no unlawful or unjust discrimination in such rates, and all customers of said company shall be allowed like rates under substantially like circumstances and conditions". The company was required to publish regular schedules of all its established rates.

A notable feature of this ordinance was the provision that the voltage of any of the company's "distributing lines from which electricity for lighting purposes is furnished, shall, as measured at the consumer's service, not vary more than 5 per cent either above or below the normal voltage carried by the circuit upon which the service is rendered", except in case of variations due to accidents or load conditions not in the immediate control of the company.

It was stipulated that by the acceptance of the ordinance, the company should "be understood as consenting for itself (but not for mortgage-trustees or bondholders under existing mortgages)", that the city might at its pleasure declare terminated and void any or all of a list of 23 electric franchise ordinances passed in former years by the local authorities and "understood" to have been owned or claimed by either the Chicago Edison Company or the Commonwealth Electric Company. Any property already installed under any of these ordinances and acquired by either of the companies named, was to "be maintained and operated respectively according to such ownership under and subject to the terms and limitations of the respective ordinances under which said two companies respectively operated at the time of their consolidation". These two particular ordinances were expressly ratified and confirmed, "according to their respective terms,

throughout the entire territory of said city, as now existing and as hereafter at any time or times extended by annexation or otherwise", but this ordinance was not to be understood as in any way extending the periods for which the original franchises were granted. It was stipulated that these two ordinances were to be considered as the only ordinances under which the two companies were operating or were entitled to operate their respective plants and distribution systems at the time of their consolidation. The 3 per cent gross receipts tax was extended by the ordinance to cover all the plants operated by the consolidated company and was to be based upon receipts from electricity "distributed, delivered or used" in the city whether generated by the company or purchased by it. By this ordinance the city consented to the consolidation of the companies, but expressly refrained from conceding to the consolidated company "the right to maintain or operate in the streets or public ways of the City of Chicago any particular property now existing therein, after the expiration of the ordinance under which such property was maintained and operated at the time of said consolidation, by the particular one of said two constituent corporations (said Chicago Edison Company or said Commonwealth Electric Company) from or through which such property was acquired". It was further provided that "all applications for permits for the repair or renewal of conduits or other equipment owned or claimed by said Commonwealth-Edison Company, in the streets or public ways of the City of Chicago, shall truly set forth which of said two constituent companies owned or claimed to own, at or prior to their consolidation, the conduits or other equipment to be repaired or renewed, and repairs or renewals shall be in all respects held and considered as a part of the conduits or equipment repaired or renewed".

By a section amending the Commonwealth Electric franchise of 1897, this ordinance provided that in the outlying districts, where pole lines were maintained, the city should have the right to use, free of charge, one cross-arm on each pole for its telegraph and telephone wires and also "for city lighting wires distributing electricity generated by said city for lighting streets or for light or power for public buildings only and having a voltage not exceeding 5,000 in any in-

stance, not including, however, power for pumps in the municipal water works". If the city used this cross-arm for conveying electricity generated by the Sanitary District of Chicago, it was to pay the company "a just and fair proportionate share of a reasonable return upon the cost of acquiring, erecting and maintaining such poles". Wherever the underground system was in use, the company was authorized, under the amended, as under the original ordinance, to bring its conductors to the surface within every four blocks and carry them over the roofs of the houses, with the consent of the owners, or, if such consent could not be obtained, then to carry them on poles in the alleys.

The provision in the ordinance of 1908 in regard to publicity of accounts deserves particular attention. The company was required, upon request of the city comptroller, not oftener than once a year, to "furnish all reasonable information necessary to enable said city fairly to exercise such lawful authority as said city may at the time of such inquiry or proceeding possess in respect to regulating or prescribing the rates and charges of said company for supplying electricity". The company was also required, "for the purpose of affording the City of Chicago opportunity to verify the information so furnished or to obtain further information needed, or for the purpose of ascertaining whether the provisions of this ordinance shall have been complied with during the preceding year", to "permit all its books of account and other books and papers to be examined, so far as necessary, on behalf of the City of Chicago, not oftener than once in each year, by accounting or electrical experts, or both", selected by the city. In case, however, any expert chosen by the city should be objectionable to the company, the company was to give the city comptroller written notice to that effect within 30 days. If the city did not wish to yield to the company's objections, it could submit the case to the person acting as Probate Judge of Cook County, whose personal decision as to the fitness of the expert was to be final and binding. If this arbiter decided against the city's nominee, the city was required to make a new selection. The city comptroller was required, upon request of the company, to recall from further participation in the work of examining the company's accounts, any person or persons employed in such an examina-

tion, who should "be made to appear" to be engaged in "unfair practices". The city was required to "treat as confidential for itself, its officers and its duly authorized representatives, the detailed information furnished to it by said company, or obtained by it from examinations of said company's books and papers, except as publicity in respect to the manufacturing and supplying of electricity and of lamps may seem to said city to be required or to be advisable in the public interest, to the end that the details of said company's accounts or affairs or business methods, especially in the mercantile branch of its business, may not unnecessarily become public and be disclosed to its business competitors or to persons having adverse business interests".

The company agreed, by the acceptance of the ordinance, not to increase its rates after the expiration of the period for which the rates were fixed by the ordinance.

Special permission was given to the company by this ordinance, to acquire the conduits laid in certain streets by the Chicago Sectional Electric Underground Company, under a franchise passed July 31, 1882, which had expired in 1907, and to permit the space in these conduits occupied at the time by other companies under leases from the former owner, to continue to be so used until otherwise ordered by the city. In consideration of this special privilege of renting space in these conduits to other parties, the company was to pay the city 10 per cent of its gross rentals or revenues from this particular branch of its business.

131. Power from Niagara Falls—Buffalo.—On December 3, 1881, the common council of Buffalo passed a resolution granting a franchise to the Brush Electric Light Company.[1] This resolution was vetoed by the Mayor, with the suggestion that it be so modified as to include a franchise to the United States Electric Light Company also, and such other companies as might thereafter apply for the same privilege. "This course," said the Mayor, "is desirable in order that there may be competition in the business, and, further, that the streets may not be overburdened with poles, since an arrangement can doubtless be made by which the various com-

[1] "Franchises Granted to the Brush Electric Light Co. of Buffalo, the United States Electric Lighting Co. of New York and Thomson-Houston Electric Light and Power Co. of Buffalo, now constituting the Buffalo General Electric Co.," 1905, p. 1.

panies will use one set of poles". In accordance with the Mayor's suggestions, a new resolution was passed by the council December 12, 1881, granting a franchise to both the companies mentioned above. Under this franchise the territory covered by certain specified streets was divided between the two companies, for the construction and maintenance of pole lines; but each company was authorized to operate in the other company's territory, using the other company's poles. The council also included a general provision in this franchise, giving "any responsible corporation desiring to work an incandescent light in the City of Buffalo", the right to lay wires along any of the streets enumerated in this franchise, in tubes underground.

In 1887 the city adopted an ordinance authorizing any person or company desiring to place a conduit for electric light wires under the streets, to do so on condition that these conduits should be of sufficient capacity to accommodate the wires of such person or company and all other electric light wires in use in the street on July 1, 1887, and also of capacity to allow an increase of electric wires of at least 50 per cent over the number then in use in the street. Any other company already having overhead wires in the same street was to be entitled to use the new company's conduits on such terms as might be agreed upon by the two companies. If they could not agree, the matter was to be submitted to arbitration, each company appointing one arbitrator and the mayor appointing as the third "some disinterested citizen and tax-payer".

The Thomson-Houston Electric Light and Power Company having secured a franchise in 1887, consolidated with the Brush Company five years later to form the Buffalo General Electric Company, thereby establishing a monopoly in the actual supply of electric current in Buffalo.

Things went along in the usual way until the utilization of Niagara Falls for the development of power was accomplished. The Niagara Falls Power Company was incorporated under another name by the state legislature as early as 1886.[1] By chapter 477 of the laws of 1893, this company, its successors and assigns, were authorized and empowered in any manner not expressly prohibited by law or by lawful

[1] See report of Corporation Counsel to the Common Council, Sept. 12, 1908.

local ordinance, to conduct, convey and furnish any power, heat or light, developed from the waters of Niagara River, to, in and through any civil division of the state and to sell and deliver the same to any and all bodies or persons, public or private, wherever situate. For any of these purposes, the company was authorized from time to time to enter upon any private property for which it might obtain the right "or upon any public bridge or street, highway, road, land or water", and to use the ground thereunder and to use and occupy "any portion of any such street, highway or road, or any such public land or water, in such manner as shall from time to time be permitted by the local or public authority having control or supervision thereof", subject to private rights. On December 16, 1895, the common council of the City of Buffalo granted to the Niagara Falls Power Company and to the Niagara Falls Hydraulic Power and Manufacturing Company permission to erect and maintain pole lines and conduits in the streets of the city. This grant was assigned, with the consent of the council, October 5, 1896, to the Cataract Power and Conduit Company. It is understood that the Niagara Falls Power Company develops the electric current at the Falls, and the Cataract Power and Conduit Company distributes the power in the city, the two companies being under common control.

In his annual message to the common council, January 1, 1906, Mayor James N. Adam said: [1]

"The lighting question has come to be identified closely with the power question in our municipality. For some years Buffalo has been heralded far and wide as the Electric City and as the Power City. Amid popular acclaim Niagara power was transmitted to Buffalo. It was to be so cheap that coal would be at a discount and steam give way to electricity in our industries. It was a momentous matter for our city. It was to mean much in the upbuilding and developing of our industrial life and material prosperity. We granted a liberal franchise ten years ago to a private corporation to use our streets and sell that power. The ten years have passed and I state only the plain truth when I say that the manufacturers and business men of Buffalo have found themselves enjoying little if anything more in the way of cheap power than they had before the electric power came."

Discussing the rate charged the city for power by the companies, the Mayor said:

"I believe the city should invite genuine and permanent competition on a basis certain to have the price of power reduced and, if necessary,

[1] Page 34.

the city should generate its own power and have its own power plant in conjunction with its reserve pumping station."

He stated emphatically that he did not think the city should be at the mercy "of the one electric light and power combination which in Buffalo holds franchises as the Buffalo General Electric Company and the Cataract Power and Conduit Company". After citing evidence that the citizens had to pay from 10 cents to 12 cents per kilowatt hour for residence lighting, while the street railway paid about one-half cent per kilowatt hour for lighting its cars, he said:

"Clearly, electric power has been no reducer of the cost of lighting to our home-owners. It simply has meant a more expensive form of lighting than was known before."

In his message to the council a year later, January 7, 1907, Mayor Adam stated that the minimum rate for power offered to Buffalo was $25 per horsepower per year, while the maximum rates in Toronto and other Canadian cities farther from the Falls than Buffalo, were less than $18.[1]

132. Perpetual franchises with practically no conditions attached—New York City.—The only interesting thing about the electric light and power franchises of New York City is the magnitude of the privileges involved and the absence of any appreciable restrictions upon the companies for the protection of the public interest. According to the report of the Public Service Commission for the First District, of the total electric current supplied in Greater New York, during the year ending June 30, 1907, 75.93 per cent was furnished by companies in the Consolidated Gas Company's system, and 22.74 per cent more was furnished by allied systems and companies, leaving 1.33 per cent of the total furnished by independent companies.[2] There is no actual competition between electric light companies anywhere in Greater New York. While there are nine operating companies, the territory is divided so that only one company operates in the same district, except in the Borough of Manhattan, where two companies, both controlled by the Consolidated Gas Company, are operating. The magnitude of the interests involved is shown by the fact that the various companies had 84,474 consumers, while a total of about 400,000,000 kilowatt hours

[1] Page 24.
[2] Annual Report for year ending Dec. 31, 1907, Volume II., p. 453.

of electrical current was generated during the year. The combined revenue of the electrical companies of New York City for the same year was about $19,500,000. The franchises under which this enormous business was carried on, were granted from time to time, from 1881 to 1897, by 29 different municipalities ranging in population from the old City of New York, with its 2,000,000 people, to various towns and villages in Queens, Richmond and Westchester Counties, with only a few thousand inhabitants each. Practically all these franchises are perpetual. The franchises granted by the highway commissioners of a single town in the Borough of Queens cover an area greater than the whole of Manhattan Island; and, as these franchises are perpetual, they are likely to be used in the future in the service of an enormous population. In the old City of New York the only compensation required under the original electrical franchises, was one cent per lineal foot of the streets opened for underground work; and, as a few years later a system of electrical subways was constructed in which the electric light companies were required to place all their wires, even this munificent payment to the city ceased. In a bunch of these franchises granted by a single resolution in 1887, the board of aldermen went so far as to require the companies to furnish also one free street arc light for every fifty arc lights furnished to private consumers. This provision, however, has long since been outgrown, inasmuch as the companies now operating not only hold some franchises which do not require free lighting, but also are able to make the claim that they furnish current only, not arc lights as in the early years of the business. About the only condition of practical interest in the electric lighting franchises of Greater New York, is a provision in the franchises granted by some of the former towns and villages on Staten Island, requiring the company to furnish free lights for public buildings, including schools, churches, town halls and fire department houses. This provision was brought to light after the establishment of the Public Service Commission in 1907, and since that time some of the churches in Tottenville have been securing free lights.

The only mitigation of the evils of monopoly which the people of New York have, comes from the power of the legislature and the Public Service Commission to regulate

rates and service and supervise the corporate activities of the companies. In the future it will be impossible for electric lighting companies in New York City to capitalize their franchises. The Public Service Commission has also established a uniform system of accounts for electrical corporations, which will undoubtedly prevent the repetition of the financial juggleries of the past. In his report upon uniform systems of accounts, under date of December 7, 1908, Commissioner Milo R. Maltbie described the purposes of the law as,

(1.) "To establish uniformity between all corporations of the same class."

(2.) "To establish systems of accounts which will show clearly and accurately the specific source of all income and the purpose of every expenditure."

(3.) "To state the fundamental principles according to which accounts shall be kept, so as to prevent the charging of items to wrong accounts" [1]

"The danger upon the one hand," said the Commissioner, "is that a sufficient amount will not be expended or set aside to keep the property of the company up to the proper standard. * * * * The other danger, with which we have had less experience so far, is that an undue amount will be taken out of earnings and spent upon the plant, usually in the form of extensions."

Referring to the three schedules prescribed for gas, electrical and street railway companies, the Commissioner said:

"The primary purpose of the three systems of accounts is to insure the integrity of 'capital' and the correctness of the charges to 'cost of operation.'"

133. Simple franchises controlled by a state board—Massachusetts.—In reply to an inquiry from the New York Public Service Commission, relative to lighting franchises in Massachusetts, Mr. F. E. Barker, Chairman of the Massachusetts Board of Gas and Electric Light Commissioners, made the following statement: [2]

"Permits to lay gas pipes, underground electric conduits or overhead electric lines are issued by the local authorities (aldermen of cities and selectmen of towns) under the provisions of the statutes enacted therefor. Such licenses are not granted for a fixed term, neither is it customary for the local authorities to prescribe such terms and conditions as would relate to prices, quality of light, compensation, etc. No authority to prescribe such conditions is contained in the law and it is very doubtful if they would be effective if their imposition were attempted unless, of course, under some voluntary contract executed between the company and the municipality.

"Although the questions involved have never been passed upon by the

[1] See Report of the Commission, reprinted from Proceedings of Dec. 8, 1908.
[2] Letter to Commissioner Milo R. Maltbie, dated June 2, 1908.

court, it is good opinion that the statutes, which were originally passed for telephone or telegraph companies solely for interurban communication and were later transferred bodily to the benefit of electric light companies, make it compulsory upon the municipality to grant reasonable locations for electric light lines, that the authority to place gas mains in the streets is derived directly from the legislature and that the local authorities are bound to permit such work to be done and can do no more than prescribe reasonable regulations therefor. The statute contains express provisions for the relocating of electric poles, but no other provisions for revoking privileges once granted in the public highway so long as the land appropriated therefor continues to be so used. At the same time the courts have held that if the street in which these privileges are exercised is, in the manner provided by law, discontinued as a public way, the companies having lines in such street are bound to remove them or lose them without compensation therefor.

"The question of the value and permanency of such privileges and of structures erected under them has occasionally arisen where they were found to occupy locations in which the municipality desired to lay its conduits, as for water supply or sewerage. Under such conditions municipalities have generally insisted upon their right to remove or break through the conduits of the company without being required to make any compensation therefor; and although companies have made claims for damages, these have generally been amicably adjusted or allowed by the company to languish, and the company's mains or conduits have been placed in a new location. Even though the contention of the municipality under such conditions might be sustained, I suppose it might nevertheless be found that the municipality had no right to revoke such privileges except for reasons affected by a public interest. This Board has no authority whatever in such a case and nothing whatever to do with the granting of specific locations for poles for electric lines, gas pipes or underground electric conduits and wires."

As in New York City, the main dependence of the people of Massachusetts cities is on the effective regulation of capitalization, extensions, improvements, service and rates, which is exercised by the state board having supervision over gas and electric companies.

134. Most important features of an electric light, heat and power franchise.—It is easy to make franchises so long and complex, and their provisions so minute, as to take away the flexibility in the operations of the company and its relations with the public authorities which is desirable if the utility is to be progressively developed. There is also danger that the gist of important provisions may be lost in excess verbiage. There are a few fundamental matters, however, which should be treated in every franchise.

In the first place, there is the all-important question of rates. Inasmuch as both efficiency and economy speak for monopoly in the furnishing of electric light and power, it is

unwise to depend upon competition, to any degree, for the control of rates. A franchise should, therefore, provide a schedule of maximum rates, with proper provision for readjustment of rates from time to time, based upon ascertained facts as to the cost of production and distribution of electric current. The company should be required to publish and file with the proper city authorities all its rate schedules in advance of their going into effect.

Discrimination between individuals using electric current under approximately similar conditions, should be absolutely prohibited. "Unjust" discrimination between classes of users, that is to say, any discrimination which tends to give an economic advantage to one class of citizens as against another class, should also be prohibited. It is generally held that a company is justified in charging, and a city is justified in permitting it to charge, a different rate for power from that charged for lighting. There is also a general disposition to admit of lower rates for large consumers than for small ones. As already indicated in a preceding chapter, the objection to different rates charged to users of different classes, that is to say, to those who use electric current for entirely different purposes, is much less obvious than the objection to discrimination in rates on account of differences in the quantity of current used for the same purpose. There can be no serious question but that all discriminations of this latter sort are vicious in their effect and should be prohibited. When the rates paid for a public utility cease to be determined by competition and come to depend upon regulation by public authority, either as a part of the conditions of a franchise or by separate act of a legislative or administrative body, the rates so fixed, per unit of use, should be uniform to all individuals without reference to whether the amount used is large or small. A difference in the rates charged for electrical current used for different purposes, such as, for example, lighting and power, does not necessarily come under this prohibition, for the reason that the use of current for the one purpose does not compete with the use for the other purpose; at least it does not compete directly. Furthermore, it may be of great importance to the public welfare of a city, for example, to encourage the use of electricity as a motive power in order to eliminate the smoke nuisance, while it may

not be of equal importance to encourage the use of electricity as against other means of illumination. In the present state of public enlightenment and in the confusion of interests in relation to the control of public utilities, the adjustment of rates for the use of electric current is a complex and difficult problem. But, as cities come more and more to take the long look ahead, instead of being guided by mere present expediency, the principle of uniformity in rates will be more and more closely adhered to.

Another subject of the utmost importance in connection with any electrical franchise, is the requirement of publicity of accounts. This publicity should be complete, that is to say, the companies should be required to make detailed reports according to forms prescribed by public authorities, and the proper officers or representatives of the city should have the right to inspect from time to time all the company's books and vouchers and report their findings in such detail as to throw all possible light upon the company's income and cost of service. Such publicity should also be sufficient to prevent the misuse of the company's funds for political or other improper purposes and to prevent the giving of secret rebates and other favors.

Another matter for which provision should be made in every franchise, is that of extensions. Every company should be required, of course, to supply any responsible individual or corporation desiring service, if such individual or corporation is situated within reasonable distance from the company's lines. The question of extending its lines into new territory should not, however, be left to the discretion of the company. One of the main purposes of a franchise should be to secure the widest possible distribution of the service. Accordingly, if underground construction is required, the company may reasonably be compelled to lay its conduits in the streets in advance of paving or at times when the streets are being repaved. If extensions, however, are in outlying districts where pole lines are permitted, a provision should be made by which the company would be required to extend its lines into any given territory upon petition or other evidence that the demand for electrical current along the desired extension will be sufficient to pay operating expenses. In the case of a prosperous company doing a profitable business in a

densely populated city, it might even be required that the company should extend its lines, upon request of the city authorities or the determination of a judicial tribunal, into districts where the service will for a limited time be insufficient to pay the cost of operation. In short, the provisions for extensions of service should be such as to require the company to push its lines out into new districts as rapidly as possible without tending to cripple its service to the bulk of its consumers.

In every franchise the city should reserve the right to control absolutely the locations of the company's pole lines or conduits in the streets, to the end that, whenever public convenience may require, these lines may be relocated, overhead wires may be placed underground, and sufficient space may be reserved for all other public utilities, both present and to come. This matter of the control of the street space is of primary importance to the city. It should extend beyond the right to determine the original locations, so that the city authorities will have a continuous and unalienated right to award locations in all public places as public convenience and necessity may from time to time require.

No franchise for electric lighting or any other utility should be granted in perpetuity. There are many objections also to franchises granted for a definite period of years. The best kind of franchise is one that is indeterminate as to time, and one that reserves to the city the right of revocation at any time upon condition that the city purchase the plant and property of the company at a reasonable valuation, not including any franchise value, but with provision for a bonus over cost in cases where the purchase is made before the property has been fully developed as a paying enterprise. While it is well that the right to purchase at any time should be reserved, there are no very serious objections to the form of franchise which reserves this right to the city at stated intervals of not more than five years.

Inasmuch as electric lighting companies have in many cases come into possession of numerous different franchises containing substantially different conditions, so that it is frequently impossible for the public authorities to tell under what particular franchise or franchises the company is operating, it is eminently desirable to make one of the conditions

of a franchise that the company receiving it shall surrender all preceding franchises then in its possession or thereafter secured by it.

Finally, it is desirable that a franchise should limit the possible capitalization of the grantee's property. The issue of stock or bonds on the basis of the value of the franchise itself, except to the amount, if any, which the company has paid the city for its grant, should be made impossible. Furthermore, it is desirable that a limit should be set upon the amount of bonds that may be issued against physical property. The promoters of a public service corporation, if they are interested in establishing and operating a utility in good faith, should be willing to furnish a considerable proportion of the required capital out of their own pockets. In other words, it is bad public policy to permit a company to construct its plant and equip its lines entirely from the proceeds of the sale of bonds. If the enterprise is one for service rather than for exploitation, there is no reason why the individuals who are to have control of the company's operations, should not, as stockholders, furnish at least from one-third to one-half of the necessary capital. A franchise should, therefore, provide that the grantee may not issue bonds to an amount in excess of, say, 60 per cent of the fair value of its physical property.

CHAPTER VIII.

THE TELEPHONE.

135, History and growth of the telephone as a public utility.—It is said that the first regularly equipped commercial exchange ever established for public or general service as a "central office" was the exchange opened at New Haven, on January 28, 1878.[1] From that time until 1894, when the original patents expired, practically the entire telephone business of the country was controlled by the American Bell Telephone Company. During those years the telephone was a luxury. With the advent of competition, however, a period of wonderful expansion in the telephone business was inaugurated. In 1902 there were forty-four Bell systems and 4,107 Independent systems in operation. The Bell Companies however, were a compact and powerful group under the direct control of the American Telephone and Telegraph Company, successor to the Bell Telephone Company, and still had more than half of the telephone business of the country. In addition to the 4,151 commercial and mutual telephone systems of which the Census Bureau got reports for the year 1902, there were about 5000 independent farmer or rural lines, which, according to the Census Report, were generally without separate exchanges and were usually operated on a grounded, although sometimes on a metallic circuit, "wire fences being used in some cases."[2]

[1] Bulletin 17 on "Telephones and Telegraphs, 1902" issued by the Bureau of the Census, page 25.
[2] *Ibid.*, p. 25.

Many of these lines were connected with the exchanges of commercial systems. Five years later in 1907 the Census Bureau found a total of 5,269 commercial and mutual systems and 17,702 independent farmer or rural lines.[1] The comparison of the telephone statistics of 1902 with those of 1907 reveals a rapidity of telephone development that is almost startling. The total length of wire in operation increased from a little less than five million to practically thirteen million miles. The number of telephones in use increased from 2,371,000 to 6,118,000. The estimated number of telephone messages or talks in the course of the year increased from a little over five billions to nearly eleven and one-half billions. The gross income of the telephone business increased from $86,825,000 to $184,461,000; while the outstanding capitalization increased from $348,000,000 to more than $814,000,000 in the five-year period. The total number of employees and wage earners of the various telephone companies increased from 78,752 to 144,169, and the total amount of salaries and wages paid in the course of a year increased from a little over $36,000,000 to more than $68,000,000. It is interesting to note that while the total amount of capital stock of telephone companies outstanding increased only 87.1% in this five-year period, the amount of bonds outstanding increased 308.1% and the amount of capital stock authorized increased 191.8%. Indeed, the par value of the authorized capital stock of the companies had reached in 1907 the gigantic total of $1,122,000,000, while the par value of the authorized bonds of the companies amounted to almost exactly one-half that sum.

The telephone, more than any other public utility, is not confined to cities. Of the 3,157 commercial systems in operation in 1902, only 530 were in places having a population of more than 4,000 inhabitants, as against 2,627 in small towns and rural communities. Furthermore, these figures take no account of the mutual systems and the independent rural lines, which are practically altogether in country districts. It should be said, however, that although 83.2% of the entire number of commercial systems had their principal exchanges in places of less than 4,000 population, these systems controlled only 8.8% of the wire in use in 1902, and

[1] Preliminary Report on Telephones, issued Jan. 29, 1909.

18.1% of the number of telephones in use, while their gross receipts were only 7.6% of the total gross receipts of the commercial systems. The comparative importance of the telephone as a public utility is illustrated by the fact that in 1902 there were fifty-six times as many telephone conversations as there were telegraph messages sent, and about 10% more telephone messages than there were letters carried in the United States mails. In 1907 there were practically a hundred times as many telephone connections made as there were telegraph messages sent.

136. Comparison of the telephone with electric light, heat and power.—The story of the two great public utilities most recently established is a thrilling one. The telephone came into use as a public utility two or three years prior to the first establishment of central electric lighting stations. The two utilities have developed hand in hand. In 1902 their gross earnings were practically the same. By 1907, however, the telephone had obtained a slight lead over electric light, heat and power, the gross earnings of the telephone industry having increased 112.5% in five years while the gross earnings of the central electric light and power stations had increased only 104.9% in the same period. The figures for 1907 were $184,462,000 for telephones and $175,642,000 for electric light, heat and power. For both utilities, electric wires are the conductors, but in one the electric current is used for the transmission of "intelligence", while in the other the current itself is transmitted as a commodity. The total capacity of the dynamos operated by the telephone companies in 1902 was 5459 horse-power, while the capacity of the dynamos of the central electric light and power stations was approximately 1,625,000 horse-power, or three hundred times as great. The capitalization of the two utilities in 1902 was widely divergent; as against $627,000,000 par value of outstanding stocks and bonds of electric companies there was only $348,000,000 of telephone stocks and bonds outstanding. On the other hand, the telephone, furnishing a service rather than a commodity, employed 78,752 persons as against 27,859 employed by the electric light and power companies. The outstanding capitalization of the electrical companies as given in the preliminary report of the Census Bureau, giving a summary of electrical statistics for 1907, is $1,342,000,000,

showing an increase of 114% in five years, while the corresponding increase in the case of telephone companies was 134%. In 1902 there was $4.01 of telephone capitalization to every $1 of income and $7.32 of electric light and power capitalization to every $1 of income. These figures had increased by 1907 to $4.42 and $7.65 respectively. The difference in the number of persons employed by the two utilities continues much the same as it was in 1902, there being a total of 144,169 telephone employees as against only 47,632 employees of the electrical corporations. It follows, from the difference between these two utilities, that the points of greatest interest to the public in the franchises under which they are conducted are somewhat different. While in the case of electric light and power companies special attention must be paid to original construction, including appliances for protecting life and property from dangerous currents, in the case of telephone companies, the authorities must take special pains to secure a high quality of personal service.

137. Comparative statistics of the Bell and Independent systems.—As already stated, there were in 1902 only forty-four Bell systems as against 4,107 Independent systems, not counting farmer lines. The Bell companies, however, were in most cases great organizations, one company operating frequently in several states, while the Independent systems were for the most part operated by a different company for each community. At that time the Bell companies were operating 3,388,000 miles of wire, while the Independent companies operated only 1,463,000 miles. In the numbers of subscribers and the numbers of telephone stations, the two groups were, however, more nearly equal. The Bell companies had 1,222,000 subscribers and 1,317,000 stations, as against 956,000 subscribers and 998,000 stations of the Independent companies. The total number of Bell telephones in use in 1907 was 3,132,000 as against 2,986,000 Independent telephones. In 1902 the Independent companies operated 6,608 public exchanges and 7,076 switchboards as against 3,753 exchanges and 3,820 switchboards operated by the Bell companies. The messages or talks over the two systems were approximately in the ratio of two over the Independent lines to three over the Bell lines. Of long distance messages there

were only 44,000,000 Independent as against 76,000,000 Bell. The difference in the number of officers and employees was very great. The Bell companies had nearly three times as many officers and clerks and paid them nearly four times as much money as the Independents, and approximately the same ratio held good with reference to the number of wage-earners and the total amount of wages paid.

In 1902, the outstanding capital stock of the Bell companies was $198,000,000, while that of the Independent companies was about $76,000,000; but the Bell companies paid $13,714,000 in dividends while the Independents paid only $1,268,000. The outstanding bonded indebtedness of the Bell companies was about $35,000,000, while that of the Independent companies was $39,000,000. As already stated, the entire outstanding capitalization of all telephone companies in 1907 was over $814,000,000. The exact ratio of division between the Bell and Independent companies is not given in the preliminary report of the Census Bureau, but the figures given in Moody's Manual for 1908 indicated a total net capitalization of approximately $570,000,000 for the Bell companies at that time, while President Lindemuth, of the International Independent Telephone Association, stated in 1908 that the Independent systems in the United States and Canada, including factories and supply houses, represented an investment of over $350,000,000.[1] On January 1, 1909, the American Telephone and Telegraph Company claimed 3,215,000 stations directly operated by the Bell companies besides 1,149,000 other stations operated by companies connected with the Bell systems as sub-licensees. The Independents claimed in 1908 to have over 4,000,000 telephones installed. It seems therefore that the two groups of companies are at the present time quite evenly balanced as to the amount of service rendered and as to their comparative importance as parts of a great public utility.

138. The American Telephone and Telegraph Company and its subsidiaries.—The American Telephone and Telegraph Company was incorporated in New York in 1885, and from that time until 1900 operated the long distance lines of the American Bell Telephone Company, the latter being the "parent" company of the Bell systems. On March 27, 1900,

[1] "A Larger View," by A. C. Lindemuth, published by International Independent Telephone Association, p. 2.

the American Telephone and Telegraph Company, having acquired all the property of the Bell company, took the place of the "parent" company and became what might be termed the step-mother of the entire system of Bell companies. The list of affiliated Bell companies given in the Census report for 1902 includes the American Telephone and Telegraph Company and forty-three licensee companies, with a gross capitalization of $372,000,000, and a net capitalization, after excluding duplications, of $233,000,000. As reported in Moody's Manual for 1908, there were only 33 licensee companies, the difference in the two lists being accounted for principally by the absorption of several of the companies that were operating in 1902. The gross capitalization of the Bell companies had increased to approximately $800,000,000; and the net capitalization, to about $570,000,000. Moody's states that for each of its associated companies, the American Telephone and Telegraph Company "furnishes all needed telephones, replaces them with others when required, grants the right to use all patents owned or controlled by it, and performs engineering and other services. The associated companies pay therefor four and one-half per cent of their gross telephone receipts". In addition to the licensee companies, the American Telephone and Telegraph Company has a controlling interest in the Western Electric Company, which, as a manufacturing concern, makes and sells "the various electrical instruments used under the Bell telephone patents, as well as other kinds of electrical apparatus and appliances".

The relations existing between the licensee companies on the one hand, and the American Telephone and Telegraph Company and the Western Electric Company on the other hand, may be illustrated by the case of the Chicago Telephone Company, as reported April 3, 1907, by the Special Telephone Commission appointed by the Chicago City Council. It appears from this report that the Chicago Telephone Company many years ago entered into a contract with the American Bell Telephone Company, the original parent of the Bell system, by which the Chicago company received an exclusive license "to operate within its territory under the fundamental Bell and other telephone patents." The Commission says that originally the contract included "royalty charges at a figure that would be extremely high to-day, but these have

been gradually reduced. The earlier patents have been expiring from time to time, and the contract has been correspondingly modified. The American Bell Telephone Company continues to furnish and maintain the telephone transmitters (with accompanying induction coils) and receivers used by the Chicago Telephone Company, and to perform other services besides licensing the latter company to operate under existing patents, and the payment for these services and the license is being made by the Chicago Telephone Company at the rate of four and one-half per cent of its gross receipts".[1] The amount of this payment for 1906 aggregated about $351,000, of which the Commission estimated that $282,000 was paid on account of business within the city of Chicago. In discussing this contract, the Commission estimated that over 150,000 telephone sets, "each comprising a transmitter, receiver and induction coil", were being furnished and partially maintained by the parent company. The value of these sets was said to be about $3.00 each; and twenty-four per cent of the original cost of the instruments was reckoned as a fair annual charge for maintenance, interest on investment, depreciation, etc. The Commission figured that after making this allowance, the Chicago Telephone Company was still paying $174,000 as a licensee for its Chicago business. The various ways in which this relationship to the Bell system of companies was of value to the Chicago company, as claimed by it, were explained by the Commission as follows:[2]

"The company's engineers report that they receive working specifications for switchboard installations, line and conduit work, pole line construction, cable construction, building materials, etc., etc., of which several hundred specifications are now on file, and others are being furnished from time to time; and bulletins are supplied, treating of engineering practice and operating methods, which summarize the experience and practice of the various large Bell Telephone Companies. Special studies of the best methods of operating are carried on whenever the occasion arises, by the engineers of the American Bell Telephone Company, and that company maintains a well equipped laboratory in Boston, wherein tests and investigations are carried on for the benefit of the local companies."

It was also pointed out that the Chicago company, as licensee, enjoyed the exclusive use within its territory of apparatus still covered by the patents of the parent company.

[1] Report of the Committee on Gas, Oil and Electric Light, Sept. 3, 1907 on "Telephone Service and Rates," p. 88.
[2] *Ibid.*, p. 89.

The Commission explained that the Chicago Telephone Company also had a contract with the Western Electric Company, by which the latter became the purchasing agent for the former, under conditions which seemed to the Commission to be advantageous to the Chicago company.

"The Western Electric Company is a large manufacturer of electrical apparatus", said the Commission,[1] "and therefore a large user for itself of copper wire and of other materials needed by the Chicago Telephone Company, which makes it a purchaser that is able to gain the best market prices for large purchases.

"The Western Electric Company is also the purchasing agent of other Bell telephone operating companies, which further improves its opportunity for purchasing at low figures. The contract between the Chicago Telephone Company and the Western Electric Company may be terminated by either party upon three months' notice given in writing. The Telephone Company is privileged to purchase of other parties any materials that can be purchased for less money direct than through the Western Electric Company. The Western Electric Company is under obligation to sell any of its manufactured products to the Telephone Company for not exceeding the price at which similar products could be bought elsewhere, and at a price not exceeding that at which it sells to any other purchaser. The Western Electric Company receives 2 per cent commission for handling the general supplies furnished to the Telephone Company, which the Western Electric Company does not manufacture; but this commission is only paid to it on condition that the total price to the Chicago Telephone Company, with the 2 per cent commission added, shall not exceed the price the Telephone Company would pay if it purchased its supplies at the most favorable figures in the open market. The Telephone Company has the privilege of buying a special list of apparatus and supplies anywhere at its pleasure, and this list of apparatus and supplies may be changed by adding thereto or deducting therefrom, at the pleasure of the Telephone Company."

In passing judgment on the merits of this contract, the Commission stated that it appeared to be favorable to the Telephone Company. In regard to the two contracts just described, the Commission gave as its opinion, that they "are not harmful, but enable the Chicago Telephone Company to improve its service and purchase its supplies at a less expense than it otherwise could".

The comparatively small number of companies which constitute the Bell system and operate in every state and territory of the United States, have a complete or practically complete monopoly of telephone service in Greater New York, Chicago, Boston, San Francisco, Washington, Cincinnati, Milwaukee and a number of other important cities.

[1] Report of Committee, *op. cit.*, p. 90.

The justification of the gigantic Bell system, as stated in the annual report of the directors of the American Telephone and Telegraph Company to the stockholders for the year ending Dec. 31, 1908, is of surpassing interest.

"The relations of the American Telephone and Telegraph Company and the associated companies are not generally understood", says this report.[1] "The American Telephone and Telegraph Company is primarily a holding company, holding stocks of the associated operating and manufacturing companies. As an operating company it owns and operates the long-distance lines, the lines that connect all the systems of the associated operating companies with each other.

"In addition to these two functions it assumes what might be termed the centralized general administrative functions of all the associated companies.

"The Bell system is one system telephonically inter-connected, intercommunicating and inter-dependent. This is such a system that any one of over 4,000,000 subscribers can talk with any other one within carrying power of the voice over wires, the only exception being that the Pacific Coast and the Middle Rocky Mountain region are not yet connected. * * * * * *

"The American Telephone and Telegraph Company owns and maintains all telephones. It also owns either directly or through the Western Electric Company all patents.

"It has a department which was organized at the very beginning of the business and has continued since, where is to be found practically everything known about inventions pertaining to the telephone or kindred subjects. Every new idea is there examined, and its value determined so far as the patent features are concerned.

"The Engineering Department takes all new ideas, suggestions and inventions, and studies, develops and passes upon them.

"It has under continuous observation and study all traffic methods and troubles, improving or remedying them.

"It studies all construction, present and future development or extension schemes, makes plans and specifications for the same, and gives when desired general supervision and advice. It has a corps of experts which, in addition to the above work, is at all times at the service of any or all of the separate companies. * * * * * * *

"A large staff has been and is continuously engaged in the consideration of disturbances arising from transmission and other lines carrying heavy currents, and in many cases that any telephone system can even exist in the vicinity of such lines is due to the constant and continued attention given this subject.

"Every new trouble, and there are many, comes before this department. When settled there, it is settled for all. This has established a commercial, operating and plant practice not only for our own associated companies, but for others of high standing throughout the world.

"All devices or inventions submitted receive the most thorough and painstaking investigation, and it is safe to say that there has as yet been no instance where any invention, system or method, rejected by the Patent and Engineering Departments of the American Telephone and Telegraph Company has ever had any permanent success when used elsewhere.

[1] Page 15.

"The Manufacturing Department creates and builds the equipment and apparatus which have been adopted. In this way throughout the whole grand system will be found standardization and uniformity. This is not any handicap on improvement or development of the art, for, on the contrary, every suggestion or idea, and there are many, has abundant opportunity to be tested, which would not be possible otherwise. No one of the companies could by itself maintain such an organization, and it would be fatal to any service to introduce or try out undeveloped ideas in actual service.

"In the Legal Department all the big and general questions are looked after. It forms a clearing house in all legal matters for all the legal departments of the separate companies to which assistance and advice are given on all questions of general scope.

"In the administration all questions which affect all companies, all questions between the associated companies, and the general policy and the general conduct of the business, are considered and close touch and relationship maintained with all parts of the system. Experts on every subject connected with this business are continually at work on old or new subjects and ready at call to go to the assistance of any of the companies. In short, the great work and substantially all the expense of the American Telephone and Telegraph Company are involved in this Centralized General Administration, taking care of all those matters which are common to all companies, or which if taken care of by each company would mean multiplication of work, effort, expense without corresponding advantage or efficiency."

Further on in this same report the directors call attention to the "stability" of the business, which they say shows an increase, whatever the general commercial conditions may be.

"This stability and the position that the Bell system holds", continues this report,[1] "is due very largely to the policy and conditions under which it was developed, not alone to the telephone.

"A telephone—without a connection at the other end of the line—is not even a toy or a scientific instrument. It is one of the most useless things in the world. Its value depends on the connection with the other telephone—and increases with the number of connections.

"The Bell system under an intelligent control and broad policy has developed until it has assimilated itself into and in fact become the nervous system of the business and social organization of the country.

"This is the result of the centralized general control exercised by the company, the combination of all local systems into one combined system developed as a whole."

139. Peculiarity of the telephone among public utilities.—As already pointed out, from the standpoint of the consumer the telephone is the most monopolistic of all public utilities. In spite of this fact there are certain features of the business, viewed from the purely commercial standpoint, that tend to invite competition. The comparatively small amount of capital required, the relatively small percentage of

[1] Report, *op. cit.*, p. 21

waste in the duplication of plants, and the increase of cost per unit of service as the business expands, are to be especially noted in this connection. The question of competition *versus* monopoly, with relation to this particular utility, will be discussed more at length in succeeding sections.

Another distinctive feature of the telephone is that the utility supplied to the consumer is not a commodity, like gas, water or electric current, but a service. While, to be sure, transportation on the street cars is also a service, it is visible and tangible as compared with the service rendered by the telephone company. A telephone patron is utterly helpless when the operator answers "busy", or when the line is out of order so that he cannot hear the voice at the other end. The fact that the patron is talking into a dumb instrument and that he cannot see what is the matter or "get at" the difficulty or the person responsible for it, makes him curse the company and feel like smashing the instrument.

Partly as a consequence of the fact that this utility is a service rather than a commodity, there has not been invented as yet any mechanical device by which the amount of service used can be accurately measured without the intervention of the human element and the consequent danger of carelessness or fraud. A gas meter, a water meter or an electric meter, is a mystery to the average consumer, but at the same time he has the opportunity, by coöperation with his fellow citizens, to establish a system of public inspection and sealing by which he may be reasonably protected from overcharging as to the amount of the commodity used. Telephone experts are working on the problem of inventing a satisfactory telephone meter. It is difficult to see, however, how any purely mechanical device will be able to separate unavailing calls from successful ones and at the same time record the length of conversations. If the consumer is to pay for his telephone service by meter, a ten-minute conversation certainly should count for more than a half-minute conversation, and it might not be amiss to give him a rebate for the time wasted in unsuccessful attempts to establish connections when his failure is due to the inefficiency of the telephone service.

In discussing meters, the Chicago Special Telephone Commission said:[1]

[1] Report of Committee, *op. cit.*, p. 81.

"The meter question is one which creates some difficulty in the telephone field. Nickel prepayment telephone boxes provide for a large number of users. There are now in use in Chicago over 68,000 nickel prepayment telephones, and the number is apparently steadily increasing. In New York City the measured rate lines are individually equipped with meters in the exchange offices, and the Chicago Telephone Company has developed a meter which makes it impossible to register more than a single unit for each message over the line. We believe that this meter used in connection with the measured service lines that are not equipped with prepayment boxes will prove accurate and satisfactory, in case the City Council grants the Chicago Telephone Company a franchise. This meter is arranged in such a manner that no record can be made until the connection with the subscriber's line has been set up in the manner required for making a communication. Thereupon the operator by pushing a button may cause the meter to register one unit, and however many times the button may be pushed thereafter, through oversight or malice of the operator, no additional messages will register on the meter until the connection has been taken down after the completion of the message and a new connection has been made, as upon receiving another call from the subscriber. This guards against an excess number of calls being registered against any subscriber through oversight on the part of the operator. We see no reason why this meter arrangement should not prove commercially accurate and satisfactory, and we recommend its adoption for the instances of metered lines in case the Chicago Telephone Company should be granted a franchise."

The experience of New Orleans is set forth by Mr. Henry Noble Hall in his special report to the Telephone Committee of the New Orleans Board of Trade, under date of January 14, 1908. Mr. Hall says:[1]

"It is necessary to point out here that the principal objection to measured rates lies in the difficulty of insuring an accurate account of the messages sent. At present in New Orleans records are kept with pad and pencil by the operators, and occasions for error are numerous, although it must be admitted that the girls are more likely to forget to mark calls than to over-charge. This is the most primitive method of recording calls. It compels each operator to perform a certain amount of work in addition to the necessary switch-board manipulations, and this extra work—the taking in hand of a pencil and marking of the call and laying down the pencil again—necessarily interferes with the operating more than would the registering by means of a mechanical or push button device. Pad and pencil recording means more operators; this, in turn, makes a larger switch-board equipment necessary; all of which tends to increase the cost of operating."

In New York a registering device has been adopted which is claimed to be fairly satisfactory. The message is recorded when the operator presses a button; but unless the subscriber's connection has been made, the machine will not register.

[1] "Telephone Conditions in New Orleans, La.", 1908, published by New Orleans Board of Trade Ltd., p. 46.

"By this means", say Westinghouse, Church, Kerr & Co.,[1] "the register of each line is placed under the control of the operator during the time that the particular line is engaged in conversation, and not otherwise, and as the operator is informed by the signal lamp when the called subscriber lifts the receiver and begins to talk and when he replaces it at the end of the conversation she knows that the call has been successfully completed, then by pressing the button she can register the call, and hence the subscriber is only charged for those conversations which are successful. As the registers are constructed with great care, are sealed in a double enclosure, and are only connected with the subscriber's line during the actual period of conversation and the push button so arranged as to make accidental registration very difficult, if not impossible, the chances of error seem to be reduced to a minimum."

There are still possibilities of error, however. The operator may forget to record the connection, in which case the advantage would be with the subscriber. Moreover, the operator could, if guided by malice, double the record. There is a series of signals, however, by which each corps of nine operators is closely watched by a supervisor, which gives a double check on the registration of each call. There is also a possibility of registering a count for both parties having telephone connection with each other, in case the local wires get crossed. It is stated that whenever the New York Telephone Company has any reason to suspect the accuracy of any register, the matter is taken up with the subscriber and adjusted usually on the basis of the average number of monthly calls according to previous records. The auditor of the company was authority for the statement in 1905, that during the preceding six months the number of questionable cases of counter registration amounted to only one in a thousand of the number of counters in service. The authorities from whom I have just quoted make this comment, namely, that "the registration of telephone calls is accomplished with an accuracy which compares favorably with other commonly accepted commercial methods for measuring the service which a vendor sells to a customer".[2]

The telephone differs from most other utilities in that it is not a purely local service. While it makes no difference to the consumer of water, gas, steam heat, or electric current, whether his neighbor is supplied from the same mains or not, or whether the city in which he lives is served as a whole or is divided into a dozen separate districts, the all-important

[1] "Inquiry into Telephone Service and Rates in New York City," June, 1905, p. 56.
[2] *Ibid.*, p. 57.

thing in telephone service, on the other hand, is not only that every one who uses telephone service in any given community should be connected with the same system, but that this system should have long distance connection with every other community in the state or country. The necessity for connection with long distance. lines is one of the most important factors of strength in the Bell monopoly, and is constantly working to compel the consolidation, or at least the close affiliation, of the Independent companies throughout the country. This fact also lessens the efficiency of local control over the telephone business and makes more essential some kind of supervision by state or national authorities. In this respect the telephone is similar to the passenger transportation business, except that in the case of transportation local and long distance traffic are for the most part taken care of by two distinct classes of companies, namely, railroad corporations and street railway corporations. For this reason and also for the reason that the patron himself can attend to the transfers from local to long distance lines when it is a question of travel, while in the case of the telephone he needs immediate connection, for which he must depend altogether on invisible and distant agents, the local authorities are even more dependent upon the coöperation of state authorities for the control of the telephone business than for the supervision of transportation. The comparative importance of the local and long-distance service is only roughly measured by the fact that in 1907 there were forty-four times as many local as there were toll connections, for on the average the latter brought in a much larger revenue to the companies and were correspondingly more important to the telephone users.

Still another peculiarity of the telephone utility lies in the fact that a citizen may secure a certain amount of service without having a private telephone. The maintenance of public pay stations by the telephone company enables the person who cannot afford a telephone in his own house, to make use of the system in emergencies on the payment of a small fee. The thing most analogous to the public pay station in other utilities, is the town pump, to which the thirsty citizen may repair for a drink or a bucket of water. This means that private telephones are absolutely essential

only to business and professional men and institutions, whose interests require that they be easily accessible to their patrons and the public at large, while the use of the telephone may be diffused through the entire population of the community for limited and necessary service at an insignificant expense to the individual. Furthermore, while the widespread practice of using one's neighbor's telephone is no doubt mildly reprehensible, it is in a multitude of cases entirely feasible from the public standpoint, and is almost peculiar to the telephone.

Another way in which the telephone system adjusts itself to the consumer, is by means of party lines, private exchanges and neighborhood exchanges. By the use of party lines, the cost of residence telephones is greatly reduced, so that two, three or four families—even as many as ten—receive a little of the benefit of this utility without the necessary cost involved in the construction of private lines for each family. At the other extreme is the great business establishment with scores or hundreds of employees and many departments, to which the telephone would be simply a nuisance if it meant that all calls must be given and received through a single set of instruments. By means of the private exchange the employees in every department of the business can be connected with the outside world with much greater convenience and at much less expense than would be possible if separate telephones were to be installed for all the departments or employees. The neighborhood exchange is useful in the case of suburban communities, where it is important for the residents to have means of communication with each other without going to the expense of having free and complete communication with the central exchanges which supply the needs of the great city. Patrons of the telephone who are connected with a neighborhood exchange, may have general service over the entire community upon necessary occasions by the payment of a small fee.

One of the distinctive features of telephone service is the printing and distribution of a telephone directory to all subscribers. This is one of the most important items of the service. Unless the directory is arranged conveniently, printed accurately and revised frequently, good service is impossible. There are several points about the directory, over which a

company and its patrons may quarrel. One is the question of the number of insertions permitted to each subscriber. It is often convenient that different members of a family, and especially that different members of a professional or business firm, should have their individual names in the telephone book, although they use only one telephone. Another point of difficulty is in regard to the publication of a double list, one alphabetically under the names of subscribers, and the other serially under the numbers of the telephones. While the second list is of much less importance than the first, it is often convenient, when a telephone number has been left, for a subscriber to be able to identify the party at the other end of the line before opening communication. In connection with a rapidly growing exchange it is, of course, necessary that the telephone directory should be frequently revised if the service is not to become chaotic. Even with a comparatively stationary system, the changes on account of death, removal and other constantly recurring causes, are sufficient to require the revision of the directory at least twice a year. This constitutes an important item in the cost as well as in the quality of service.

140. Increase of cost with increase of business.—The Committee on Gas, Oil and Electric Light, in its special report to the Chicago City Council on "Telephone Service and Rates", September 3, 1907, discussed in considerable detail the causes that go to make the telephone industry peculiar, not only among public utilities but among practically all lines of business. It is claimed that the more patrons a telephone company has at a given rate, above a certain minimum number, the less profit there is from each one. In other words, instead of being able to supply a larger and larger number of patrons at a reduced cost for each, the company finds that the expense per unit of telephone service increases with the expansion of its business, and, consequently, that the more business it has the higher its rates must be. I cannot do better than quote at length the following discussion of this point by the Chicago Committee:[1]

"The average person does not understand why it costs more per telephone to supply telephone service in a large city than in a small city. The assertion of this principle to many seems a paradox. It is regarded as contrary to the ordinary principle of business—that is, that

[1] Report, *op. cit.*, p. 12.

the unit cost becomes less as the volume of business done increases. It is but natural to think that the wholesale principle ought to apply in the telephone business as in other lines. This idea prevails because the ordinary individual does not understand the peculiar features of the telephone business, and does not look beyond the telephone on the wall or on the desk. He does not take into consideration that the real business of a telephone company is to furnish service, transmit messages, and not merely to rent instruments. This prevailing idea has been constantly brought home to members of the Committee by having their attention called by people thus uninformed to the lower rates existing in other cities; cities between which and Chicago there can be no common basis of comparison. Attention is called to some of the reasons for this exception to that rule of business, so well established.

"Every line added to a telephone system requires the addition of telephone central office equipment to every other line in the exchange, so that the new line may be connected to any one of the existing lines. For every line added to an exchange, the company must not only handle the additional calls originating from that line, but must provide for the additional calls originating from existing lines to the new line. The average number of calls per telephone increases with the opportunities presented for calling.

"The size of a switchboard to serve a given number of subscribers depends upon the number of messages handled and not upon the number of subscribers. It is also true that the number of operators necessary depends upon the number of messages sent and not upon the number of subscribers. It is therefore impossible in a large city to locate the lines of all subscribers in a single exchange. Mechanical difficulties interfere. In small cities one exchange is usually sufficient to supply the demand for service.

"The subdivision of a city into exchange districts, with an exchange in each district, necessitates a complete system of intercommunication between each such district and all of the other districts. The complexity of switchboard wiring and the multiplicity of trunking facilities form very expensive items of plant installation. It also necessitates the handling of a very large percentage of messages twice. In a large city a very small proportion of calls are completed within a single exchange. It is usually conceded that about eighty per cent of such calls are required to pass through a second exchange. It is thus plain to see how both the investment and the operating cost are accordingly increased.

"In a small city the business day is longer and there can be said to be no excessively busy hours. In a large city the greater volume of the business is transacted in a comparatively short period of time. The plant must therefore be constructed, and the operating force provided, to meet the business demands of the high tension hours—to meet the 'peak'. If the increased business of the busy hours could be spread over the full business day, it would greatly decrease both the investment necessary and the cost of operation.

"An enlarged exchange means an enlarged area covered and, therefore, added length to subscribers' lines. This requires a proportionate increase of investment for wires and equipment.

"A large city usually has a greater percentage of paved streets, and makes more extended requirements for underground work. Thus is increased the investment necessary for installation of the system and

the expenses of maintenance incident to the repairing of wires and cables placed underground.

"There are additional causes for the increased cost of service, such as higher wages and shorter hours; destruction of underground cables by the interference of foreign electrical currents; higher rates of taxes and insurance; probable higher rates of compensation, and some additional investment for the benefit of the city, in providing space on poles, and ducts and cables, for the city's use."

The Commission of experts employed by the Chicago Committee, in discussing this question of the increase of telephone costs with the expansion of the business, expressed the opinion that by the use of measured rates this increase could be largely prevented.

"It is a tradition in telephone circles", said the Commission,[1] "that the service per telephone costs more as the number of telephones connected with the plant increases. As the number of telephones increases, each subscriber has the opportunity to call upon more people by telephone, and the law of averages would indicate that the number of calls per day from each telephone should increase, thus making the service more expensive to the operating company, provided the service is flat rate service and unnecessary use of the telephone is not deterred by a measured rate charge. This condition seems to have worked out in practice, according to the statements of telephone companies at Cleveland, Indianapolis and elsewhere, and flat rate service seems to increase in cost per telephone as the number of telephones attached to a system increases.

"On the other hand, a different condition exists in connection with measured rate service. With the measured rate service the message is the unit instead of the rental of the instrument; and it is the message that the subscriber ought to pay for, because it is for the purpose of sending his messages that he provides himself with a telephone. With measured rate service and a reasonable use of the telephone lines, the unavailing calls are reduced to a minimum. The number of calls per telephone per day, apparently, is not inclined to increase as the system increases in extent. * * * * But the total number of messages handled increases approximately in proportion to the number of telephones. Under these conditions, the ordinary laws regulating the difference between the cost of producing articles in large and small quantities comes into play, and the actual cost per message ought to steadily decrease. Since it is the messages that are paid for under the measured rate system and the actual cost per message ought to steadily decrease as the system enlarges, the average amount paid by each subscriber will decrease if the subscribers limit the use of their telephones to their actual needs and the telephone company is well managed.

"The difference thus arising between flat rates and measured rates is very marked. The flat rate telephone user tends to increase his number of messages as the system enlarges, so that the average calls per day per telephone may be expected to increase and the proportion of unavailing calls also to increase. The consequence is that the company is forced to handle more calls per telephone as the system becomes larger,

[1] See Report of Committee, *op. cit.*, p. 74.

and the price per telephone has to increase under flat rate charges; while the subscribers limit their use of the telephone to their actual needs under measured rates and the number of calls per telephone does not have a tendency to increase as the system increases in size after it has reached a considerable development such as is now found in the City of Chicago. Under these conditions the principle of wholesale production makes it possible for the company to reduce its cost of operating per message and thereby reduce the average price charged the telephone subscribers."

Mr. Gansey R. Johnston, General Manager of the Columbus Citizens' Telephone Company, in a pamphlet published in September, 1908, by the International Independent Telephone Association, discusses this question of the increase of costs in connection with his explanation of the reason why Independent companies have increased their rates.[1] He says:

"As lines are added to a telephone plant, the cost of construction, maintenance and operation of each new and of each old line tends to increase because of the addition. The construction cost of the new lines averages greater because the average length of line increases with the growth of the plant. The construction cost of the switchboard connections for both the old and the new lines increases because facilities must be provided at the switchboard to connect each line, old and new, with every other line, as well as extra facilities for the additional traffic. The unit of operation cost increases because, as new connections are provided, there is additional use of each line. For example, each subscriber on a 2,000-line plant uses his line for such business as he has occasion to do with those two thousand, and for the entire subscription list (without taking into account more than one person for each line) the possible demand for connections is limited to the square of 2,000 less 2,000, or 3,998,000. If the plant is doubled, each of the original two thousand has his original outgoing and incoming calls plus what he has with the additional subscribers, and in like manner do the new ones have more than did the old. The limit of demand in this case on the same basis is measured by the square of 4,000, less 4,000,or 15,996,000. If the plant is trebled, then the limit of the demand is measured by a number nine times the first one taken. If the number of persons using each telephone should be taken into account, the increase would be much more rapid than indicated. While the actual demand never approaches the possible demand, it is certain to increase in greater ratio than by simple addition. The additional traffic means more work for operators and consequently more operators proportionately, and greater wear and consequently a higher maintenance charge for each line. As the size of the plant grows, the operators work under increasing physical difficulties, and with still greater growth the line connections get beyond the operator's length of arm, so that the separation of switchboards is necessary. The average maintenance charge is increased, not only by the wear, but by the existence of the additional central office equipment and the longer length of lines to be kept in repair and ultimately replaced. On

[1] "Some Comments on the 1907 Annual Report of the American Telephone and Telegraph Company", p. 5.

a very large plant certain traffic, trunking, and transmission difficulties require large expenditures in their overcoming. Not only does the cost increase as outlined, but also does the value to the user increase. If the telephone charge were based on a unit of use, as in the ordinary business, then probably the telephone business would be more analogous to the ordinary business; although even such charge would not afford relief from the extra elements of construction and maintenance costs. Within certain limits the public gains more from the larger number of connections than it loses by paying an increased charge for line rental, if indeed the charge is not left stationary."

Further along in his pamphlet, Mr. Johnston says that his company, which uses the automatic system, "is experimenting, with prospects of success, in the construction of branch exchanges of small units, whereby the maximum distance is traversed by trunking cable and the minimum by subscribers' cables."

"In these branches", says he, "is the minimum equipment connecting with maximum common equipment at the main exchange. Operation through the branch exchanges involves no additional operating employes and no additional burden upon the subscriber, who is his own operator. There are fair prospects through further inventional progress of reducing the number of trunking wires below any proportion heretofore known, and of increasing the adaptability of existing cable plants beyond that of any plants heretofore known."

It is evident that if the length of subscribers' wires could be kept from increasing with the enlargement of the area over which unified telephone service is given, one important element in the alleged increase of unit cost would be eliminated. Even as it is, available statistics do not seem to prove that the average length of wire per subscriber always increases with the number of subscribers. From the report of the Massachusetts Highway Commission for 1908, I have compiled the following figures, relative to the five companies having the largest number of subscribers within that state.

	First company.[1]	Second company.[2]	Third company.[3]	Fourth company.[4]	Fifth company.[5]
Number of subscribers	1,043	1,068	1,148	18,855	161,209
Miles of wire per subscriber	2.10	2.35	3.07	2.29	2.68

[1] Automatic Telephone Co. of New Bedford, Report, p. 153.
[2] Providence Telephone Co. of Massachusetts, *Ibid.*, p. 181.
[3] Fall River Automatic Telephone Co., *Ibid.*, p. 163.
[4] Southern Massachusetts Telephone Co., *Ibid.*, p. 188.
[5] New England Telephone and Telegraph Co., *Ibid.*, p. 176.

If in addition to keeping the average length of wire from increasing, we could also keep the average use of the telephone from growing with the size of the exchange, it is clear that the Chicago Telephone Commission's hope of decreasing rates would be something more than a pleasant dream. It is not to be believed, however, that the average use of the telephone will fail to increase in the long run as the size of the exchange increases, unless it be as a result of the extension of the service to classes of people who have less use for the telephone than the earlier subscribers have.

141. Competition vs. monopoly.—Upon this question the Bell companies and the Independent companies are at variance. It is a part of the business policy of the Bell companies to show the benefits of monopoly service, while the Independents place their main reliance upon the argument for competition. The reason for this difference is obvious. The Bell companies, having long enjoyed a monopoly, have been loath to lose it, while the Independent companies, in the nature of the case, could not get a "look in" except on the basis of a competing service. In the report of the directors of the American Telephone and Telegraph Company for 1907, the attitude of the Bell interests toward competition is strongly put.

"The value of any exchange system", says this report,[1] "is measured by the number of the members of any community that are connected with it. If there are two systems, neither of them serving all, important users must be connected with both systems. Connection with only one is of but partial value and cannot be satisfactory. Two exchange systems in the same community, each serving the same members, cannot be conceived of as a permanency, nor can the service in either be furnished at any material reduction because of the competition, if return on investment and proper maintenance are taken into account. Duplication of plant is a waste to the investor. Duplication of charges is a waste to the user.

"The advantages claimed for competition are lower rates and improved service. Exhaustive competition may temporarily produce either or both of these results, but, as before stated, this temporary gain is purchased by an excessive waste. Duplication of plant and operation cannot produce either result without exhaustive competition. Given the same management, the public must pay double rates for service, to meet double charges, on double capital, double operating expenses and double maintenance. In most cases of proposed competition an examination of the prospectus will show that, by some process, it is expected to make good a capitalization equal to at least two or three times the actual cost of the construction. The only benefits are to the promoter.

[1] Page 17.

"It is contended that if there is to be no competition, there should be public control.

"It is not believed that there is any serious objection to such control, provided it is independent, intelligent, considerate, thorough and just, recognizing, as does the Interstate Commerce Commission in its report recently issued, that capital is entitled to its fair return, and good management or enterprise to its reward."

In answer to this argument the Independent Telephone Association appealed to the experience of Columbus, Ohio. In that city the Independent company began agitation for a franchise late in 1898, when the Bell company had less than 1,900 telephones, with rates, near the center of the city, as high as $96 a year for business places and $48 a year for residences, with additional charges for distance beyond one mile from the exchange. Since that time the Bell rates have been reduced to $54 for business telephones and $27 for residence telephones throughout the city. In the mean time the number of telephones in use has increased until each company serves approximately 12,000 subscribers. The manager of the Independent company figures out how much the subscribers in his system saved during the years 1900-1907, as compared with what they would have had to pay at the Bell rates which were in force at the same time. According to this estimate, there was a total saving, during these years, of $664,000. He argues that the reduction of rates, as well as the great expansion of service, was due to competition. He also urges, in favor of competition, that only a small percentage of the total number of telephone subscribers are compelled to pay duplicate charges by reason of using both systems.

"In Columbus something like 15 per cent of the telephones are duplicated", says he.[1] "The bulk of these duplications are business telephones. Many of these duplicate users would have two or more telephones if there were but one system. Many others get benefits from their telephone service so far beyond its cost that the cost is in no sense a burden or a waste. The cost of a business telephone on the one plant is 11 cents a day, and on the other 15. If incoming or outgoing calls are worth on the average 5 cents apiece, then three a day will pay for the assumed wasteful duplicate charge."

He also claims, in defense of competition, that the amount of duplication of plant involved is comparatively small, being only about twenty per cent of the total.

[1] "Some Comments on the 1907 Annual Report of the American Telephone and Telegraph Company," *op. cit.*, p. 13.

"The most expensive elements of a telephone plant", says he, "are individual for each subscriber. The largest single investment item is cable and line wire."

Without giving any definite figures, he goes into a discussion of the various items of telephone equipment, attempting to show that, for the most part, there is no large percentage of waste by reason of duplication. As a further argument against monopoly, he urges that the stimulus of competition leads to marked improvement in the service. He also urges that the great bulk of subscribers who cannot afford to pay for unlimited service in a large exchange, are more cheaply served by the partial service of a small competitive exchange. This argument is based on one set forth in the preceding section, to the effect that telephone service becomes more expensive per unit with the increase in the number of units. The Independents urge, with some justice, that the great bulk of telephone subscribers, to whom the telephone is coming to be a necessity, need it primarily for connection with the physician, the grocer, the butcher, and other tradesmen, who, from the nature of their businesses, naturally are subscribers to both systems.

The Merchants' Association of New York, on June 29, 1905, addressed a communication to the Board of Estimate and Apportionment of that city in opposition to the grant of a franchise to any Independent telephone company. Quoting from the report of its special telephone committee, the Association said:[1]

"The effect of two rival telephone systems in one city is to divide the population into two parts, without means of telephone communication with each other except at excessive cost. While a single system promotes general intercommunication, two systems make it impracticable. Two systems therefore greatly restrict the utility of the telephone, seriously impair its value and impede its commercial development.

"It has been shown that a single system can perform the desired service much more efficiently and at less aggregate cost than two systems can. It is obvious that two systems involve extensive duplication of plant and organization, which entails a heavy additional burden of fixed charges and operating expenses, much of which would be unnecessary if the service were performed by a single system. This duplicated outlay, being in excess of the amount really necessary to perform the service, is an economic waste. In telephone operation no compensatory benefits to users in the form of lesser cost of service or increased efficiency have yet developed to justify this waste. The

[1] Inquiry into Telephone Service and Rates, *op. cit.*, p. 36.

dangers coming from it are easily seen. Unless it is provided for in the charges exacted from consumers the capital investment will be gradually eaten up. In the meantime, as abundant experience in railroad competition has shown, equipment will be permitted to deteriorate, operating expenses will be reduced below the proper limit and the efficiency of service will be lowered.

"In the opinion of this committee, competition in telephone service is not a public benefit and not a useful means of regulating telephone charges. As shown above, little or no benefit accrues to any part of the public in the way of reduced rates, many consumers are compelled to increase their aggregate outlay, the utility of the service is cut in half, expansion made difficult, the efficiency of the service threatened and the capital investment endangered.

"Competition in telephone service does not offer a choice of benefits, but compels a choice of evils—either a half-service or a double price."

In a supplemental report presented to the Merchants' Association September 18, 1905, the Telephone Committee set forth a considerable amount of interesting data bearing upon the effect of competition on quality of service and on the development of telephone use.[1] In this report it is stated that the Bell companies were not until recently under centralized management and that "in consequence there has been much variation in the character of the service rendered in different districts. In many cities where competition does not exist, as well as in those where there has been but little competition, the service of the local Bell companies has been maintained at the highest point."[2] In other instances, however, it is stated that "the alleged former incapacity, indifference and arrogance of the local Bell managements have been said to be responsible for public exasperation and just irritation at the defective service rendered and the negligence of the methods of operation. In the latter cases competition has exercised a most beneficial influence by compelling the complete reorganization of methods where they have been inefficient, and causing the adoption in some cases of improvements which had theretofore been delayed".[3] The Committee gives figures to show the development of the use of the telephone at competitive points, as compared with non-competitive points. Of the 23 cities for which figures are given, it appears that Denver and San Francisco, without telephone competition, have a larger number of telephone subscribers per hundred of population than any of the other

[1] "Telephone Competition in Various American Cities."
[2] *Ibid.*, p. 18.
[3] *Ibid.*, p. 19.

cities. "Other causes than competition", says the report, "have operated to produce development. The fact is that it has been as great, or greater, in the areas where competition does not exist than in those districts where competition has exerted its force to the utmost." As regards the number of subscribers at competitive points who feel themselves obliged to use both systems figures presented by this Committee for July 1, 1905, showed that in 36 cities, where each of the competing telephone systems had at least 20 per cent of the total number of subscribers, on the average 16 per cent of all subscribers were connected with both systems. In many cases more than half of the subscribers of the weaker system were also subscribers of its stronger rival.

The New Orleans Board of Trade, in its telephone report in 1908, discussing the question of one or more systems, had this to say:[1]

"After giving the question our closest and most careful consideration, and after having gone over the evidence gathered in connection with our work, we are unalterably opposed to two or more systems, for the following reasons:—

"1st. A single system provides for general intercommunication; whereas, two or more systems render thorough intercommunication impossible, and divide the population of a city into two camps.

"2nd. Two or more systems force the individual users to either be content with half a service, or pay, if not a double, at least a greatly increased, cost for a full service.

"3rd. Where there are two or more systems, the business man is obliged to take both, and although it is true that in some instances it has been possible to get a measured service rate telephone from one company and a flat rate telephone from the other company, for approximately the price formerly paid to a single company before competition entered the field, this is only where rates have been cut by both sides to a point where they are no longer profitable, and financial disaster is the result.

"4th. In every city where an exhaustive investigation has been made recently into the telephone situation, they have in every case recommended only the adoption of one system, under such control of the state or city government as to properly regulate it.

"With these facts before us, and the overwhelming testimony we have obtained from other cities against two or more systems, it is our opinion that the interests of the city will be best served by having only one system; provided, always, that the proper regulations as to service, rates and extension of its business can be enforced so as to safe-guard the rights of the public."

The extent to which competition has been tried, may be seen from figures given by the special report of the Census for

[1] "Telephone Conditions in New Orleans, La.", *op. cit.*, p. 11.

1902.[1] According to this report, of the 1,051 incorporated places in the United States having a population of 4,000 or over, telephone facilities were provided at that time in 1,002. Out of this number the Independents had a monopoly in 137 places, and the Bell companies in 414, while both systems were established in 451.

142. Measured rates vs. flat rates.—It is frequently pointed out that in the early days of the telephone business the companies made a serious mistake in regard to the basis of rates. In the absence of adequate data relative to the cost of service in detail, the plan was adopted of dividing the expenses of maintenance and operation, plus profits and fixed charges, by the total number of telephones in use, and assessing the quotient to each subscriber. This "flat rate service" obviated the necessity of meters. In small communities, with a differentiation of rates as between business places and residences, it worked out with approximate satisfaction to all concerned. In the larger cities, however, with the increasing cost of universal service and the great differences in the amount of use on the part of the different subscribers, flat rates became a burden upon the business and upon the public. They made telephones so expensive that ordinary people could not afford them in their residences, while at the same time these rates resulted in a marked injustice to small business places, which were compelled to pay as much for their telephones as the big stores and offices. The necessity of adjusting rates in the large communities so as to multiply the number of subscribers and cater to the needs of those who have only a limited use for the telephone, has caused a general movement toward the establishment of measured rates. Telephone men and those who have made a special study of this utility, have come to see that the rental of the telephone equipment is secondary in importance to the payment for service rendered whenever a connection is made.

"A strictly flat rate telephone charge to all patrons", says Mr. Hall, in the report to which I have already referred,[2] "is every bit as unfair as a similar charge for gas or electric light would be. No one will deny that it would be absurd to charge a fixed rate per year for gas burners, regardless of the quantity of gas burned. Before electric meters were perfected, incandescent lamps were charged for at a fixed rate, which, as in the case of the telephone to-day, was lower for residences than for

[1] Bulletin 17, "Telephones and Telegraphs", *op. cit.*
[2] "Telephone Conditions in New Orleans, La., *op. cit.*, p. 44.

business places. It is pointed out in the report of the Chicago Special Telephone Commission that as long as this unfair and unbusinesslike method was in vogue, electric lighting remained a luxury. With the advent of charges for actual consumption (that is, measured rates) electric light came within the reach of the great proportion of people who now use it.

"To illustrate my meaning more forcefully, the flat rate for all patrons, whereby a fixed sum is charged for the use of the telephone instrument irrespective of the number of messages sent, is like conducting a restaurant on the plan of hiring a knife and fork to each customer at a fixed rate, which would be the same whether a man had the run of the entire kitchen or only ordered ham and eggs. * * * * * * *

"To my mind, the proper way to charge for telephone service is to fix a flat rate for the privilege of connection with the exchange and for the hire of the instrument itself, and then to charge a given sum for each message sent. The charge for connection with the exchange should be sufficient to cover interest and sinking fund charges on the investment of fresh capital represented by each additional subscriber, and the charge per message should be governed by the traffic and expense of the exchange."

The Chicago Telephone Commission, in its 1907 report, discusses the question of measured rates or flat rates in considerable detail. After pointing out that the flat rate system admits of only a relatively small differentiation of rates according to use, the Commission says: [1]

"The measured rate arrangement manifestly makes it possible to reduce the price of the telephone to the small user to the smallest possible annual charge, that is, to a charge which is just sufficient to cover a reasonable interest and depreciation for the portion of the plant that must be set aside for the use of that individual user (or the average of the users in his particular class), increased by an amount which is proportional to the actual number of messages transmitted from his telephone in the year. It is only by this arrangement that large city service may be extended to the small business men and the small residence and apartment dwellers who may be unwilling to pay more than from eighteen to twenty-four dollars per year, and this sort of customers constitutes a remarkably large proportion of the total telephone using population of a large city like Chicago. When the measured rates are introduced exclusively and carried to their logical conclusion, it may increase the cost of telephone service to the largest business users, but these users are even then charged no more than the actual service rendered to them costs the company, plus an appropriate amount to represent interest on the investment; and it is an obvious business principle that each class of service should not only be satisfactory to the users, but should also return its reasonable proportion of remuneration to the company furnishing the service."

The Commission also points out that the great increase in the number of telephones in use in Chicago dates from the time when measured rate service was installed. Commenting

[1] Report of Committee, etc., *op. cit.*, p. 68.

upon the effect of measured rates upon the number of calls, the Commission says:[1]

"The frivolous and useless messages can be largely cut off by making measured rates of service, since even a small charge per message becomes a marked deterrent to the needless use of the telephone. * * * The number of telephones has been steadily increasing in Chicago, and the total number of telephone calls per day has also been steadily increasing, but the average number of daily calls emanating from the individual telephones began to decrease in 1899 and has decreased from an average approximating sixteen calls per telephone per day to an average approximating nine calls per telephone per day. The time that this decrease began is concurrent with the introduction of measured rates, and during the four years while the measured rates were coming into vogue the average daily calls per telephone in the city were steadily decreasing until they have now reached an apparently fixed value that is determined to a considerable degree by the remaining flat rate telephones which involve an overuse of the lines."

It was pointed out that approximately one-third of the daily calls in Chicago were unavailing, and that one-half of these were caused by the overuse of lines which were reported "busy." The Commission expressed the opinion that an extension of the flat rate service "would tend to so greatly increase the useless calls over the telephones and so overload the lines, that the unavailing calls would increase tremendously, making the daily calls per telephone even larger than they were in 1896, and thus increase the annual expense of the service so largely that the average price per telephone would be given a tendency to rise instead of fall".[2]

The problem of rates in connection with a complex telephone system, is perhaps as difficult as the corresponding question of rates for the supply of electrical current in a great city. Moreover, the principles upon which the schedules of rates should be based, are somewhat different. Usually, an electric company furnishes only that part of the interior equipment represented by the ordinary lamps, while the telephone company supplies the equipment complete, including the necessary wiring. Furthermore, the individual equipment of the subscribers constitutes a much larger proportion of a telephone plant than is the case with an electric lighting and power plant. For this reason there is better ground for a minimum rental charge than for the corresponding meter charges in connection with the supply of gas and electricity.

[1] Report of Committee, etc., *op. cit.*, p. 71.
[2] *Ibid.*, p. 74.

It is proper, therefore, that the principle of "the greatest good to the greatest number" should be subserved by a combination of rental charges and message rates, as suggested by Mr. Hall. This question has an important bearing upon the question of competition *versus* monopoly, which was discussed in the preceding paragraph; for if by the introduction of measured rates it is possible for the great mass of subscribers to be given a limited and efficient service at a low rate, even though they are connected with a universal exchange in a great city, one of the most plausible arguments in favor of competition will be overcome. Indeed, if it should prove true that through the introduction of a proper rate schedule the cost per unit of service can be made to decrease rather than to increase with the number of telephone subscribers in a given system, one of the most fundamental peculiarities of the telephone business will have been removed. The advantages of monopoly, from the standpoint of the telephone user, are so marked that the removal of any excuse for the establishment of competing systems is to be welcomed by the public.

143. Discrimination in telephone rates.—The Wisconsin Railroad Commission, which since the enactment of the Public Utilities Law in that state on July 9, 1907, has had jurisdiction over the service and rates of telephone companies, has made a special investigation of free and reduced rate telephone service within that state.[1] It found many classes of discrimination arising from various causes. There were reported to the Commission about 75 free telephones in railroad stations. Some of the companies explained that they needed the depot service very much for the benefit of their subscribers, and in one case a competing telephone company thought it had to have a station at the depot in order to prevent its subscribers from going over to the other company. It is obvious that in cases where the telephone companies are willing to maintain free stations for their own benefit at depots, the railroad companies are likely to hold back from paying for the service. The Commission also found that there was a great deal of free service rendered by telephone companies to various muncipalities "in compliance with so-called franchise requirements." It was also found in some cases that

[1] See Decision and Order of the Commission, June 12, 1908.

free telephones had been installed in village stores, telegraph offices, opera houses, express offices, electric light plants, post-offices, public halls, etc., because telephone subscribers generally desired to be able to reach these places. This explanation was specially applicable to free telephone connections for fire-alarm purposes. Occasionally the Commission found that the telephone companies were giving free private service to city officials, and in one case the officials of the police and fire departments were furnished long distance service free in case of necessity. Some companies gave free use of room on their poles, lines and conduits for municipal wires; some gave churches and ministers free service or reduced rates; some gave special rates to charitable institutions and occasionally a hospital had free telephones. Various social clubs, lodges and Y. M. C. A. and Y. W. C. A. organizations were receiving free service. In some cases long distance pay stations, with free local service, were being maintained for the benefit of these organizations. In many cases free service was being rendered to the officers, stockholders and employees of the company, and in one city 250 telephones were being maintained absolutely free in competition with another telephone company. In some cases the companies were giving free service for a limited period for advertising purposes, and in a few cases complimentary telephones were given to certain individuals. Another class of discrimination was shown in the practice of giving telephone service in exchange for services or goods and without any direct monetary consideration. This included free service in some hotels in exchange for the privilege of installing pay station booths; and in exchange of free telephone service with electric light companies for the use either of power supplied or for courtesies in connection with the use of pole lines.

The reduced rate service furnished by the company included refunds for defective service, discounts on bills paid in advance, discounts on bills paid before a certain date, discounts for persons owning their own instruments, reduced rates where business and residence telephone service were rendered to the same subscriber, reduced rates where one subscriber had more than one telephone and the sale of long distance coupon books at a discount. In some cases special rates had been given to subscribers under individual contracts, and

in many cases special rates were given to city, village and county offices, churches, social clubs and other semi-public institutions.

Acting under a provision of the Public Utilities Law to the effect that no company charging or receiving from any person a greater or less compensation for any service rendered than that prescribed in the public schedules or tariffs, then in force, or than it charges or receives from anyone else for a like and contemporaneous service, shall be deemed guilty of unjust discrimination and be subject to a fine, the Commission gave its findings in regard to various kinds of apparent discrimination which it had discovered. It found in the first place that all free and reduced rate service was absolutely prohibited by law, including service to municipalities whether expressly provided for in the franchise or not. "It has been determined that a municipality has no power to grant a franchise to a telephone company", said the Commission. "An ordinance attempting to grant such a franchise is ineffectual and void." [1] The Commission found, however, that the law of Wisconsin did not prohibit the company from giving free service to the employees whom the management of the company must be able to reach in order to supply adequate service to the public. The classification of telephone patrons into residence and business subscribers with higher rates for the latter than the former was declared to be lawful and permissible "not only from the point of view of the greater cost of supplying business service, but also because of the coordinate principle that a lower rate is necessary in order that a sufficiently large number of subscribers may be secured to make the telephone valuable to business subscribers". The Commission also found that this classification could be extended so as to make special provisions for schools, hospitals, churches, lodges, Christian associations and similar organizations so long as the two principles of cost and of service to other subscribers were kept continually in view. It was declared that in a depot where a railway company could not reasonably be expected to pay for the telephone or where it was already paying for one or more instruments, a company might for the benefit of its subscribers place a pay telephone

[1] This finding in regard to the law applied of course to the State of Wisconsin only and does not affect the powers and duties of municipalities in their relation to telephone companies in other states.

in the station so that telephone subscribers calling up the depot would get free service, but persons sending messages from the depot, except official messages, would have to pay. In the judgment of the Commission it was not feasible to attempt to restrict the use of subscribers' telephones to the subscribers alone and the immediate members of their families. It was admitted, however, that this would be a proper restriction wherever it was feasible to enforce it. The Commission held that it was unlawful to exact a higher rate from subscribers who were not stockholders, directors or officers of the company than from those who were. It was held also that where the place of business and the residence of the subscriber were in the same building, and no telephone was installed in the place of business, the company should charge the business rate for the residence telephone. The Commission also held that where a telephone company offers business and residence service, a separate and distinct rate should be published for each, and that the so-called combined business and residence rate which would be less than the sum of the two rates as regularly published would be unlawful. It was declared to be lawful, however, to offer a discount for the prompt payment of bills on condition that the discount rates be strictly complied with and without discrimination. The companies were authorized to charge higher proportional rates for telephones installed for short periods of time, as at summer cottages and temporary business places. They were also authorized to charge a special fee for removing a telephone from one address to another after the first installation, the amount of the fee to be as nearly as possible the actual cost of the work.

Undoubtedly, as the telephone business develops, there will be a greater reliance upon measured rates if the meter problem can be satisfactorily solved. The measured rate system immediately raises the question of the discrimination involved in charging large business houses a smaller rate per message than is charged to residences and small business houses. In Chicago, following the advice of the special Telephone Commission of 1907,[1] the public authorities are endeavoring to have the company keep its accounts so that the cost of the various classes of service may be made the

[1] Report of Committee, Sept. 3, 1907, *op. cit.*, p. 124.

basis for regulating the rate schedules.[1] It is probable, however, that the same objections found by the Massachusetts Board of Gas and Electric Light Commissioners to the "cost-of-service" basis for the rates of the Boston Edison Company,[2] will in the long run prevail, and the system of telephone rates will gravitate toward a fixed charge per message regardless of the class of service or its amount.

144. Telephone equipment.—The telephone differs from some other public utilities in that practically the entire equipment is the property of the operating company. This includes the "office division", consisting of switchboards, registers, dynamos, batteries, etc., and the "line division", consisting of poles, wires, conduits, transmitters, receivers, etc. In some cases the conduits and ducts under the streets are not owned by the telephone companies, but are rented either from the city or from a company holding a franchise to build and supply conduits for different utilities. In some cases, also, the poles used by the telephone company are owned by some other company or by the city. There are also certain accessory fixtures, not in common use, which may in some instances be purchased by telephone subscribers independently of the telephone company. With these exceptions, the entire equipment is the property of the telephone company or its "parent". In 1907 the Census Bureau found 16,065 switchboards in use, of which 118 were automatic and the rest manual. Of the manual switchboards, 13,801 were of the magneto system; and 2,146 of the common battery type.[3] In a business which has developed as rapidly as the telephone business, it is necessary that certain parts of the equipment should be gauged with reference to future needs. This applies particularly to switchboards, pole lines and duct space in conduits. Mr. Lindemuth, already quoted in a preceding section, admits that one of the early mistakes of the Independent telephone companies was that they did not foresee the wonderful growth and possibilities of the telephone business.[4] He says that while they built for double the capacity of the Bell companies at the time when

[1] See Report to Commissioner of Public Works and City Comptroller on Regulation of Rates under Telephone Ordinance of Nov. 6, 1907, by D. C. and Wm. B. Jackson, Engineers and Arthur Young and Co., Certified Public Accountants submitted Dec. 30, 1908.

[2] *Ante*, section 72.

[3] Preliminary Report on Telephones, *op. cit.*

[4] "A Larger View." *op. cit.*, p. 4.

competition was instituted, under the stimulus of this competition, although the Bell companies had had exclusive control of the business for nearly 20 years, within 10 years after competition appeared the number of telephone users in the country increased 25-fold.

"In view of this stupendous multiplication in telephone subscribers," says he, "which no one could in saneness anticipate, we, in most cases, builded too small and accepted a schedule of rates, fair and reasonable at the time, but which are not now commensurate with the cost and extent of the service."

With the advance of the telephonic art and the constant adjustment to the demands of the service, great changes are taking place in the equipment of the business. The substitution of the automatic for the manual switchboard means a complete replacement of telephone instruments, both at subscribers' stations and at central. At the present time the only meters, except the nickel-in-the-slot machines, are located on the company's premises. As a result of the movement for measured service, there naturally arises a greater demand for a satisfactory meter. Discussing the Chicago telephone ordinance with reference to this point, Mr. Henry R. Baldwin, at a meeting of the Chicago City Club, September 25, 1907, said: [1]

"I think that it will appeal to you, and to thoughtful men generally that when they propose to measure our service, the measurement, the machine to do the measuring, should be in the office of the consumer and subject to his inspection while it is being used. It should be subject, not to his control, but to his inspection, so that when he uses his telephone from day to day he may know how the register is made up; and until such time as the telephone company will furnish the measurement in your own office, the existing prices should not be exceeded at any rate. In other words, we should not be compelled to receive measured service when the instruments of measurement are wholly within the control and in the office of the company."

Telephone instruments are subject to rapid depreciation, and it is claimed that many of the Independent companies failed to make provision in their original rates to cover this depreciation, so that after a few years they were compelled to replace their equipment by the investment of new capital. An instance is cited of the Kinloch Telephone Company of St. Louis, which mortgaged its plant in 1898 and in 1905 found it "absolutely necessary to provide new switchboards, shaft, cables, central and exchange equipment, etc." These

[1] See the City Club Bulletin, Vol. I., No. 17, p. 186.

renewals covered practically one-half of the company's plant. Not having provided any depreciation fund, it became necessary for the company to raise the $1,000,000 that it needed by a high finance arrangement with the Kinloch Long Distance Telephone Company, which is described at length in the report of the New Orleans Board of Trade.[1]

As already stated, it is the usual custom for a telephone company to furnish all equipment, including wiring and all telephone instruments. In 1907 Dr. Julius Garst of Worcester, to whom reference has already been made,[2] submitted to the Massachusetts legislature a proposed act permitting a subscriber to any telephone company to purchase in the open market and connect with the public telephone line, not to exceed three telephone instruments, provided that such instruments should conform to a standard to be prescribed by the State Highway Commission and that the connection with the telephone line should be made at the subscriber's expense. In support of this proposition Dr. Garst called attention to the fact that the telephone patents have expired and that the monopoly which is advantageous so far as operation of the telephone system is concerned and also from the standpoint of the use of the streets, should be strictly limited to that portion of the system which is necessary to connect the various subscribers together. In other words, a monopoly, which in the case of a public utility is regarded as a necessary evil, should be limited to the narrowest possible scope. Inasmuch as telephone instruments can now be purchased in the open market from many different manufacturers, it is a reasonable contention that the policy of the old Bell companies in forbidding the use of any instruments not furnished by them in connection with their telephone lines, should be resisted by the public authorities. The prices of instruments accessory to the telephone business may be regulated by competition. Under these circumstances it would be better to take them out of the monopoly and subject them to regulation by competition rather than to leave them in the monopoly, subject to regulation by ordinance.

[1] "Telephone Conditions in New Orleans, La.," *op. cit.*, p. 105.
[2] *Ante*, section 44, *note*.

CHAPTER IX.

TELEPHONE FRANCHISE REGULATIONS.

145. Public control — Massachusetts.—By a law passed in 1906, Massachusetts brought telephone companies within that commonwealth under the supervision of the State Highway Commission.[1] By this act the jurisdiction of the commission was extended over "all companies engaged in the transmission of intelligence by electricity". The commissioners were prohibited from accepting employment from any of these companies, from owning any stock in them, from being in any way pecuniarily interested in the manufacture or sale of any article or commodity used by them, or from being connected with or in the employ of any person, partnership or corporation which finances any such company. Under this law, whenever a complaint in writing relative to the service or charges of any company is filed by any city or town in the state, signed by the proper officers or by 20 customers of the company, the commission is required to give a public hearing and to make such recommendation concerning reduction or modification of charges or improvements in the quality of service as it may see fit. The commission, however, has no authority to compel the acceptance of its recommendations. Every company is required to file

[1] Acts of 1906, chapter 433.

annually a report in such form and detail as may be prescribed by the commission; also to furnish the commission, upon request, any information concerning the condition, management and operation of its business or concerning its rates or facilities, as may be required. The companies have to keep books and accounts covering the business done within the commonwealth, in a form approved by the commission.

Any company incorporated for the transmission of intelligence by electricity, or by telephone whether by electricity or otherwise, or for the transmission of electricity for lighting, heating or power, except for street railway purposes, is authorized to construct its lines along the public highways of the state.[1] It is required, however, not to incommode the public use of the streets. In any city or town through which the company desires to pass, the local authorities are required to give the company "a writing specifying where the poles may be located, the kind of poles, the height at which, and the poles where, the wires may be run". Before these locations are fixed, notices must be served upon the real estate owners along the streets which the company proposes to use, and a public hearing must be held. At any time after the company's lines have been erected, the local authorities, after giving the company a hearing, or on petition of the company without a hearing, may order any change in the location or erection of the poles or in the height of the wires. Abutting land owners whose property is "injuriously affected or diminished in value by occupation of the ground or of the air, or otherwise", by the construction, erection or alteration of a company's lines, whether the fee in the streets belongs to them or not, may within three months apply to the local authorities for an appraisal of damages. This appraisal is made by the mayor and aldermen in cities and by the selectmen in towns. A property owner may appeal from this appraisal to a jury. If the jury increases the amount of damages, costs are assessed against the company; otherwise, against the property owner.

A telephone company is not permitted to commence the construction of its line until three-fourths of its capital stock has been unconditionally subscribed and at least one-half has been paid in in cash. No telephone company is permitted

[1] Revised Laws, chapter 122, as amended by acts of 1906, chapter 117.

at any time to contract or owe debts to a larger amount than one-half of its capital stock actually paid in. Any person or corporation operating a telephone exchange in Massachusetts is required, upon application from a telegraph company, to supply telephone service to the latter without discrimination as to connections, service, use of instruments or rates. Whenever any individual or corporation applies to a telephone company for service and tenders the customary rental for the class of service required, the service must be furnished without discrimination, if the applicant has secured the rights necessary to make the connections applied for and pays the company in advance an amount sufficient to cover the actual cost of the extension if the extension is more than one-half mile from any of the company's main exchange circuits. Companies are required, wherever they operate lines of wires over or under streets or buildings, to use only proper wires, safely attached to strong and sufficient supports and insulated at all points of attachment. Abandoned wires must be removed. Every wire entering a building must be properly insulated, and there must be attached to it, near the place of entering the building and at a point so situated as to avoid danger from fire, "an appliance adapted at all times to prevent a current of electricity of such intensity or volume as to be capable of injuring electrical instruments or of causing fire, from entering the building by means of such wire". In cities the owners of telephone wires and cables are required to affix, at the points of support, a tag or mark distinctly designating the owner or user. In towns, when wires belonging to different owners are carried on the same poles, the poles must be marked with the initials of the owners and the wires must be tagged, at or near the points of attachment, with the names or initials of their owners.

Any person desiring to cut, disconnect or remove telephone wires in order to move a building or for any other necessary purpose, may do so, "exercising reasonable care", if he has given written notice to the company 24 hours in advance.

Early in 1907 the Highway Commission undertook an investigation into the rates and service of the New England Telephone and Telegraph Company, which is the principal Bell Company operating in Massachusetts and the northern

New England states. The commission found that the company had been engaged in certain illegal practices, "inasmuch as men were employed, at the request of public officials, some of whom did not necessarily perform a full day's work for a day's pay, and some of whom rendered no service whatever for the wages received".[1] The commission also found that the company furnished "frank books and free telephones to certain persons". Commenting upon this fact, the commission said:

"The greater part of these were proper favors, or were necessary in the maintenance of the physical plant of the company or in conducting the business; but a few of them were furnished to persons under such circumstance as indicated a possible wrong motive on the part of both the company and the recipient of the favor."

On September 18, 1907, without waiting to complete the investigation relative to rates and service, the commission addressed a letter to the president of the company, calling attention to these practices and making the following recommendations:[2]

"First.—The discontinuance of the practice of furnishing frank books except to officers and employes of the New England Telephone and Telegraph Company, and to officers of other telephone companies.

"Second.—The discontinuance of the practice of furnishing free telephones except: (a) to officers and employes of the company, (b) to charitable institutions, (c) such as may be from time to time necessary for the maintenance of the plant of the company, and (d) such as may from time to time be necessary for the accommodation of telephone subscribers.

"Third.—That quarterly reports to the commission be made by the company, containing the names of all persons to whom frank books or free telephones have been furnished, said reports to be open to public inspection in the office of the commission.

"Fourth.—The adoption of the same merit system in the selection of the employes of the company in the underground construction or street work as apparently obtains in other departments of the company, and the consequent permanent discontinuance of the employment of men through political influence, or who do not render an equivalent for the wages which they receive.

"Fifth.—The readjustment of all discounts to municipalities to a uniform basis."

In his reply to the commission, the company's president undertook to carry out all these recommendations.

The commission also found that at various times subscriptions had been made by the telephone company for charitable and campaign purposes.

[1] Fifteenth Annual Report of the Massachusetts Highway Commission, 1908, p. 138.

[2] Report, 1908, *op. cit.*, p. 140.

"A subscription by the officers of a corporation for any cause, however meritorious it may be, is probably not a legal act", comments the commission.[1] "It may be that the cause is of such merit that the stockholders, subscribers and general public will approve of it; but chapter 581 of the Acts of 1907 prohibits a telephone or telegraph company from paying or contributing in order to aid, promote or prevent the nomination or election of any person to public office, or in order to aid, promote or antagonize the interests of any political party, or to influence or affect the vote on any question submitted to the voters. It is the clear duty of a Board charged with 'keeping itself informed as to the compliance of all telephone and telegraph companies with the provisions of law' to make sure that this law is respected. The law will doubtless be observed by the officers of the different companies without the intervention of the commission."

Although local franchises, strictly so-called, are not required for the operation of telephone lines in Massachusetts, it may be of interest to note the provisions of the Springfield ordinance relating to the lines, conduits and distributing poles of telephone companies.[2] Under this ordinance the mayor and aldermen, the latter constituting the upper branch of the city council, are given power to authorize any telephone company to construct underground conduits and maintain cables and wires in them, with distributing poles at the termini of the conduits. The usual provisions are made for restoring the surface of streets disturbed and for the protection of gas pipes, water pipes, sewers, etc. It is provided that the conduits, once laid, may not be removed without permission of the aldermen, but must be removed to other suitable locations whenever that is required by the aldermen. No permit for disturbing the surface of any street is to be valid until the company has executed an agreement, in form approved by the mayor, binding the company to the fulfilment of certain conditions. Space in every conduit must be reserved and maintained, free of charge, for the use of the fire, police and other signal wires belonging to the city and used exclusively for municipal purposes. The company must indemnify the city against all damages and expense resulting from the company's acts or arising in any manner from the exercise of its privileges granted by the city. The company must also execute a bond of not less than $10,000 before disturbing any street for the purpose of laying wires or conduits, this bond to be conditioned upon the fulfilment of all the company's agreements with the city and

[1] Report, 1908, *op. cit.*, p. 142.
[2] Springfield Revised Ordinances, chapter 46, p. 219.

its duties under the ordinance. The company must remove all wires from any conduit when the license to use it has been revoked by the mayor and aldermen, and must at once comply with any changes in the conduits, man-holes or poles, ordered by the mayor and aldermen after a duly appointed hearing. The ordinance provides that any authority granted by the mayor and aldermen "may, after notice and hearing, be revoked or altered at any time without liability on the part of the city therefor; but in case any location in any street shall be revoked, a substitute location in some other street, that will, in the opinion of the said board, accommodate the service, shall be granted".

Apparently, the indeterminate franchise, which applies to street railways in Massachusetts, is not wholly applicable, under the laws of the state, to the grants of locations for telephone companies. It is true that particular locations may be changed; but there seems to be no power in the local authorities to revoke any such locations without granting substitute locations. In 1904 Dr. Julius Garst, representing the city of Worcester in the State House of Representatives, introduced a bill providing that telephone franchises might be granted by any city by a two-thirds vote of the city council approved by the mayor.[1] Franchises in towns were to be granted by the selectmen. The local authorities were authorized to fix the terms upon which such franchises should be given. It was provided that a city or town might sell such a franchise "upon such terms and conditions as it shall prescribe, at public sale, to any responsible person or corporation agreeing to pay to the city or town the highest percentage upon its gross receipts, or agreeing to render service at the lowest rates". It was specifically provided that no new public telephone lines should thereafter be constructed, maintained or operated, without a franchise from the local authorities. Any such franchise was to be subject to the optional referendum upon petition, within 60 days after its passage, of five per cent of the qualified voters of the locality. Every franchise was to be granted for a specified period not exceeding 20 years, and all franchises in force at the time of the passage of the act were to become void on July 1, 1924, if not sooner revoked. Every company, whether exercising

[1] House Bill No. 1265.

a new or an old franchise, was to keep such accounts and make such annual reports as to sums expended by it for construction or otherwise, as should be satisfactory to the local authorities. In case of any substantial violation of the terms of a franchise, the Supreme Court was authorized to forfeit the grant on petition of the local authorities. At the expiration of the period of any grant, the city or town might renew it for another period of 20 years or might give a franchise to a new company. In the latter case, the new company was required to purchase the old company's plant at a price based on the cost of duplication, less depreciation, plus a fair allowance not exceeding 10 per cent for the value of the plant as a going concern. Whenever a city or town should grant a telephone franchise, any company operating a line in an adjoining city or town was required to supply connecting service upon terms to be fixed by agreement or arbitration. This proposed law, except so far as it related to the keeping of accounts and the rendering of reports, was not to apply to any company whose net earnings had not averaged 4 per cent per annum on its capital stock prior to the passage of the act. This measure was not passed; but it is indicative of a certain amount of dissatisfaction, which exists in Massachusetts, with indeterminate and perpetual franchises.

146. Monopoly without conditions — New York City. — The telephone business of Greater New York is divided between two companies, both of which are subsidiaries of the American Telephone and Telegraph Company. These two companies, however, coöperate in rendering service, and in fact publish only one telephone directory. In old New York, that is to say, in the Boroughs of Manhattan and the Bronx, the New York Telephone Company, successor of the old Metropolitan Telephone and Telegraph Company, enjoys a monopoly. In the Boroughs of Brooklyn, Queens and Richmond, the New York and New Jersey Telephone Company has a monopoly. These companies are operating under the general laws of the state. Strictly speaking, they have no local franchises. However, the Metropolitan Telephone and Telegraph Company, the predecessor of the New York Telephone Company, obtained, on December 13, 1881, from the common council of the City of New York, permission to use the streets "for the purpose of constructing and laying lines

of electrical conductors underground, from time to time, in tubes or otherwise, and for constructing, maintaining and using in such streets, from time to time, upon, above or below the surface of the ground, boxes, vaults, or other fixtures suitable for distributing and testing, from time to time, the wires and insulators of said lines, and for access thereto".[1] The only conditions attached to this resolution were first, that excavations in the streets and the removal and replacement of pavements or sidewalks should be done under the direction of the commissioner of public works; second, that one wire in each route should be reserved for the use of the police and another for the fire alarm telegraph, without charge to the city, and third, that the company should pay one cent per lineal foot of streets opened by it for the purpose of laying its conductors. This resolution was passed over the veto of Mayor Grace. In his veto message, dated November 29, 1881, the Mayor said:[2]

"The resolution fails to make any provision for the payment to the city of an adequate consideration for the franchises sought to be granted. The approval of this resolution by me would be equivalent to the bestowal upon the Metropolitan Telephone and Telegraph Company of a right which is of great value to them, and which should be of great value to the city, while the city itself would reap practically no return for the proprietary rights of which it would dispose.

"The Metropolitan Telephone and Telegraph Company, which is a wealthy corporation, already possessed of most valuable rights, should be compelled to pay the city an honest price before it is permitted to add to the franchises it already enjoys. * * * * * *

"Not only should this practice of granting franchises without compensation come to an end because of its inherent wrongfulness, but because if the burden of taxation is ever to be materially reduced, the city must avail itself of all possible sources of income. Capital is entitled to a fair return for its use; but if the municipality is enabled to afford the opportunity to capital for reaping unusual returns far above the market rate of interest, the city which thus affords the opportunity should share in the benefit."

The Mayor also called attention to the fact that under the resolution the company would not be subject to the general provisions of the revised ordinances relative to wires.

"The passage of your resolution", said he, "would practically place the streets of the city at the mercy of the Metropolitan Telephone and Telegraph Company, free from all the provisions of Article 41 of the Revised Ordinances, which are most wholesome, except the one concerning the reservation of wires for the use of the police and fire departments, while such wires could supply no existing need of either of these de-

[1] Proceedings of the Board of Aldermen, vol. 164, p. 881.
[2] *Ibid.*, p. 734.

partments, inasmuch as they are already sufficiently provided with wires for their respective purposes. The article of the ordinances referred to provides for the protection of water and gas pipes, sewers and drains, from exposure, prohibits the laying of wires more than four feet distant from the curb-stone; directs that all work shall be done so as not to materially impede traffic or passage, and that in no case shall passage be interrupted for a longer period than an hour; provides that the space selected for laying the wires shall not exceed two feet in width, and two feet in depth, and contains other salutary regulations, to the rigorous observance of which this company should be held, instead of being granted practical exemption from its requirements."

Furthermore, the Mayor said that inasmuch as the company was only one of a large number using electrical wires for telegraphic and telephonic purposes in the city, it was unfair to give this one company the right to occupy underground space for its conduits, when it would be impossible, on account of the crowded condition underneath many of the streets, to grant a similar privilege to the other companies. He thought this grant "might work a practical exclusion of all other companies from the streets".

A few years later legislation was enacted by the state of New York, requiring all overhead wires on the Island of Manhattan, with unimportant exceptions, to be placed underground. A board of electrical control was established for the purpose of devising and carrying out a plan of underground conduits for the accommodation of all these wires. This board entered into a contract with a private company for the construction of electrical subways. In 1890 a new company was organized to take over that portion of the conduits used for low tension wires. This new company, the Empire City Subway Company, Limited, still controls all the conduits in Manhattan used by telephone and telegraph companies. The company is itself controlled, through stock ownership, by the New York Telephone Company. The monopoly of the telephone service is, therefore, doubly strengthened. All telephone wires must be placed underground in the conduits owned by the Empire City Subway Company; and this company is controlled by the powerful New York Telephone Company, a licensee of the American Telephone and Telegraph Company.

In 1904 the Merchants' Association of New York undertook an investigation of the rates charged by this company. The Audit Company of New York, which was given unrestricted access to the company's books and accounts under an

agreement between the Association and the company, reported, as a result of its examination, that for the 16 years prior to December 31, 1904, the net earnings of the New York Telephone Company and its predecessor had averaged 11.12 per cent per annum on investment, and that for the year 1904 the company's net earnings had been 14.64 per cent.[1] The Audit Company did not report the amount of the company's investment, but stated that telephone property, real estate, cash, supplies, subway securities (stocks and bonds of the Empire City Subway Company), and accounts and bills receivable, had been included in investment. At the solicitation of the Merchants' Association and under pressure of a threatened legislative investigation, the company made a considerable reduction in its rates. The Merchants' Association made a report to the Board of Estimate and Apportionment, strongly commending the service rendered by the New York Telephone Company and just as strongly condemning the proposition to introduce competition by giving a franchise to an independent company. The Association's committee stated that, in its opinion, "to provide a fair return on capital actually and necessarily invested, and a proper allowance for contingencies, 10 per cent margin above operating outlays is a reasonable and proper margin in the telephone business".[2] It was stated that the company had acceded to this conclusion and had agreed that its rates should be so adjusted as to produce a net revenue of approximately 10 per cent on actual investment. The Association's committee, while contending that telephone companies, along with other public service corporations, should be subject to regulation by law, in case the necessity arises, suggested that "such regulation should be resorted to only when the unreasonableness and arrogant attitude of a corporation and its refusal to justify its rates leaves no alternative".[3] So far as the New York Telephone Company was concerned, the committee was all equanimity. After stating that the company had now adjusted its rates so as to bring its net revenues down approximately to the 10 per cent basis, the committee said:[4]

"It has likewise been shown that in the past the rates of that company have been voluntarily adjusted and reduced at moderate intervals, so as

[1] "Inquiry into Telephone Service and Rates," etc., *op. cit.*, p. 19.
[2] *Ibid.*, p. 17. [3] *Ibid.*, p. 37. [4] *Ibid.*, p. 38.

to have maintained a reasonable rate of earnings during the past sixteen years; that the public have been the beneficiaries of these voluntary reductions made possible by a graded system of charges based upon sound business principles; and, further, that these reductions would have been unlikely and probably impossible had legislation arbitrarily intervened to force a continuance of the fallacious system of flat rates."

In regard to the efficiency of the New York Telephone Company's service, the committee quoted from Mr. John Hesketh, a special representative of the Postmaster-General of Australia, who had made an expert study into the relative efficiency of the telephone systems of the most important cities of America and Europe. In answer to the question as to what telephone system, among all that he had seen, he regarded as most complete, Mr. Hesketh was reported as saying:[1]

"Without any question, that of New York. The New York telephone system is the finest example of thorough telephone engineering I have seen. All the exchanges are equipped in a uniform manner, all are in fire-proof buildings designed specially for telephone purposes, the cable distribution is, for the greater part of the city, so carried out that the lines are in lead-covered cables practically the entire distance between the exchanges and the subscribers' premises, and the service is in all respects at the very highest point of efficiency. * * * The New York system is by far the largest telephone system in the world, and is undoubtedly in all respects the best equipped."

147. Stringent conditions proposed for a competing company—New York City.—On June 1, 1905, the Atlantic Telephone Company made application to the board of estimate and apportionment for a franchise to cover the whole of Greater New York for the operation of telephone, telegraph and telautograph lines. This application, together with the applications of certain other companies, was referred to Mr. Harry P. Nichols, in charge of the division of franchises, which at that time was a part of the city comptroller's office, for a report. During the pendency of these applications, Mr. Nichols made four reports, three upon the application of the Atlantic Telephone Company and one upon the results of a special investigation into the operation of a dual system of telephones in various cities. In his first report, dated October 12, 1905, Mr. Nichols, in discussing the value of the proposed franchise to the Atlantic Telephone Company, said:[2]

[1] "Inquiry into Telephone Service and Rates," etc., *op. cit*, p. 48.
[2] Report of the Bureau of Franchises, upon the application of the Atlantic Telephone Company, p. 22.

"Weight should not be given to the fact that the New York Telephone Company pays nothing for the invaluable privileges which it enjoys, nor to the consideration that the applicant is to operate in opposition to the present monopoly for the purposes of cheaper and better service, and therefore will not wish to be burdened by terms more onerous than those imposed on the existing company. The failure to exact adequate compensation for the grant of public privileges in the past, is no recommendation for similar procedure at present."

Accordingly, he proposed that the company should be required to make a cash payment of $250,000 upon the acceptance of its grant, and annual payments according to a graduated scale of percentages on its gross receipts, increasing from 5 per cent annually during the first 5 years to 10 per cent during the last 5 years of the proposed 25-year grant, with minimum payments ranging from $200,000 to $400,000 per year. The minimum payments proposed would aggregate, during the full term of 25 years, the sum of $7,750,000. This compensation was to be in addition to the furnishing of free telephone service for all city departments. This service, Mr. Nichols said, had cost the city during the year 1904 more than $200,000.

After further negotiations with the applicant company and more extended investigation, Mr. Nichols made a second report, under date of April 24, 1906, accompanied by a form of contract in which certain concessions had been made to the company, involving a considerable decrease in the compensation required and an extension of the privileges of the grant to include a right of renewal for a second period of 25 years. The company had asked to have the initial payment of $250,000 reduced to $100,000. Mr. Nichols refused to make this concession. In explanation of his position in this matter, he said:[1]

"Franchises have heretofore been obtained which have never been utilized, and in consequence conveniences and improvements for the benefit of the people, expected from the grants, have never materialized, though the rights so given have many times been sold, leased or otherwise disposed of to some competitor presumably at a large profit to the holder, and have been held by such purchaser to prevent their use. This has stifled competition and thus created monopolies in many public utilities. In consequence I believe that the city should receive a substantial initial payment, large enough to act as a powerful incentive to the carrying out of the terms of the contract and to discourage speculation in franchises so obtained. Certainly $250,000 is not too great a sum to ask the company to pay in order to show its good faith and intention to utilize the great privilege it asks."

[1] Second Report of the Bureau of Franchises upon the application of the Atlantic Telephone Company, p. 9.

In his second report he also suggested that a provision should be inserted in the franchise, giving the board of estimate and apportionment control over the capitalization of the company. To this suggestion the company's representatives were seriously opposed, claiming that inasmuch as the city authorities were to have the right to regulate rates, the city would be in a position absolutely to prevent the watering of stock. With this position Mr. Nichols could not agree. He urged that if the capital stock and bonded debt of the company should become many times the actual value of its property and therefore require the payment of excessive fixed charges, the company's service would be likely to become inefficient because of lack of funds, unless the rates charged were exorbitant.

"If under these circumstances an effort were made to reduce the rate of telephone service", said he,[1] "the board of estimate and apportionment perhaps would not consider it 'reasonable and fair' if, by reducing such cost, the result would be that no profits would remain for the shareholders. A decision at such time would, unless public opinion demanded it, cause criticism and perhaps litigation. At any rate the board would be put in the position of dealing harshly with the stockholders who had invested their money in the enterprise and deciding favorably for the consumer, or of dealing fairly with the stockholder and deciding unfavorably for the consumer. * * * *

"Nearly all the complaints against public service corporations are traceable to over-capitalization. * * * *

"These two conditions, one giving the city the power to fix rates, the other restricting the capitalization and bonded indebtedness, are each dependent upon the other, and both are required to protect the citizens of the city as a consumer of the product. One is necessary to protect it from unfair charges, and the other is necessary to prevent a condition of affairs which experience shows may delay action fixing just charges, and, in the event of reducing charges, to prevent confiscation of capital invested in stocks or bonds which have no real value."

During the summer of 1906, employes of the bureau of franchises visited 36 cities of the United States for the purpose of obtaining information relative to the Bell and Independent telephone companies and their growth. In Mr. Nichols' third report to the board of estimate and apportionment, dated November 21, 1906, he gives the results of this investigation, with a general discussion of the subject of competition in the telephone business. In this report he calls attention to the fact that the Independent companies almost invariably charge for service on the flat rate plan.

[1] Second Report, *op. cit.*, p. 13.

"That this system is unfair to many subscribers", says Mr. Nichols,[1] "is universally conceded. By it, the subscriber having a small business and who uses the telephone infrequently, pays the same rate as the subscriber having a larger business, whose telephone instrument is in constant use. One pays too high a rate and the other too low for the service rendered, and this would be particularly true in New York, where the use of the telephone varies so materially among the different subscribers.

"As the telephone system and the use of the system grows, so does the total cost of operation. Under the flat rate plan, the income grows only in proportion to the number of telephones, and not in proportion to the use of the telephone. As the system grows, so does the use of the telephone, there being more people with whom each subscriber can communicate, but the subscriber does not pay for such increased use by the flat rate plan. Under the measured rate, the subscriber pays in proportion to the service rendered, and, therefore, does pay for this increased use, the company being thereby repaid for its increased operating cost.

He found, from his investigation, that in cities having competing telephone systems only about 15 per cent of the subscribers found it necessary to be connected with both systems. He found also that the Independent companies, by their energy in getting new business, had inspired the Bell companies to make an effort to increase the number of their subscribers, as a result of which there had been an enormous growth in the number of telephones used, with consequent benefit to all users. With reference to the effect of competition upon rates, he gave it as his opinion, that the Bell companies had made reductions from time to time because of competition or the fear of it. Discussing the effect of competition upon efficiency of service, he said that in many cases, previous to the coming of the Independent companies, little attention had been paid to the complaints of subscribers, little development of the telephone system had been attempted, and the service rendered had been unbearable. After the advent of competition the Bell companies had spent money freely for the installation of better apparatus and had maintained better discipline among their employes. Generally speaking, the service now rendered by the two systems was of about equal efficiency, with the exception that the Bell companies had the advantage in most parts of the country in long distance service, while the Independent companies had the advantage here and there through the use of

[1] "Result of Investigation of the Operation of a Dual System of Telephones in Various Cities," p. 8.

the automatic exchange. Summing up his conclusions as to the effect of competition by the Independent companies, he said:[1]

"They have, by a vigorous campaign, been the means of creating a new interest in the telephone business, resulting in a great increase in the number of subscribers of both Independent and Bell companies, which has been of great benefit to all users of the telephone."

"They have, by competition, compelled the Bell companies to give better service."

"They have been the direct or indirect cause of reductions in rates of the Bell companies."

"Where Independent companies have installed the automatic system, they have been able to furnish to their subscribers a more efficient service than that of the competing Bell companies using the manual system."

In a final report dated June 17, 1907, Mr. Nichols presented to the board of estimate and apportionment, which at that time seemed disposed to grant a franchise to the Atlantic Telephone Company, a proposed form of contract, which, as being the outgrowth of an extended study of the telephone business and as applying to a great city like New York, I shall describe at some length, although the franchise provided by this contract was not granted.

It was proposed to grant the company the right to construct and maintain a telephone system only, on the theory that such supplemental activity as the company might desire to undertake in the way of doing a telegraphic or a telautographic business, should be covered by a separate grant. The franchise was to run for a period of 25 years, subject to renewal for a similar period at the option of the company upon a fair revaluation of the privilege. It was provided that if the company should determine to exercise its privilege of renewal, it must make application to the city not earlier than two years or later than one year before the expiration of its original term. If the city and the company should be unable to agree upon the compensation for the renewal prior to a date one year before the expiration of the original term, it was stipulated that the rate of compensation for the renewal period should be "reasonable", the exact rate to be fixed by the appraisal of arbitrators. But in no case should the annual sum to be paid under the renewal grant be less than the sum required to be paid during the last year of the original contract. At the end of 25 years, or, in case

[1] "Result of Investigation," etc., *op. cit.*, p. 22.

of the renewal of the grant, at the end of 50 years, or upon the termination of the franchise for any other cause, or upon the dissolution of the company, the plant and property of the company used for telephone purposes within the street lines of the city were to become the property of the city without cost, to be used by the city for any purpose whatever. The city might, however, as an alternative to the acceptance of the property, require the company to remove all its fixtures from the streets. There was also reserved to the city the right to purchase at its fair market value, exclusive of any franchise value, the company's real estate, buildings, equipment, etc., not within the streets, at the time of taking over the other property.

The compensation to be paid by the company for its franchise was as follows:[1]

(1) Cash down, $250,000.
(2) During the first two years, 1 per cent of gross receipts, but not less than $20,000 a year.
(3) During the next three years, 2 per cent of gross receipts, but not less than $30,000 per year.
(4) During the next five years, 4 per cent of gross receipts, but not less than $60,000 a year.
(5) During the next five years, 6 per cent of gross receipts, but not less than $100,000 a year.
(6) During the next five years, 7 per cent of gross receipts, but not less than $150,000 a year.
(7) During the last five years of the original 25-year period, 7½ per cent of gross receipts, but not less than $200,000 a year.

There was a specific provision that no assignment, lease or sublease of this franchise, or any part of it, should be valid unless it contained a covenant on the part of the assignee or lessee to be bound by all the conditions of this contract and to make all the payments required, notwithstanding the provisions of any other franchise or any statute. This clause was also to apply to any purchaser on foreclosure sale. It was stipulated that all payments made under this contract were not to be considered in any manner in the nature of a tax, but were to be in addition to all taxes, of whatever kind or description, "now or hereafter required to be paid by any ordinance of the city or by any law of the state".

The company was required to install for the use of the city, free of charge, as many telephones in each public office as

[1] Third Report of the Division of Franchises upon the Application of the Atlantic Telephone Co., p. 13.

might be needed from time to time by the city, and to furnish free service, throughout the term of the grant, from such telephones to any other telephones in the company's system within the city limits.

The franchise was not to be assigned in whole or in part, or leased or subleased in any manner by the company or its successors, or by operation of law, except with the consent of the city. Neither was the company or its successors to consolidate, or pool their stock or interests, or enter into any agreement, with any other company, for division of business or territory, or to prevent competition or a reduction in rates.

Within six months after the granting of the franchise, the company was required to enter into contracts with other telephone companies, for the full period of its grant, to provide for a long distance service between New York and all cities with a population of 4,000 or more within a radius of 1,000 miles. Certified copies of these agreements were to be filed with the city. The company was also bound to limit the charges for long distance service to sums not exceeding 75 per cent of the existing schedule of the New York Telephone Company.

It was stipulated that the company's system should be constructed and operated subject to the supervision of the authorities of the city having jurisdiction and in strict compliance with the laws and ordinances, present and future, affecting telephone companies in the city. It was provided that the company's telephone system should be constructed and operated "in the latest improved manner of automatic telephone construction", with the most modern and improved appliances, "provided that the manual system may be used in connection with the automatic system for the purpose of making connections between stations within the city and stations without the city, and also for the purpose of making connections between stations within two different sections within the city, as hereinafter described and fixed, and between stations located in districts, the boundaries of which may be hereafter fixed by the board, but not otherwise". The company was to give efficient and continuous service 24 hours each day.

In the Borough of Manhattan and in such portion of the Borough of The Bronx as might be directed by the city au-

thorities, the company's cables and wires were to be placed in conduits leased from the company or companies having control of them, or from the city if it should obtain possession of them. In case the city should construct subways for electrical conductors, the company was to place its wires in them, and the city agreed to lease the company the requisite space. The company was to place in subways any or all of its wires and conductors within one year after being required to do so by the city. If the company, at any time during the term of the grant or its renewal, should construct electrical subways in any part of the city, the right to purchase them was reserved to the city, upon the payment of the original cost, less depreciation. The company was required to file annually a statement of the money actually spent in the construction of subways. The company was required to keep accurate books, showing such expenditures, and such books were to be open to inspection by representatives of the city for the verification of the company's statements. In any electrical subways constructed by the company, there was to be reserved for the exclusive use of the city, free of charge, one duct at least three inches in diameter. Before commencing the construction of any electrical subways, the company was required to obtain permits from the president of the borough in which the work was to be done and from the commissioner of water supply, gas and electricity. All pavement replaced after being disturbed by the company, was to be kept in repair for one year at the company's expense, and the company was to bear the entire cost for the protection and changing of all surface and sub-surface structures disturbed by it during the construction of its electrical subways.

The company was required to commence construction within six months after the execution of this contract, and within three years thereafter to have erected, equipped and in operation, 33,250 telephone stations distributed through the five boroughs of the city in a prescribed proportion. It was specifically provided that the rights granted by this contract were to be used in their entirety, and that no part of them were to be used in connection with any other right or franchise previously granted, except as expressly provided in this contract.

On the first day of November in each year the company

was required to file a map showing the position of its conduits already laid and of those proposed to be laid during the succeeding year, with a statement of the number of ducts in each street and of wires in each duct occupied.

The board of estimate and apportionment reserved the right, in its discretion and upon due notice and hearing, to require the company to construct extensions, install subsidiary connections, revise or improve its equipment or service and install any new system of telephony, unless covered by patents not under the company's control.

It was provided that during the term of this grant or its renewal, the board of estimate and apportionment should "have absolute power to regulate all rates, provided that such rates shall be reasonable and fair, and provided, further, that the maximum rates hereinafter specified shall not be increased for the several districts described, so long as any or all of said districts remain unchanged".

For the purpose of fixing maximum rates, the city was divided into three districts. The first district included the former cities of New York, Brooklyn and Long Island City; the second district included all of the Borough of Queens except Long Island City; and the third district comprised the Borough of Richmond, or Staten Island. It was provided that between stations within any district the rates for service should not exceed 5 cents per call. In the first district the company's maximum annual rates were fixed as follows:

For four-party residence service, $42.
" three-party " " $48.
" two-party " " $54.
" direct line " " $60.
" two-party business " $66.
" direct line " " $90.
For private branch exchange switchboard service:
first central office line, $90;
additional central office lines, each, $60;
local telephones connected with private branch exchange, each, $18.

Upon payment of these rates the company's subscribers were to be entitled to unlimited service within the first district. The schedule of rates in the second and third districts ranged from $30 a year for three-party residence service, to $48 a year for direct line business service. Between stations in the second and third districts and any station within the

Borough of Brooklyn, the rate was not to exceed 5 cents per call; while between second or third district stations and any station in the Borough of Manhattan or the Bronx, the rate was not to exceed 8 cents per call.

The company was not permitted to "require or receive any deposit or advance payment in excess of what is reasonably necessary to insure payment of current bills", and on such amounts, if held for more than one month, the company was to pay interest at the statutory rate. It was provided that unpaid bills, unless due from an owner, should not be charged against the property, and that no person not himself in arrears should be denied service because any previous occupant of the same premises was in arrears to the company.

The wires of the company were not to be employed for any other purpose than the purposes set forth in the grant, except with the consent of the city; and the company bound itself not to use, lease or operate wires for illegal purposes or to illegal places.

The company was required to make a weekly report to the police commissioner, showing the location and number of instruments installed by it, together with the names of the persons contracting for their use. The company was also bound to permit the police commissioner or his representatives to examine any instrument installed by it, or any connections made by it, and to remove any such instrument immediately upon notice from him to do so. The company was to include in all contracts with its subscribers provisions in accordance with this requirement.

The company was to assume all liability for damages to persons or property, resulting from the construction or operation of its system. If it should fail to give efficient public service at the rates fixed in the contract, or which might thereafter be fixed by the city, or if it should fail to maintain its structures in good condition, the city might give the company written notice of its default; and, upon its failure to remedy the default or defect within a reasonable time, the company was to pay to the city a penalty of $100 per day as "liquidated damages". The city reserved the right to declare the franchise forfeited "without further proceedings in law or equity", in case the company's telephone system should not be operated for any period of two consecutive months.

The company was required to make an annual report to the city comptroller of its gross earnings, with such other information as the comptroller might require. That officer was to have access to the company's books for the verification of this report, and was authorized to examine the company's officers under oath for the same purpose.

The company was bound not to issue additional stock or bonds until it had received a certificate of authority from the city, stating the amount of stock or bonds reasonably required for the company's purposes; and no securities were to be issued in excess of this amount. In order to determine the amount of capitalization to be allowed the company, the board of estimate and apportionment was authorized to hear testimony and examine the company's books and papers pertaining to the value of its property and franchises. The company was required to submit to the board an annual statement showing the amount of stock issued for cash and for property, the amount of stock paid in, the amount of funded and floating debt, the amount of dividends paid during the year, the amount paid as damages to persons or property on account of construction and operation, and the total expenses of operation, including salaries, with any other information in regard to the business required by the board. Failure to comply with this requirement was to be punished by a penalty of $100 per day, this amount to be collected by the comptroller without notice.

The company was required to deposit with the comptroller $50,000 in money or in securities approved by him, to make a guaranty fund for the performance of the company's obligations under the grant, especially those relating to the payment of annual charges. If the company should at any time be in default on its payments, the comptroller was authorized to take the amount due from the guaranty fund. A penalty of $1,000 was fixed for any violation by the company of the terms of the contract relating to the filing of annual statements, the commencement and rate of construction of its plant, or the neglect or refusal to comply with the lawful demands of the city authorities; and penalties of from $100 to $500 were fixed for the illegal use of wires. A unique procedure for the imposition and collection of these penalties was provided. On complaint, the comptroller was required

to notify the company to appear before him on a certain day to show cause why it should not be penalized. If the company failed to appear or if, after its appearance, the comptroller adjudged it to be in default, he was forthwith to impose the prescribed penalty, or, in case the amount of the penalty was not prescribed in the contract, he was to fix the amount; and then, without legal procedure, he was to withdraw the amount of the penalty from the security fund deposited with him. Whenever any money was taken out of the security fund, the company was required, on 10 days' written notice, to replenish the fund so as to restore it to the original amount of $50,000. In default of such replenishment, the city was authorized to revoke the franchise contract.

In case the company should violate, or fail to comply with, any of the provisions of the contract, the franchise could be forfeited by a suit brought by the corporation counsel, on 10 days' notice to the company; or, at the option of the board of estimate and apportionment, by resolution of this board. In the latter case, the resolution might contain a provision that the property constructed and in use by virtue of the grant, should thereupon become the property of the city "without proceedings at law or equity".

148. Monopoly conditioned by ordinance fixing rates—Chicago.—On November 6, 1907, at what is known in Chicago as a "midnight session", the city council passed an ordinance granting a renewal of privileges to the Chicago Telephone Company and an ordinance regulating telephone charges in the City of Chicago.[1] A "midnight session" means a continuous session of 15 or 18 hours, at which an important public service franchise is finally passed a few minutes before day-break the next morning. The Chicago Telephone Company enjoys a practical monopoly of the telephone business in Chicago, although the Illinois Tunnel Company, under a franchise granted some years ago, has several thousand automatic telephones in operation in the central business district. This latter company, under its franchise obligations, was to have 20,000 telephones installed and in operation by January 1, 1909. Some of those who opposed the granting of a renewal franchise to the Chicago

[1] "Ordinance granting Privileges to the Chicago Telephone Company and an Ordinance Regulating Telephone Charges in the city of Chicago," passed by the City Council, Nov. 6, 1907, published in pamphlet form by John R. McCabe, city clerk.

Telephone Company in 1907, urged that the city should, before making the grant, make a careful inquiry into the plans and purposes of the Tunnel Company, with the idea of avoiding duplicate telephone systems. In an address before the Chicago City Club, November 13, 1907, Major Edgar B. Tolman said:[1]

"Surely, it is no unreasonable request that, before an ordinance is given for twenty years to the Chicago Telephone Company, it should be determined whether or not the system of this other company, which now has a status by law and whose officers declare their intention to go ahead and do a telephone business in the whole city of Chicago, is better and cheaper and more desirable than the system which has been used by the Chicago Telephone Company. * * * *

"The statements that have been made from time to time by the proponents of the Chicago Telephone Company, that the automatic system of telephone service is impracticable for a large plant, have been amply and absolutely contradicted by the highest possible engineering expert talent, who say that, like everything else, almost anything that needs to be done can be done better by modern labor-saving machinery than it can be done by hand.

"If it be a fact that the new system of telephony is as superior to the old as the electric cars on our streets are superior to horse cars, or as the Hoe printing press is superior to the old hand press, then the very first consideration of all—good service—demands that the modern system should be adopted."

In spite of all opposition, however, the Chicago Telephone Company got its renewal grant. The committee of the city council having the matter in charge, had the subject under consideration for nearly two years and received an elaborate report of a special telephone commission appointed for the purpose, from which we have already quoted. The terms of this franchise are of sufficient interest to warrant careful examination. The franchise was granted for a period of 20 years, ending January 28, 1929. It gave the company the right to transmit sound and signals only by means of electricity. The company was required, throughout the term of the grant, to keep at its principal office in the City of Chicago "a complete and separate set of records, books, accounts, contracts and original vouchers of receipts and expenditures, showing in detail all the investments, disbursements, expenses, receipts and earnings of its Chicago business". The company was also to keep at this office any books and records relating to its business that might be required by the city comptroller, and to keep them in form and manner as re-

[1] See The City Club Bulletin, Vol. I, No. 21, p. 235.

quired by him. Once a year the company was required to submit a report to the city council, covering its business for the preceding year. The comptroller, his deputy or any certified public accountant designated by the comptroller, was to have the right at any time during business hours to make a complete examination at the company's office of all its records, for the purpose of verifying any statements of its gross receipts provided for in the ordinance, or for any other purpose "connected with the duties or privileges of the city or company" under the ordinance.

As compensation for its franchise, the company was to pay the city 3 per cent of its gross receipts for business done within the City of Chicago. This business was described as including all receipts for local business within the limits of the city, and also all Chicago receipts for toll and long distance business.

The city reserved to itself the right to carry, on the top cross-arm of the company's poles, the municipal telegraph and telephone wires, or to use for this purpose one duct in each of the company's underground conduits in any street where the city had no conduits of its own; or, in lieu of this, the company might furnish the city as many wires in its cables as were necessary for this purpose. So long as the city made use of this company's system alone, the company agreed to furnish the necessary telephone instruments free of rental. The company also agreed to furnish telephone service without charge throughout the city hall and to furnish telephone facilities to all other municipal buildings and offices at 25 per cent discount from current rates. In addition, there was to be furnished free, a single party line for incoming messages only, in each police station and each fire engine house in the city. But the lines installed in the engine houses might be used generally during emergencies for the transmission of the business of the department. The company was "expressly forbidden to directly or indirectly give, offer, or offer to give, promise to give, or agree to give, to any municipal or public officer or employee, any free or gratuitous service or discrimination within said City of Chicago".

The company was required, without extra charge to its subscribers, to maintain its plant, equipment and service "at

the highest practicable efficiency", and to "promptly adopt and put into use, within the City of Chicago, all available improved apparatus, appliances, equipment and methods of service, developed in the progress of the art of telephony, which shall have come into common use from time to time, or if experience has shown them to be practicable".

The company was required, under the supervision of the commissioner of public works, to construct and operate extensions of its system and new exchanges in any part of the city for the purpose of supplying all kinds of service authorized by its franchise, "whenever, in the judgment of the city council, it is necessary in order to meet any considerable demand of the public, or a portion thereof, for such kinds of service, or any of them, and whenever said city council shall so require by ordinance or resolution passed not less than 30 days after a request" by the council or the proper city officers asking the company to do such work. The council also reserved the right to regulate, by ordinance, the company's service.

The section of this ordinance regarded as the most important was the one fixing maximum rates and providing for service and equipment. Under this section the company was required to furnish, upon demand, telephone service of any of the classes described, without discrimination, to all persons, firms and corporations asking for it, at the following rates:

For single-party line unlimited business service, $125 per year, or $1 per day.

For single-party line measured business service :—

including 1,200 outgoing messages,	$60 per year;
for the next 2,400 outgoing messages,	3 cents each;
for all additional messages,	2 cents each;

a second single-party line, free to any subscriber guaranteeing to pay for 7,200 messages a year;

an additional single-party line, free for each additional 6,000 messages;

additional single-party lines, to any subscriber to measured service, for each line, per quarter, $6.

Private branch exchange, with switching apparatus and appliances, free to any subscriber to measured service contracting for two or more single-party lines on the same premises;

operator's telephone, free; but for terminal telephones connected with the private branch exchange on the same premises, each, per quarter, $1.50.

No charge to be made for incoming messages, except for toll or long distance messages when subscribers consent to pay for them.

For single-party line unlimited residence service, $18 per quarter.
For two-party line unlimited residence service, $14 per quarter.
Nickel prepayment service to be furnished by means of instruments equipped with coin box and slot or similar device, as follows:
one-party line, with guaranty of 20c. per day, or 4 messages;
two-party line, with guaranty of 12.5c. per day, or 2½ messages;
for residences only:—
two-party line, with guaranty of 10c. per day, or 2 messages.
four-party line, with guaranty of 5c. per day, or 1 message.

Whenever a subscriber, in making settlement with the company under these guaranties, should be required to pay any amount to make up a deficiency between the amount in the coin box and the sum guaranteed, he was to receive a receipt for the amount of such deficiency payment, and, at any succeeding settlement within 60 days thereafter, any amount found in the coin box for local messages in excess of the amount due under the guaranty, was to be applied to the redemption of his receipt. The company was required to collect from the coin boxes "approximately every 30 days or less". The company was expressly forbidden to furnish telephone service to more than four subscribers by means of a single line, and was obliged to furnish four-party line service only when at least two subscribers located within the limits of a single block desired such service.

For public telephone service the charge was not to exceed 5 cents for any conversation within the city. The company was expressly forbidden to authorize or permit any of its lessees or patrons to charge anyone more than this 5-cent rate, and was required to insert a clause in every contract, binding its lessee or patron not to charge anyone more than this rate.

In addition to its telephone system extending throughout the city, the company was authorized to maintain local or neighborhood exchanges, and was forbidden to abolish any such exchange already established, without the consent of the city council. It was required to establish new exchanges in suburban districts within the city limits when directed to do so by the council; but the council was not to give any such direction unless there was a reasonable demand for the establishment of the exchange. Any subscriber in a neighborhood exchange was permitted to communicate with any telephone located within the city limits outside of his exchange, on

payment of a charge not exceeding 5 cents for a five-minute conversation. The rates for local or neighborhood exchange service, under yearly contracts, were not to exceed the following:

For one-party line, business service,	$4 per month.
For two-party line, " "	$3 per month.
For four-party line, " "	$2 per month.
For one-party line, residence service,	$3 per month.
For two-party line, " "	$2 per month.
For four-party line, " "	$1.50 per month.

Subscribers in the company's general system could not be charged extra for connections with subscribers included in any neighborhood exchange.

For toll service to any point within 15 miles of the city hall, or within one mile of the city limits and within the State of Illinois, the company could not charge more than 10 cents for a three-minute conversation or more than 5 cents for each additional minute.

The company was required to install on each measured service line "a meter which shall prove effective in actual use for accurately and correctly recording the number of outgoing messages or conversations over said line." Any question arising as to whether a practicable meter had been devised, was to be submitted to the chairman of the finance committee of the city council, the commissioner of public works and the corporation counsel, who were given authority to decide the question and require the company to make such changes in its meters, or in the method of operating them, as they should deem reasonably necessary to protect the subscribers. The company was forbidden to charge a subscriber for any message unless the message was actually transmitted, except in cases especially provided for in the ordinance. The company was required to furnish a subscriber on demand, at least three extension telephones for each line at a rate not exceeding 50 cents per month for each extension; but not more than one extension could be required by a subscriber served on a four-party line.

The company was required to publish at least three times a year, and deliver to each of its subscribers, free of charge, a directory containing in alphabetical order the names, addresses and telephone numbers of all subscribers in the city except those who had requested that their names be omitted.

The company was required to furnish, if requested, an additional copy of the telephone directory for each extension telephone in use. At the request of any subscriber, the company was to include in its directory list, in connection with the address and telephone number of the subscriber, the names, in their proper alphabetical order, of not more than three partners, officers, employes or members of the family of such subscriber, for each single-party or two-party line, and to make one such listing for each four-party line and each neighborhood exchange telephone, these extra listings to be free of charge. One more free listing was to be made for each extension telephone, and additional listings were to be made, on request, upon payment of a maximum rate of $3 per year for each additional name. This last provision, however, was not to apply to flat rate single-party line subscribers at $125 per year.

The company was required to furnish, upon demand of any subscriber, a private line or lines at the rate of not to exceed $5 per quarter if the extension was located within one-half mile of the subscriber's premises, and $2.50 more for each additional quarter-mile of distance. The company was also to furnish private lines or wires not connected with any switchboard and connecting any two points not more than one mile apart, at the rate of $10 per quarter, each, and $2.50 per quarter for each additional quarter mile. Terminal or extension telephones to be connected with any line described in this paragraph, were to be furnished at a rate not exceeding $1.50 per quarter.

It was specifically provided that "all rates, prices or charges for telephone service, facilities or equipment herein prescribed, are maximum rates only, and nothing herein shall be construed as an admission of the City of Chicago that such maximum rates are reasonable or proper rates". The company was given 18 months to make the changes and additions necessary for the adjustment of service to the requirements of the ordinance.

The council expressly reserved the right, from time to time during the period of the franchise, to revise and regulate the company's rates. It was stipulated that, by the acceptance of the ordinance, the company should be understood as expressly consenting and agreeing promptly to accept and put

into effect, throughout its system, any "reasonable" schedule of rates established at any time by the council after the expiration of 30 months from the time this original ordinance went into effect. But any future revision of rates was to be for a period of five years.

In case the company should contest the reasonableness of any rates fixed by the council and refuse to accept them pending litigation, and the final determination of the case should be against the company, then it was to repay to its subscribers all excessive collections, with 5 per cent interest.

It was especially provided that the ordinance should not be construed as preventing the city from taking advantage of any enabling legislation to pass general ordinances regulating or taxing telephone companies or prescribing their rates, or as preventing the city from granting a franchise to any other company. The Chicago Telephone Company was forbidden to enter into any agreement or combination with any other telephone company in regard to telephone rates in Chicago, or to make any transfer or division of territory with any other telephone company. It was provided, however, that the rights and privileges granted to the company under this ordinance might pass, by assignment, mortgage or otherwise, to any legal successor of the company, except a competitor in the telephone business.

The company's wires were to be laid and kept in underground conduits in the down-town district, but before laying any new conduits, the company was required to file with the proper city officials, plans showing each conduit to be laid, the number of ducts in it, and the location of the man-holes. It was required that the name or initials of the company should be placed on the cover of each man-hole. No work was to be done in the street except on permit of the commissioner of public works. The company was required to restore the streets disturbed by it to a satisfactory condition, and for that purpose was to keep on deposit with the city at all time a fund of $5,000. Whenever the city should undertake to build a subway, either under the terms of the street railway ordinances granted in 1907, or otherwise, the company would be obliged to remove at its own expense all its underground construction in the streets affected and replace its wires and conductors in the city's subways, unless space

could be provided for them in existing conduits without excavating in the streets. The company was to have the right to use the city's subways upon the payment of reasonable compensation and subject to reasonable terms and conditions, to be fixed by the city council. In those parts of the city where overhead construction was permitted, the company's poles and wires were to be placed in alleys, so far as deemed practicable by the commissioner of public works; and all overhead wires were to be placed underground in advance of paving or repaving, if so ordered by this official. For the local distribution of wires from its conduits, the company was permitted to cross streets and alleys with overhead wires for a distance not exceeding two blocks in length. Wires over buildings were to be kept at least 8 feet above the roofs, except in the case of the buildings which they entered.

The company was required to file an acceptance of the ordinance with a written surrender and waiver of any right thereafter to construct or maintain its fixtures under the terms of any other ordinance or franchise, whether granted by the city or by any municipal corporation within the territory then or thereafter embraced within the city limits. It was clearly stated that the provisions of this ordinance were to apply "not only to all the territory now within the limits of the City of Chicago, but to all territory which may hereafter be included within the City of Chicago". The company was required to pay the city the sum of $35,000 in full settlement of all claims and counterclaims under the company's old franchises.

The city reserved the right to purchase the company's plant on January 1, 1919, on January 1, 1924, at the termination of the grant in 1929, or within thirty days after any one of these dates. This option could be exercised for municipal, state or federal operation of the plant. If the city desired to take advantage of this privilege, it was required to give the company twelve months' notice. The plant which the city might purchase was to include "all appurtenances, appliances, equipment, lines, lease-holds, buildings, stores, furniture and fixtures, suitable to and used by it for the purposes of this grant, taking into consideration the then condition of the art". The price for the property was to be "the then cost of the duplication, taking into consideration the then

condition of the art, less depreciation, of said telephone plant and system and other property aforesaid, together with, if the said grant shall not then have expired, 5 per cent thereon in addition as compensation for the compulsory sale, but there shall be no allowance for earning power, or for the value of the rights and privileges hereby granted, or for any franchise or license value". The value of the plant was to be determined by appraisers, one to be appointed by the city, one by the company, and the third by the two so selected. In case either party, after being notified by the other party, should refuse or fail to appoint an appraiser, or in case the two appraisers appointed should fail to agree upon a third appraiser within thirty days after their appointment, either the city or the company, upon giving ten days' notice to the other party, could apply to the judges of the Appellate Court for the first district of Illinois, or a majority of them, for the appointment of an appraiser; and any appraiser appointed by the judges, or a majority of them, was to have the same powers and duties as if regularly appointed in the manner first provided. It would be the duty of these appraisers to determine what tangible property of the company was reasonably required for the continued operation of the plant. In considering the cost of duplication of underground structures that had been placed in the streets in advance of paving, the appraisers were not to take into consideration the cost of removing or replacing any pavement. Within 90 days after the award of the appraisers, the company was to execute bills of sale and deeds, transferring the plant to the city, and the city was to make payment therefor in cash. In case the award was not made until after the date named by the city in its written notice of intention to take over the property, the delay of the appraisers was not to affect the city's right to purchase the plant. The cost of the appraisal was to be paid by the city, and contracts were to be entered into with the appraisers, fixing their compensation and binding them to complete their award within a stipulated time or be penalized by a specified reduction per day from their allowance. This contract was also to forbid the appraisers accepting any other or additional compensation for their services from any person, firm or corporation. In purchasing the plant, the city was authorized to deduct from the award one-

half of the cost of the appraisal. The appraisers were to have the right to make a complete examination of the company's books and documents "for the purpose of fully informing themselves as to the actual cost, value and depreciation of the plant and system". The city reserved the right to designate, as its licensee, any person or corporation having the right to operate a telephone system. Such licensee was to have the right to purchase the company's plant at the expiration of the grant, or within 30 days thereafter, in the same manner as that provided for purchase by the city; and it was especially stipulated that the right of the city's licensee to purchase the plant under the provisions of the ordinance should not be in any way impaired by any lack of authority on the part of the city to acquire the plant for itself. If, at the expiration of the franchise, the city had not chosen to purchase the plant and had not designated any licensee, this failure was not to be construed as an extension of the franchise or any of the company's rights and privileges. It was expressly provided that the city's reserved right to purchase the plant could be exercised only on condition that the city should possess the charter power to acquire the plant at the time it attempted to do so; but the company, by the acceptance of the ordinance, was understood as being precluded from attacking or questioning the city's authority reserved under the franchise. Apparently, by this provision the city attempted to preclude the company from raising the point that the option for purchase, reserved at a time when the city had no authority to buy a telephone plant, would be void, even though the city should secure the authority later.

The company agreed, by the acceptance of the ordinance, that if it should make default in the fulfilment of the conditions imposed upon it, and if such default should continue for a period of three months, "exclusive of all times during which the company may be delayed or interfered with, without its connivance, by unavoidable accidents, labor strikes, or the orders or judgments of any court entered in any suit brought without its connivance", after written notice of such default, then the city council would be authorized to declare the franchise forfeited.

One entire section, comprising more than four pages of this ordinance, as originally drawn by the council committee

having the matter in charge, was stricken from the ordinance on the night of passage.[1] This section provided that if, during any year of the grant, the company should earn more than 10 per cent net on its average investment for the year, it should pay the surplus to the city at the end of the year. It was stipulated, however, that this provision should not be taken as an admission, on the part of the city, that any net return of less than 10 per cent would be inadequate or unreasonable. In determining the net earnings, the city comptroller was to have the right to investigate and review the reasonableness of the company's expenditures in carrying on its business. The company was to spend on maintenance and repairs, after January 1, 1912, an average of at least 6 per cent of its gross receipts, and was also to set aside each year a reserve fund of not less than 4 per cent or more than 8 per cent of its investment, not including land, stock of materials or cash on hand. This fund was to cover depreciation and insurance. For the purpose of arriving at the amount of the investment upon which profits were to be reckoned, there was to be an appraisal of the company's tangible property within the City of Chicago, "consisting of operating plant, real estate and buildings, stock of materials on hand, teams, tools and other tangible property and working capital". To the amount so fixed was to be added, from time to time, the sums spent for making extensions of the company's system and for other additions to its tangible property. The amount of working capital and stock of materials to be included, was not to exceed in value 10 per cent of the other tangible property.

The cutting out of this entire section at the last moment was severely criticised. Its provisions relative to turning over to the city the company's net earnings in excess of 10 per cent, had been planned as an automatic check upon unreasonable rates. There had been considerable objection to the schedule of charges fixed by the ordinance, it being claimed that, under the terms of the ordinance, business men would be practically compelled to use measured service, and that this would result in paying higher rates than had been paid under the company's old franchise. This objection had been met by referring to section 8 and saying that the com-

[1] See Report of Committee, *op. cit.*, p. 285, for section 8 of the proposed ordinance, afterwards stricken out.

pany would prefer to reduce its rates rather than to have all net earnings in excess 10 per cent on its investment turned into the city treasury. It had been stated by the council committee, in its report, that the accounts kept by the company were entirely inadequate as a basis for intelligent rate regulation, because they failed to show the cost of the different kinds of service, and consequently the committee admitted that the rates suggested by it were a mere guess and should be subject to future regulation as soon as the necessary data of cost could be ascertained. The striking out of section 8 left these rates in force, without any remedy except from future action taken by the council, which naturally might be opposed by the company.

149. Telephone contract dominated by business interests—New Orleans. — Telephone companies in Louisiana were made subject to supervision by the state railroad commission, so far as rates were concerned, by the constitution of 1898.[1] The highest court of the state decided, however, that under this authority the commission was not empowered to regulate telephone service. This defect was remedied by the adoption of a constitutional amendment in April, 1908. Late in 1907 the directors of the New Orleans Board of Trade appointed a special committee to inquire into telephone conditions in that city. This committee made its report in March, 1908. It called attention to the fact that for two years past there had been incessant complaints against the quality of service furnished by the Cumberland Telephone and Telegraph Company, which is the Bell company having a monopoly of the telephone business in that section of the country. In 1907 many of the principal business firms of the city, whose contracts had expired, received notice from the company that in the future they would have to pay from 40 to 100 per cent more for the same class of service than they had been paying. Soon after this committee was appointed, ordinances were introduced into the city council, looking toward the granting of franchises to independent companies; but action on these ordinances was suspended, pending the committee's report. The committee was strongly adverse to the establishment of two or more telephone systems in the city. Inasmuch as the existing company had an investment of nearly

[1] See "Telephone Conditions in New Orleans, La.," *op. cit.*, p. 96.

$3,000,000 in its New Orleans plant and about two years would be required for another company to establish a similar system, which, when completed, would provide only for local service, leaving the community without long distance connections, and inasmuch as the streets would be dug up during the period of construction or disfigured by another line of unsightly poles, this committee recommended that the monopoly of the existing company be maintained, "provided, always, that proper regulations respecting the service, rates and extensions of its business can be arranged in such a manner as to protect the interests of the citizens".[1]

Under the company's original franchise, the city had not clearly reserved the right to pass further ordinances regulating service or rates. The greatest and most common defect in the service furnished in New Orleans was said to be the extent to which party lines and extension sets were used. It was said that sometimes as many as 10 subscribers had been placed on the same line. The committee found, in its investigation, that 80 per cent of the unavailing calls and complaints of poor service were "due to the common nuisance of interference on party lines". It therefore recommended that party lines should be entirely abolished for business houses and professional service; and, for residences, should be restricted to two-party lines. It also said that another drawback to good service was the use of extension sets by persons in the same building for talking with one another. It recommended, therefore, that extension sets should never be placed on party lines, and on direct lines should be strictly confined to the purpose for which they were originally intended, that is, to enable the telephone users to speak over the trunk lines from their chairs or desks, without having to go to the main instrument in some other part of the building. In regard to the regulation of rates, the committee was of the opinion that no one could determine what would be a fair rate for telephone service five years in advance; and, accordingly, it recommended rates for a period of one year only.

"The ideal system of charges for telephone service", said the committee,[2] "is, no doubt, the measured rate plan; but the flat rate, to which the public is accustomed, is already in existence here, and, tak-

[1] "Telephone Conditions in New Orleans, La.," *op. cit.*, p. 14.
[2] "*Ibid.*, p. 17.

ing into consideration the primitive method employed for recording calls for measured rates, it would be undesirable to eliminate the flat rate service at the present juncture."

The committee found that New Orleans was far behind other cities in the number of telephones in use in proportion to population. On December 22, 1907, the company reported 10,171 subscribers and 14,094 telephones. The committee estimated that there should be not less than 20,000 telephones in use in a city of the size of New Orleans, "even making allowance for the Negro element". As a result of this committee's investigation and the report of its special commissioner, Mr. Henry Noble Hall, an agreement was entered into between the Board of Trade and the telephone company. This agreement was substantially a contract regulating the company's rates and service to the public generally, and in other cities would have taken the form of an ordinance passed by the city council and accepted by the company. This contract was to be in operation for the period of one year, ending March 31, 1909, and to be continued from year to year for four years longer, unless one of the parties should give notice of its cancelation 30 days prior to the expiration of any one-year period. The company, whose principal office is at Nashville, Tennessee, agreed to keep a separate set of books for its New Orleans business and to publish at the end of every quarter, in the New Orleans newspapers, a complete statement of its gross earnings and expenses in the city, in such a way as to show its actual net earnings on its New Orleans investment. In the gross earnings were to be included all moneys received for long distance calls originating in the city. The Board of Trade was authorized at any time to appoint an expert to examine the company's books for the purpose of verifying this statement. The company agreed to "use its best endeavors" to extend its business, with the view of placing not less than 250 new telephones a month, so as to bring the total number in use to about 17,000 by March 31, 1909. The company agreed also to issue, at least once every three months, a directory embracing a complete list of its subscribers in alphabetical order, and also a numerical list of its subscribers. The company was also to publish a complete list of all its classes of service and rates on the first page of its directory and at least once a month in the newspapers. The company agreed to furnish telephone serv-

ice upon demand, "without discrimination and at the same price to all persons, firms and corporations" who should elect to take any of the classes or kinds of service offered. "Complimentary telephones" in existence at the time were to be abolished. A schedule of maximum rates, ranging from $10.50 a month for unlimited flat rate service for business houses to $4.50 a month for the same service to residences, was agreed upon. Provision was also made for measured rates on the basis of a minimum charge of $3.50 per month for business telephones, $3 for "professional telephones", and $2.50 for residence telephones, with an additional charge of 2 cents for each outgoing message. A special rate of $3.50 a month for direct line unlimited service, was quoted to clergymen, churches and strictly charitable institutions. Pay stations were to be furnished on a monthly guaranty of $6.50. If the receipts at 5 cents per call did not make up this amount, the subscriber was to pay the difference. If receipts exceeded this amount, the subscriber was to get one-half the surplus. All of these rates were subject to a discount of 50 cents per month for each telephone if bills were paid quarterly in advance. Special rates for private branch exchange service were set forth in detail, and it was made optional with the subscriber to furnish his own private branch exchange equipment on condition that it should be "substantial and efficient". The company and the Board of Trade, as parties to this contract, agreed to join in a petition to the state railroad commission, asking that all service and rates for the City of New Orleans theretofore authorized be canceled, and that the rates described in this contract be substituted therefor. The company agreed, as soon as the commission had taken favorable action on this petition, to accept no more orders for party lines, except two-party line telephones for residences, and, within a year, to substitute other classes of service for all party lines in use for business places and professional service. The company agreed not to make any application to the railroad commission, during the continuance of this contract, asking for any changes in its rates or service, unless such application had the approval and endorsement of the Board of Trade, which in turn agreed to give the company its full coöperation in the development of its business and the furtherance of its interests in the City

of New Orleans and the surrounding country, in case the company acted in good faith. The rates agreed upon in this contract were ratified by the Railroad Commission of Louisiana, April 29, 1908.[1]

150. Monopoly under Federal laws—Washington.—Telephone service in the District of Columbia is rendered by the Chesapeake and Potomac Telephone Company, a subsidiary of the American Telephone and Telegraph Company. It has been the exclusive operating company in the City of Washington since the date of its organization in 1883. At the present time the company charges $48 per year for unlimited direct line service for residence telephones.[2] On two-party lines the charge for a residence telephone is $36 a year. For business places only measured service is given. The annual rate on measured service, for either business or residence places, ranges from $39 for a minimum of 600 calls, and 5 cents for each additional call, to $144 for a minimum of 4,500 calls, and 3 cents for each additional call.

The company's franchises were originally acquired by acquiescence. In an investigation made in 1898 by a special committee of the House of Representatives into telephone charges in the District of Columbia, Mr. Samuel M. Bryan, president of the company, testified that originally the telephone company was a "squatter", in the same way that the Postal Telegraph Company and the electric lighting companies were.[3] It had been assumed that under the organic act establishing the present form of government for the District of Columbia, the commissioners had authority to permit the construction of telephone lines under the police power. This authority having been denied by the courts, however, Mr. Bryan said:[4]

"Our principal rights of way are derived from the acquiescence of Congress in 1880 in what we had done previous to that time, and in their subsequent acquiescence in what we were doing."

Apparently, the first specific regulation in the laws of Congress relating to telephone service in the District of

[1] Order No. 868, in the matter of Telephone rates, Exchange service, City of New Orleans.

[2] "Telephone Service and Rates," Report of Chicago Council Committee, Sept. 8, 1907, *op. cit.*, p. 188.

[3] Testimony relating to Telephone charges in the District of Columbia, reported July 8, 1898, by the Committee to Investigate Gas and Telephone Service. See Report No. 1659, Fifty-Fifth Congress, Second Session, 1897-98, House Reports, Vol. VII, p. 65.

[4] *Ibid.* p. 267.

Columbia, was found in the appropriations act approved July 18, 1888. Under this act the commissioners of the District were forbidden, after September 15th of that year, to permit or authorize any additional telephone or other wires to be erected or maintained on or over any of the streets or avenues of the City of Washington.[1] The commissioners were further directed to investigate and report to Congress, at the beginning of its next session, the best method of interring the overhead wires, and also to report what kind of conduits should be maintained by the city, if any, and their estimated cost, and what charge, if any, should be made by the city for the use of such conduits by persons or corporations placing wires in them. It was provided, however, that the commissioners might authorize, under such reasonable conditions as they should prescribe, any existing telephone company then operating in the District to lay its wires under any of the streets of the District, whenever in the judgment of the commissioners the public interest should require the exercise of such authority. All such privileges, however, were "to be revocable at the will of Congress without compensation", and the authority granted the commissioners by this act was not to be exercised after March 3, 1889.

In the appropriations act approved March 2, 1889, this authority was extended for another period of two years.[2] In the appropriations act approved August 6, 1890, there was a provision authorizing the President to appoint a board of three persons, "one of whom shall be an army engineer 'skilled in electric matters', one a civil engineer of known skill and experience in municipal engineering, and one an expert electrician of high repute".[3] It was provided that no more than one of the members of this commission should be a resident of the District, and that no member should be in the employ of any electric company or have any interest in the business or securities of such a company, or in any patent or form of conduit or subway. This board was to report upon a scheme for building electrical conduits for the City of Washington. The next year a clause was added to the appropriations act, requiring this board to report also a set of

[1] Laws Relating to Gas, Electric Light, Telegraph and Telephone companies etc., in the District of Columbia, compiled by Walter C. Allen, Government Printing Office, 1908, p. 15.
[2] *Ibid.* p. 18.
[3] *Ibid.*, p. 19.

recommendations concerning a safe and sufficient wiring of public and private buildings for all electrical purposes.[1] Pending the report of the board and its approval by Congress, and prior to April 1, 1892, the commissioners of the District were forbidden to permit the additional construction of more than five miles in aggregate length of conduits or subways for telephone service.

It does not appear that Congress took any action on the report of this board; for, in the appropriations act approved August 7, 1894, there was a provision that the commissioners of the District might authorize the erection and use of telephone poles in the public alleys of the City of Washington, on condition that such poles be subject to use by the District, without charge, for stringing its wires to be used for fire alarm and police purposes.[2] In this act also there was a provision that any privileges granted under it should be revocable at the will of Congress without compensation. By the appropriations act approved March 3, 1897, the authority granted in the act of 1894, by which the commissioners were authorized to permit the erection of telephone poles in alleys, was limited by the provision that thereafter no wire should be strung on any alley pole at a height of less than 50 feet from the ground.[3] The commissioners were also authorized to grant temporary permits for stringing wires to poles in the alleys, and from alley poles in one square to alley poles or house-top fixtures in another square, for the purpose of making necessary house connections from cable poles and existing overhead trunk-lines. It was specifically stated, however, that nothing contained in the act should be deemed to authorize the erection of any additional pole upon any street, avenue or public reservation within the city.

In the appropriations act approved June 30, 1898, there was a provision limiting the telephone charges in the District of Columbia to $50 per annum for the use of a telephone on a separate wire, $40 for a two-party line, $30 for a three-party line, and $25 for a line connected with four or more parties.[4] In the appropriations act approved April 27, 1904, there was a clause which repealed all preceding acts or resolutions regu-

[1] Laws, etc., *op. cit.*, p. 22.
[2] *Ibid.*, p. 28.
[3] *Ibid.*, p. 35.
[4] *Ibid.*, p. 39.

lating telephone rates for grounded circuits and provided that in the future, until the population of the City of Washington should reach 350,000, no telephone company operating in the District should be authorized to charge more than $60 per annum for a residence telephone on an individual metallic circuit, or $48 in case of a two-party metallic line.[1]

In the course of the investigation of the congressional committee to which reference has already been made, it appeared that at the time of the organization of the Chesapeake and Potomac Telephone Company, its "franchises, licenses, rights of way, etc.", appurtenant to the Washington plant were valued at something over $581,000.[2] The counsel for the company urged that this valuation should be accepted as a legitimate part of the company's investment, upon which it was entitled to earn a reasonable profit. In reply to this claim, Hon. Mahlon Pitney, the acting chairman of the committee, said:[3]

"Let me call your attention to this. The value of what I understand was included in licenses, rights of way, etc., depended not only upon the value of the patent, but upon the value of what may be called the public franchise, although not distinctly granted as such—the continued use of public rights, subject always to the qualification that they should be exercised for the benefit of the public and at reasonable rates. Something might depend upon whether Congress would exercise its jurisdiction or would sleep upon its rights."

It appeared from expert testimony that the National Capital Telephone Company, the predecessor of the present operating company in the District of Columbia, had expended $91,000 on its plant up to August 1, 1883, when it was sold to the present company, and that it also turned over to the present company cash and cash assets amounting to $77,000 net.[4] The new company, whose business also included the telephone service of Baltimore, was capitalized at $2,650,000, of which $750,000 was issued in capital stock to pay for the plant and net cash assets in the City of Washington, representing a total, up to that time, of a little over $168,000.[5] It appeared also that on December 31, 1897, the amount of capital stock and bonded debt outstanding, properly chargeable against the Washington end of the business, amounted

[1] Laws, etc., *op. cit.*, p. 51.
[2] Testimony, etc., *op. cit.* pp. 220, 279, 398.
[3] *Ibid.*, p. 404.
[4] *Ibid.*, pp. 216, 220.
[5] *Ibid.*, p. 216.

to $899,200. Between 1883 and 1897 the present company had expended for actual construction on its Washington plant, $441,000, and for real estate $36,000. These items, with proper allowance for working assets brought the total original investment up to $591,000 at the end of 1897.[1] This left a balance of $308,000 to be charged against "franchises, licenses, right of way, good will, etc". Of the amount expended on construction by the present company, $215,000 had been spent out of earnings.[2] It appeared that during the seven years from 1891 to 1897, inclusive, the company, after paying $138,750 in dividends on its Washington stock and $137,689 in royalties on its Washington business, had accumulated a Washington surplus amounting to more than $248,000.[3] The company's officers explained that their policy was to estimate at the beginning of the year the amount of depreciation which could be expected during that year and then, in case for any reason the company was prevented from expending that amount of money on replacements and repairs, to charge the unexpended balance off for depreciation. During the seven years referred to there had accordingly been charged off nearly $54,000 on this account. This sum was not included in the surplus.

Inasmuch as the Washington company, representing the Bell interests, has from the beginning had a monopoly of the telephone business in Washington, the contracts between the parent company and its local licensees, as printed in the report of the congressional investigating committee, throw an interesting light upon the policy of the owners of the Bell patents. Under date of April 22, 1878, Gardiner G. Hubbard, as trustee for the Bell patents, issued the first license for the District of Columbia to George C. Maynard.[4] Under this original agreement Maynard was strictly the agent of the licensor for the purpose of leasing telephones, making contracts and collecting telephone rentals in the District. While the principal, under this agreement, was authorized to assign his interests, the agent had no such authority, the license being personal to him. This license or agency did not include the building and operation of a telephone exchange, but merely the supplying of telephones for private lines. The

[1] Testimony, etc., *op. cit.*, p. 217.
[2] *Ibid.*, p. 219.
[3] *Ibid.*, pp. 220, 221.
[4] *Ibid.*, p. 166.

principal agreed to furnish the telephones and call bells needed, delivered at the office of the Bell Telephone Company in Boston; the agent agreed to pay in advance at the rate of $2 for each telephone and $3 for each call bell taken by him. The agent agreed to construct with his own capital all lines that might be reasonably required in the District for use in connection with telephones and to lease or sell such lines on reasonable terms. The rental for the telephone instruments themselves was fixed in a schedule attached to the agreement, and the agent was to receive, for his share, 50 per cent of the rental money collected for telephones and 20 per cent of the money received for rent or sale of call bells. The principal reserved the right to change the schedule of rates from time to time in conformity with prices charged in other places. It was agreed that for all requirements of the United States government and the government of the District, telephones and call bells should be supplied by the principal to the agent and that the latter should have the right to furnish them to the government without requiring any formal contracts for their use. The agent was required to pay all moneys due to the principal on account of the rental of the instruments to the governments "as fast as they can be collected, using his best efforts to secure the permanent use of telephones by said governments and to promptly collect all rentals therefor". It appears from the terms of this agreement that, so far as the instruments themselves were concerned, the rental schedule was originally fixed by the principal and might be changed by him from time to time, but the agent was authorized to construct telephone lines and lease them to the users of telephones for such additional rental as he might see fit to charge. The agent was required, however, to "use his best efforts in all proper ways to introduce telephones to the utmost possible extent, and to preserve leases therefor for use in the District". In case any telephone instruments received by the agent from the principal should be lost, stolen or destroyed without the agent's fault, his account with the principal could be squared by the payment of the actual cost of manufacturing the instruments. This contract was made for a term of six years and was to continue beyond that time until three months after notice of its termination had been given by either party. The princi-

pal agreed to bear all expense incident to any litigation in regard to telephone patents.

On December 2, 1878, a new agency agreement was issued to Maynard by the Bell Telephone Company, as successor of Hubbard.[1] Under this agreement Maynard secured the right to establish a district or exchange telephone system and agreed to extend it from time to time as rapidly as possible and as the public need should require, and to furnish service to subscribers "at fair rates, not exceeding the rates charged in other cities of like population". Under this agreement Maynard was authorized to associate with himself one or more partners for the purpose of carrying on the business, and the license, instead of being for a term of six years, was to continue during the life of the Bell patents. It was provided, however, that in case the licensee failed to organize the telephone system, to prosecute the business with reasonable dispatch or to pay any rental due the company, the latter, upon giving not less than 60 days' notice, might take possession of the licensee's premises and all telephone lines and fixtures, or other property belonging to the licensee and used in connection with the business. In other words, if the licensee defaulted, the principal was authorized to enter into posession of the property for the purpose of continuing the telephone service. Upon payment of the expenses incurred in consequence of the default and all arrearages of rent, the licensee had the right to regain possession of the property and the business. Under this contract the company extended the licensee's rights under the preceding contract for private lines, to correspond with the life of the patents.

By an agreement made October 28, 1879, between Maynard and the National Bell Telephone Company, which in the meantime had succeeded the Bell Telephone Company, the licensee's commission was reduced from 50 per cent to 40 per cent of the telephone rentals collected by him.[2] It was stated that this reduction was made in view of the fact that the company was about to enter into an agreement with the Western Union Telegraph Company, representing the Gold and Stock Telegraph Company, the American Speaking Telephone Company, and the Harmonic Telegraph Company, by which under certain conditions the Bell company was to

[1] Testimony, etc., *op. cit.*, p. 168.

[2] *Ibid.*, p. 169.

"obtain full and exclusive license to make and to use speaking telephones, call bells, and switches, and other appliances for use in telephone lines and any inventions or improvements applicable thereto", which the Western Union and its allied companies then owned or controlled. The Bell company evidently considered that 40 per cent of the rentals on a monopoly business would be as profitable to its licensee as 50 per cent subject to competition by the Western Union and its allied interests. Under this modified agreement the licensee agreed to take over all the plant, fixtures, etc., acquired by the Bell company from the Western Union in the District of Columbia, at the price agreed upon by the Bell and Western Union companies, which according to the statement of the Western Union would be less than $2,500. Another point covered by the modified agreement was the long distance traffic, which the Bell company reserved to itself exclusively. The licensee, however, agreed to collect long distance tolls for the company and turn over all the long distance business he could legally control to the Bell company or such parties as it might designate. The licensee was to receive a reasonable commission on this business..

The agreement between the National Bell Telephone Company and the Western Union Telegraph Company and its subsidiaries, anticipated in the modified agency agreement just described, was entered into on November 10, 1879.[1] Under its terms the telegraph companies agreed to withdraw from the telephone business and to transfer their patents, then held or thereafter acquired, to the National Bell Telephone Company. In consideration for this action the Bell company agreed to pay the Western Union 20 per cent of all royalties or rentals collected by it "from licenses or leases of speaking telephones", not including, however, call bells, batteries, wires and other appliances or services furnished or performed. The Western Union was also to receive a bonus of 20 per cent of the net profit derived by the Bell company from the manufacture and sale of telephones exported to foreign countries. The gross rentals to be charged by the Bell company were fixed in this agreement at $10 per annum for each telephone where only one instrument was to be used at a station, or $15 for a pair of telephones composed

[1] Testimony, etc., *op. cit.*, p. 225.

of a transmitter and a receiver. From this standard rate, however, the Bell company was to be allowed a discount of 40 per cent in order to cover the commission allowed to its licensees for handling the instruments. It was provided that the Bell company might change the standard rates of gross rentals or royalties charged for the use of its telephone instruments, subject to certain conditions. No such reduction could be made which would operate to reduce the bonus of the Western Union Telegraph Company below $1 per annum for each terminal single telephone and $1.80 per annum for each terminal pair, unless such reduction was made with the consent of the Western Union Telegraph Company or by arbitration.

"Whereas it is difficult", said this famous agreement, "to determine absolutely and in advance the price which at all times and for all purposes it will be advantageous for the interests of the patents and of both the parties, as interested in income derived from royalties and rentals, to charge, either with a view of increasing the revenue of the parties hereto from royalties and rentals by enlarging the demand for the instruments, or under circumstances of competition, it is agreed that the party of the second part (National Bell Telephone Company) in cases where its power to reduce is qualified, as hereinbefore expressed, may reduce the rentals either generally or for a particular purpose, or a particular locality, or a particular licensee or class of licensees, to such sum as may be advantageous as aforesaid for the interests of both parties and as may be determined by agreement of the parties hereto, or as provided in this article."

The provision "in this article" was for a reference, in case of dispute between the two companies, to three disinterested persons, one to be chosen by each of the companies and the third to be chosen by the first two. It was provided, however, that if the third referee should not be selected within a given period, the company desiring the change in rates could apply to any judge of the United States Circuit or District Court in the city of Boston, New York or Brooklyn and request him to appoint the board of three referees. The decision of the referees so appointed was to be binding upon both parties for a period of at least six months, unless the question at issue should be resubmitted to the same referees. The limitation upon the power of the Bell company to cut rates was not to continue, however, past the expiration of the principal Bell patents in 1894. This agreement was to remain in effect for the period of 17 years, that is, until November 1, 1896.

On December 1, 1879, Maynard, as licensee of the National Bell Telephone Company for the District of Columbia, transferred his right to conduct a telephone exchange business to the National Capital Telephone Company. On June 9, 1881, he transferred his right to furnish telephones for private lines under his original agency agreement, to Henry D. Cooke, Jr.[1] No copy of the first transfer was furnished to the Congressional investigating committee, and in the copy of the second transfer the consideration was left blank. At a later date, the exact time not being given, Cooke, who was a heavy stockholder in the National Capital Telephone Company, offered to sell to the company, for $50,000 in stock or cash, the "valuable franchise" which he had secured from Maynard.[2] It appears that this offer was accepted and that Mr. Cooke's holdings in the local company's stock were increased by the amount of $50,000 on account of the "franchise" referred to.

Under the original agency agreements these transfers by the licensee of the Bell interests would not be valid without the approval of the parent company. This approval was secured by two agreements dated March 31, 1883, between the American Bell Telephone Company and the National Capital Telephone Company.[3] Under these agreements, one of which was a lease and license for the operation of the telephone exchange, and the other a lease and license for the operation of telephones for private lines, social lines, etc., it was expressly provided that the ownership of all telephone instruments should remain with the parent company. The licensee company was given the exclusive privilege of operation, however, within the District of Columbia and agreed to supply, by general or special exchanges, all reasonable demands of the public and to be diligent to increase the number of telephones used on its exchanges. It was also expressly provided that call bells, switches, switch-boards and other apparatus furnished by the parent company, should not be used in connection with any telephones except those furnished by that company, and were not to be disposed of to anyone not licensed by that company. The local company agreed to pay the parent company 60 per cent of the rental or royalty col-

[1] Testimony, etc., *op. cit.* p. 176.
[2] *Ibid.*, p. 177.
[3] *Ibid.*, pp. 177, 181.

lected for the use of telephone instruments, the standard rate to be $10 per annum for each battery transmitter and $10 for each magneto telephone. These rates, however, might be changed from time to time by the parent company. It was provided that the second party (the local company) "will not, without special leave of the licensor, so far as it can lawfully prevent it, permit the transmission over such connecting lines of general business messages, market quotations, or news for sale or publication, nor any communications in behalf of other parties than those who directly communicate by the telephone, by themselves or their servants or agents personally present at the instruments, and no person engaged in the business of transmitting messages for other parties shall be authorized or knowingly allowed by the second party to transmit such messages over such lines".

The parent company reserved to itself the right to use the local company's office and exchange for its long distance business or to establish independent offices for that purpose. The Western Union Telegraph Company was named in this agreement as the company which was to perform all telegraphic transmission of messages collected from the telephone lines. The local company had no right to assign its license without the approval of the parent company. Furthermore, it agreed that it would not allow any telegraph company to use or have any rights on its poles or other structures without the assent of the parent company. The local company also agreed to build and equip at its own cost the necessary lines between its telephone exchange and the Western Union Telegraph Company's offices; and in consideration of this undertaking the local company was to receive 50 per cent of the commissions paid by the telegraph company on messages delivered to it. The second agreement of the same date between the parent company and the local company covered the use of private lines, club lines, social lines and speaking tube telephones.

On July 30, 1883, the National Capital Telephone Company transferred its property and franchises to the Chesapeake and Potomac Telephone Company, which had also purchased the property of the Telephone Exchange Company of Baltimore.[1] On August 1, 1883, an agreement was entered

[1] Testimony, etc., *op. cit.*, p. 184.

into between the American Bell Telephone Company, the Chesapeake and Potomac Telephone Company, and the two local companies which had up to that time furnished telephone service in Washington and Baltimore.[1] An interesting side-light upon what is supposed to have been the usual custom of the parent company, is thrown by one of the exhibits in this agreement. This exhibit shows that the parent company had in 1882 made an agency agreement with the local Baltimore company by which the latter agreed to turn over to the parent company, in addition to the required royalties, 35 per cent of all its capital stock, originally issued or that might be issued thereafter. For some unexplained reason this requirement was not contained in any of the Washington agreements.

On February 7, 1885, and March 25, 1886, agreements were entered into between the parent company and the Chesapeake and Potomac Telephone Company for certain extra-territorial connecting lines.[2] The first of these was the long distance line between Baltimore and Washington and intermediate places. For the use of the local company's poles, the parent company agreed to pay a rental of $4 per mile per annum for each wire it strung upon them. The local company was to pay the parent company, in addition to the required royalty on instruments, one-fourth of its gross receipts from long distance tolls, such tolls to be not less than at the rate of 15 cents for the first 10 miles, and 5 cents for each additional 10 miles, for a 5-minute talk. It appears from the copies of these agreements published in the testimony taken before the Congressional investigating committee, that these contracts or agency agreements were made in accordance with standard forms, which were presumably used by the parent company for its licensees everywhere.

Copies of the contracts entered into by the local company with its Washington subscribers, were also furnished to the committee.[3] There are several important and interesting features of the rules and regulations made a part of these contracts. These rules provide that the telephone instruments and lines on the subscriber's premises shall be for the subscriber's use only. The subscriber is to pay $10 for each

[1] Testimony, etc., *op. cit.*, p. 185.
[2] *Ibid.* p. 188, "Form 13C"; p. 192, "Form 13D."
[3] Testimony, etc., *op. cit.*, p. 141.

telephone or transmitter destroyed otherwise than by unavoidable accident, and $25 a month for each instrument removed or detained without authority, until its destruction or loss without the subscriber's fault is satisfactorily proved. The company assumes no liability for the interruption of communication from any cause whatever, except to repay a proportionate rebate of the telephone rental for interruptions, continuing after 24 hours' written notice from the subscriber, and aggregating more than three days a month. The company agrees to remove the telephone instruments from place to place at the request of the subscriber and at his expense. In accordance with the terms of its license agreement, the company has included in its rules a provision that the telephone shall not be used for performing any part of the work of collecting, transmitting or delivering any message in respect of which any toll has been paid to any other party, nor for transmitting market quotations or news for sale, publication or distribution, or for calling messengers except from the central office of the company, "or performing any other service in competition with service which the said company may undertake to perform". The subscriber is forbidden to attach to the telephone, or use in connection with it, any instrument or appliance of any kind whatever, not furnished by the company, without its written consent. The company reserves the right, in case any law is passed which, in its opinion, tends materially to increase the cost of maintaining telephonic communication between its subscribers, to terminate the contract and remove its instruments before the expiration of the contract period. The regular period of the contract is one year. After the expiration of that time it may be terminated by either party on 10 days' notice. The subscriber is required to pay his telephone rental quarterly in advance. In case of his failure to pay any sum due, or in case of any improper use of the telephone on his premises or of any use contrary to these rules and regulations, the company reserves the privilege of terminating the subscriber's right to use the telephone instruments by 24 hours' written notice.

In the course of his testimony before the Congressional committee, Mr. Bryan, president of the company, made some interesting statements relative to the use and the abuse of

the telephone by the public. In explaining the reason for the establishment of public pay stations in Washington, he said that at one time drug stores were permitted to maintain flat-rate public stations by paying $25 more than the regular rate.[1] Under this arrangement these drug store stations were used by every one who chose to use them. This became such an abuse "that a drug store telephone was made to serve a dozen or twenty square blocks, for marketing and for every purpose for which the whole neighborhood desired to use a telephone, and the cost of maintaining it and operating it was out of all proportion to the money received". To overcome this difficulty, the company removed the telephones from the drug stores and replaced them with automatic machines on condition that every one who used the telephone should pay, except the druggist, who had the right to call up all other druggists or physicians without charge. Mr. Bryan also stated that at one time it had been the practice of the exchange to furnish subscribers with information about boat races, ball games, the location of fires and other matters. On one occasion a newspaper man, who had been out late on the night of a fire, found that it was impossible for him to get into communication with his office through the exchange. His wires were all right, but the demand on the operators for fire news was so great that the legitimate business was clogged and in this case practically stopped. As a result of this incident, a new regulation was put into effect by the company, requiring its operators at all hours of the day or night to confine themselves exclusively to giving connections asked for by subscribers.[2] The operator was instructed, in case information was asked, as soon as she ascertained that a regular connection was not being called for, to "refuse to carry on further conversation with the person calling". The first violation of this rule was to subject the offender to an admonition; for the second offense she was liable to four weeks' suspension from duty without pay; and for the third offense she was to be dismissed. In his letter of instructions by which this new rule was promulgated, Mr. Bryan called attention to the fact that, in addition to other objections urged against the disseminating of information by the telephone exchange, there was the fact that such dis-

[1] Testimony, etc., *op. cit.* p. 101.

[2] *Ibid.*, p. 108.

semination "came in direct competition with those who have, I understand, devoted considerable money and time to the establishment of a bureau or bureaus through which the public, by means of its or their publications or otherwise, may legitimately and properly receive such information to which these instructions relate, and such competition is undesirable from every point of view".

In regard to the rule that the use of the telephone should be confined to the subscriber, Mr. Bryan was asked as to what limitations were, in practice, imposed upon subscribers. He replied that the company construed the rule as meaning just what it said, "that when a man subscribes for his telephone, it shall be for the sole use of the subscriber, and on his business".[1] When asked what measures the company took to enforce the rule, he said:

"We have a monitor for every 8 or 10 operators, in order to see that they do not indulge in talking with the grocery clerks—that they attend to their business, in other words; and if in the process of this monitoring it is found that it is the habit of a man having a telephone to bring in a great many persons to use it, it is very easily picked up in that way. * * * * We notify the party that his contract stipulations are being disregarded."

151. Competition to reduce rates—Indianapolis.—There are two telephone companies operating in Indianapolis, having substantially an equal number of subscribers. The Central Union Telephone Company, representing the Bell interests, charges $54 a year for a direct line business telephone, service unlimited, and $24 a year for a similar residence line.[2] The Indianapolis Telephone Company, which is the Independent company, charges $40 a year for an unlimited service on a direct business line within a two-mile radius of the center of the city, and $1.50 additional for each quarter of a mile beyond that distance. The residence rate within the two-mile radius is the same as that charged by the Bell company, $24 a year; and for residences outside this limit an additional charge is made the same as in the case of business telephones.

The original franchise of the Central Union Telephone Company was granted February 17, 1879, to the Indiana District Telephone Company.[3] This company was authorized

[1] Testimony, etc., *op. cit.*, p. 128.
[2] "Telephone Rates and Service", Report of Chicago Council Committee, Sept. 3, 1907, *op. cit.*, p. 191.
[3] Laws and Ordinances, City of Indianapolis, Revision of 1904, p. 1129.

to attach its telephone lines to the poles of the city's fire alarm system, on condition that it would keep the poles in repair and not interfere with their use by the city. The company was also authorized to erect and maintain poles for its own use under certain specified restrictions, and was required to furnish the city, free of charge, 22 telephones, 11 call bells and the necessary wooden brackets, for the purpose of connecting the several engine and reel houses by telephone. The city reserved the right to repeal the ordinance at any time. As a matter of fact, the ordinance was repealed in 1886, and the company was notified to remove all its wires from the streets of the city and to take down its poles within 14 days, on penalty of having these fixtures removed by the street commissioner.[1] A few weeks later, however, a petition was presented to the council, signed by numerous citizens, requesting that the company should not be required to remove its fixtures until such time as a new company should have been given a franchise and have had time to construct a plant and furnish service.[2] The petition was granted on condition that no more poles should be erected or wires strung by the company. The very next year, 1887, a resolution was adopted, authorizing the company to maintain its existing fixtures and to establish such new poles and lines as might be necessary to furnish telephone service to the citizens.[3] Finally, in 1896, an entirely new franchise was granted to this company on certain conditions.[4] The company agreed to place its wires underground within a prescribed district. On all poles which the company maintained in the streets, the city was to have the exclusive use of the top cross-arm for police and fire alarm purposes. In each of the company's conduits, one duct was reserved for the city's use, and the company assumed the obligation to put in, connect up and keep in repair, the city's wires required for use in this duct. The company agreed to pay $6,000 a year for its franchise privileges. It also agreed that its rates for telephone service should not exceed the rates "which it charges in other cities within its territory of the same size and population, for similar service, unless by special request of persons, firms or other corporations desiring to be furnished special service".

[1] Laws and Ordinances, City of Indianapolis, Revision of 1904, *op. cit.*, p. 1131.
[2] *Ibid.*, same reference.
[3] *Ibid.*, p. 1132.
[4] *Ibid.*, same reference.

It should be explained that the Central Union Telephone Company operates practically throughout the states of Indiana, Ohio and Illinois, with the exception of the cities of Cincinnati, Cleveland and Chicago. The franchise contained detailed provisions bringing the company's operations in the streets under the supervision of the city authorities and guarding the city and the other occupants of the streets against damages caused by the company's activities. The company was required to give a bond in the amount of $50,000, which was to be released after two years in case the company had placed its wires underground within the prescribed district. Thereafter the company was to furnish a new bond in the sum of $15,000, conditioned on the faithful performance of its obligations under the franchise.

An Independent franchise was granted by the City of Indianapolis, May 20, 1898, to the New Telephone Company for a period of 25 years.[1] It was expressly stipulated that the company, "recognizing and conceding that such limitation of time as herein expressed is one of the essential and governing conditions of this contract, does hereby bind itself, its successors and assigns, that at the expiration of said period of time it will yield possession of the streets, alleys, avenues and public grounds of said city, and cease the operation of said telephone plant and system, and from thenceforward will make no claim of any kind to exercise any right under the grant herein made, whether such claim be founded upon any charter or corporate rights claimed, or otherwise, and any rights which might be claimed by said company to hold beyond said period of time, under the statute under which it was incorporated, are herein and hereby expressly waived". The city reserved the right, at any time not less than 3 months or more than 6 months before the expiration of the franchise, in case a new franchise had not already been granted to the company, to purchase all the company's tangible property constituting its telephone plant, by payment of the fair market value of such property. In case the city and the company were unable to agree as to the price, the value was to be determined by arbitration, but the reserved right of purchase was not to be construed as binding the city to purchase the property or any part of it unless it elected

[1] Laws and Ordinances, *op. cit.*, p. 1142.

to have the property appraised. If the franchise was not renewed and the city did not care to exercise its option of purchase, the right was reserved to grant a franchise to another company upon such terms as might be fixed in a contract for a period commencing on the date of the expiration of the old franchise. In such case the new company would be authorized to purchase the telephone plant on the same conditions as those under which the city might purchase it. If, at the end of the 25 years, the city had not purchased the plant and the plant had not been sold to another company having a franchise and the franchise to the old company had not been renewed, then the city was required to offer by public advertisement a new franchise for the operation of the plant for a term of years not exceeding 25, such grant to be awarded to the responsible bidder offering the most favorable terms for the city and its citizens and agreeing to purchase the old company's plant at its fair cash value, as determined by arbitration. If no satisfactory bid was received for the franchise, the city would then have the right, without any process of law, to take possession of the streets and other public places occupied by the company's telephone systems, and the company would have three months in which to remove its tangible property. As in the franchise granted two years earlier to the Central Union Telephone Company, the city provided for underground construction within a prescribed area, for the free use of one cross-arm and one duct by the city, for the supervision of street work, for indemnity against damages, and for other matters of detail.

The company agreed to connect the lines of its telephone system with the line or lines operated by such other telephone companies doing business outside the city as should make application therefor and construct their lines to the corporate limits of the city. All such connections were to be made on reasonable terms and without discrimination, on condition that all such outside lines should agree to receive and transmit on similar terms all messages in which this company was interested. It was stated as understood between the parties to the agreement, that connection with these outside telephone lines in the State of Indiana was one of the essential conditions on which the franchise was granted. In case of disagreement as to terms between this company and outside

companies, their differences were to be promptly submitted to arbitration. It was "distinctly understood" by both parties to the agreement "that the principal consideration for the granting of the franchise and privileges conferred herein, is and will be the securing of a reduction of telephone rates to the citizens of said city * * * and the maintenance of such reduced rates during the period of time covered by this contract". It was accordingly agreed that if the company should at any time consolidate with or be absorbed by any competing telephone company, or if any such company should come to own or control, directly or indirectly, one-third or more of this company's stock, or in case there should be any combination, collusion or coöperation between this company and any competing company, or between the stockholders or officers of such companies, to increase the price of telephone service beyond the rates fixed in this franchise, or to modify, change, evade or nullify any of the terms and provisions of this contract, then the franchise was to be forfeited and the city was to have the right to take possession of the company's tangible property, the value of which was agreed upon in advance as the true amount of liquidated damages which the city would sustain by any such violation of the franchise. The company, however, was authorized to consolidate with any competing company with the consent of the city, on condition that the other company should bind itself to reduce telephone rates to its patrons to the rates fixed in this ordinance, and to maintain and operate all its lines and furnish good service at such rates to all its patrons at the time of the consolidation of the companies and to all other persons in the city residing on or near its lines, and on the further condition that it would carry out this company's obligations as to connections with outside telephone systems and perform this company's contracts with all such independent telephone companies. The capital stock of the company was not to be increased beyond $400,000, nor diminished during the period of the franchise, without the express consent of the city. The company agreed to furnish first-class telephone service of the best and most modern character at the rates which were described at the beginning of this section as being charged by the Indianapolis Telephone Company. The company agreed to pay $6,000 a year for its franchise and, after it had 6,000

telephones in operation to pay the city $2 a year for each additional telephone in use.

In regard to the extension of service, it was provided that when the request of any number of citizens desiring telephone service was refused by the company, they might appeal to the board of public works, which must set a time and hear the claims of both sides in regard to the matter. If, after this hearing, the board was of the opinion that the request of the petitioners for service should be granted, it was authorized to order the company to install the necessary telephones and to furnish service at the rates fixed in the ordinance. A penalty of $10 a day for failure to obey any such order was agreed upon as liquidated damages.

This franchise was transferred by the New Telephone Company to the Indianapolis Telephone Company in 1904, and the city gave its consent to the increase of the latter company's capital stock to $1,200,000.[1]

152. Competition secured through the Initiative—Portland, Oregon. —In 1902 all the old franchises of the Pacific States Telephone and Telegraph Company, the Bell company which at that time held a monopoly of the telephone business in Portland, were repealed and a new franchise was granted to run for a period of 25 years.[2] Provision was made that within a certain district the overhead wires were to be removed within 5 years, and in a certain other district within 10 years, and elsewhere from time to time as might be required by the city authorities in the exercise of the police power. The company agreed that upon 90 days' notice it would furnish, equip and install, for the use of the city, and maintain and keep in working order throughout the period of the grant, free of charge, a telephone fire alarm system to consist of a switchboard placed in the headquarters engine house, with metallic circuits running to each of the city's engine houses and fire stations, there to be connected with long distance telephone sets. The company also was to furnish, free of charge, two trunk-lines between its central switchboard and the switchboard of this telephone fire alarm system, so that communication could be had between the company's exchange and the fire alarm exchange. Until the city demanded this special fire alarm system, the company was to furnish, free

[1] Laws and Ordinances, *op. cit.*, p. 1157.
[2] Revised Ordinances of the City of Portland, Jan. 2, 1905, p. 146.

of charge, one telephone for each engine house, to be connected by individual metallic circuits with the company's general telephone system. The city reserved the right to place its fire and police telegraph and water department telephone wires on the company's poles, and the company was required to provide and maintain for the city, free of charge, such wires in its underground conduits as might be necessary for these purposes. The company also agreed to furnish, without charge, 25 telephones to be used in connection with the city's police telephone system, and to continue to furnish 14 telephones in various enumerated city offices, which it was at that time furnishing voluntarily. It was provided, however, that the city should not connect any of the telephones furnished by this company with any telephones, telephone lines or apparatus of any other telephone company. As compensation for the franchise, the company agreed to pay $1,000 a year in addition to the quarterly license fee of $75, which it was already paying. It was also provided that the company should not charge or collect any higher rental for telephones than the maximum rates being collected at the time the franchise was granted. It was expressly stipulated that the franchise should not be construed as limiting the right of the city to make other grants to other persons or corporations for similar purposes in the same streets.

Under the Initiative provisions of the Portland charter a new franchise for an automatic telephone system was submitted to the people at the June election in 1905 and ratified by them. This franchise is of particular interest because it was secured by means of petition and popular vote and was at the time criticised as being a more liberal grant than could have been secured from the city council. One of the conditions of the new franchise was that the telephone system constructed in accordance with its terms should be what is known as the automatic system, similar in kind to the system then in operation in San Diego, California. This franchise contained the usual provisions in regard to underground construction and the safeguarding of the city's interests in connection with all street work. It also contained a provision that the grantee should maintain his poles, conduits, plant, system and exchange in good order and repair and render efficient service throughout the entire term of the

grant, on pain of the forfeiture of the franchise. The grantee was not permitted, without the consent of the city by ordinance, to sell or transfer his property or privileges to any other person or corporation engaged in the telephone business, and was forbidden to enter into any combination, directly or indirectly, with any other person or corporation operating within the city, to fix the rates to be charged for telephone service.

The immediate grantee in this franchise was an individual, and he was authorized to transfer his rights to a company organized under the laws of the state for carrying on a general telephone and telegraph business, on condition that notice of such assignment should be filed by him with the city auditor within 60 days after its execution. It was a condition of the franchise that all telephone lines constructed by the grantee should have complete copper metallic circuits and that its conduit system should be constructed of such size and capacity as to accommodate wires and conductors sufficient to provide for 10,000 telephones. The rates fixed in the ordinance were $6.25 per month for a business telephone and $2.75 per month for a residence telephone, so long as the number of telephones comprised in the grantee's system did not exceed 10,000. When the number of subscribers had increased beyond the limit, the rate charged might be increased $6 a year for each additional thousand, but in no case was the business rate to exceed $8 a month or $96 a year, or the residence rate to exceed $4 a month or $48 a year. Moreover, a discount of 25 cents per month for prompt payment was allowed. The grantee agreed to pay 1 per cent of his gross receipts into the city treasury, with a fixed minimum of $1,000 a year for the years 1908 to 1914, of $2,000 a year for the years 1915 to 1926, and of $3,000 a year for the years 1927 to 1929. The grantee also agreed to install, equip and maintain a police patrol telephone system, with a suitable switchboard in the police station and telephones to be placed in boxes on his poles or at places designated by the city. The grantee was to install 75 of these telephones as soon as he had his poles erected and his wires laid, and thereafter was to install 35 telephones a year until he had installed a total of 300. It was provided that 5 telephones might be placed on one line, and the city was to supply the boxes. The

entire police telephone system was to become the property of the city on the termination, forfeiture or abandonment of the enterprise. Provision was also made for free telephone service for the fire department and for the general city offices. It was provided that the grantee should keep, at all times during the period of the franchise, full and correct books of account and make quarterly reports to the city auditor. These reports were to contain "an accurate statement in summarized form, as well as in detail, of all receipts from all sources, and all expenditures for all purposes, together with a full statement of all assets and debts", and other information in regard to the costs and profits of the service and the financial condition of the grantee; and the city auditor was authorized to examine the grantee's books and vouchers at all reasonable hours. No charge could be made for any telephone service until at least 3,000 telephones had been installed and were in actual operation. It was agreed that $50,000 should be expended under the grant within one year, $250,000 within two years, and $500,000 within three years. The entire cost of the plant, when fully completed, was estimated at $1,000,000. The automatic system could be changed for a manual system only with the city's consent. It was expressly stipulated that the rights conferred by this franchise should not operate in any way as an enhancement of the grantee's property or be an asset or item of ownership in its appraisal in the event that the city should ever acquire the plant by purchase. It was stipulated that the franchise should terminate in 25 years, and that the city should at that time have the right to purchase the grantee's property used in connection with the telephone business at a fair valuation. This valuation was not to include any franchise value, but was to include "good will of every kind and description". No purchase could be effected by the city without ratification by a majority of the electors; and if it was necessary to issue bonds for the purchase of the property, then a two-thirds affirmative vote of the electors was required.

If the city should elect not to purchase the plant and should instead grant a new or additional franchise or an extension of the old franchise, then the grantee under the old franchise was to have "the first and preferential right to take and receive such new, additional or extended franchise". If, how-

ever, the present grantee declined to take the new franchise and it should be granted by the city to any other individual or corporation, then such new grantee, in addition to the compensation it might be required to pay the city, would also be required to purchase the original grantee's plant. It was expressly stipulated that, before the original grantee, his successors or assigns, should be deprived of the right to "possess, maintain, operate and enjoy" the plant and property, the new grantee must take over the property at a fair valuation to be arrived at in the same way as if the city were the purchaser.

It is apparent from the purchase clause of this franchise that the grantee's property is amply protected against confiscation by the city. While the franchise purports to be for 25 years only, the city must itself purchase the entire plant, including good will, or find somebody else who is willing to do so, before this grantee can be stopped from continuing to operate. It may be noted also that the rate of $75 a year for business telephones, fixed in this franchise, is nearly double the $40 rate fixed by the Independent telephone franchise in Indianapolis, a city about twice as large as Portland. It is true that under the Indianapolis franchise the $40 rate applies only within the two-mile radius; but in Portland, on the other hand, the $75 rate applies only as long as the number of telephones connected with the exchange is less than 10,000. In Grand Rapids, Michigan, a city of about the same size as Portland, the automatic telephone system has been in operation for several years by an Independent telephone company, and the rate charged for business telephones is $36 a year for unlimited service.

153. Franchise conditions approved by the Probate Court—Toledo.—In February, 1901, the Toledo Home Telephone Company applied to the city council of Toledo for authority to use the streets of the city for telephone purposes, and submitted with its application a draft of a franchise which it asked the common council to adopt. The council, however, did not grant the franchise or pass upon the company's application within a reasonable time. Accordingly, the company applied to the Probate Court of Lucas County for a determination of the terms and conditions upon which it might operate within the city limits. The Probate Judge granted

the company's petition and awarded a franchise which was accepted by the company on July 16, 1901.[1] Under this grant the company was authorized to construct a telephone system consisting of wires, underground conduits, poles, switchboards, and other necessary appliances, and operate this system in perpetuity. Construction work in the streets was to be under the reasonable supervision of the city engineer, and the wires were to be placed underground within a specified district at the heart of the city. The company was required, within 90 days after the acceptance of its franchise, to file a detailed map, plan and specifications for its underground construction with the Probate Court, which, if approved by the court, were to be afterward filed with the city engineer. The company was required to commence work under this plan within 90 days after the last filing and complete the work not later than December 31, 1903, unless delayed by litigation carried on in good faith. The company was also

[1] Special Ordinances of the City of Toledo, p. 686. In response to an inquiry about this franchise, Mr. Charles S. Northrop, City Solicitor of Toledo, in a letter dated March 16, 1909, made the following statement:

"The franchise was granted by the State of Ohio by virtue of Section 3461 (Revised Statutes), which in form applies only to magnetic telegraph companies but which has since been made applicable to telephone companies. This section provides as follows:

"'When any lands authorized to be appropriated to the use of a company are subject to the easement of a street, alley, public way, or other public use, within the limits of any city or village, the mode of use shall be such as shall be agreed upon between the municipal authorities of the city or village and the company: and if they cannot agree, or the municipal authorities unreasonably delay to enter into any agreement, the Probate Court of the county, in a proceeding instituted for the purpose, shall direct in what mode such telegraph line shall be constructed along such street, alley, or public way, so as not to incommode the public in the use of the same; but nothing in this section shall be so construed as to authorize any municipal corporation to demand or receive any compensation for the use of a street, alley, or public way, beyond what may be necessary to restore the pavement to its former state of usefulness.'

"The city having declined to grant a franchise on the terms demanded by the telephone company, the company filed its application in the Probate Court for this county setting forth its inability to agree with the city and asked to have the Probate Court determine by what mode the telephone company should construct its wires along the streets of the city, and in its application agreed to a certain scale of prices. The application, of course, was granted and the agreement as to the prices carried into the decree.

"Section 3461 was declared by the Supreme Court of Ohio to be unconstitutional, in Zanesville vs. Telephone and Telegraph Company, 63 Ohio State, 442. However, on rehearing the Supreme Court held the statute to be constitutional. See same title, 64 Ohio State, 67. * * * *

"After the telephone company had operated for some little time in accordance with the scale of prices fixed in the order of the Probate Court, the Supreme Court in the Findlay case held that the Probate Court was without power to make an order relative to the prices that might be charged for telephone service.

"Macklin vs. Home Telephone Co., 24 O. C. C. 446: 70 Ohio State, 507.

"The decision in the Supreme Court was without report and the title in the Court of last resort was City of Findlay vs. Home Telephone Company.

"After that case had been decided in the Supreme Court the Toledo Home Telephone Company increased its rates. Its right so to do was questioned by the city, but was sustained by the Circuit Court in the case of State of Ohio, ex rel., against the Toledo Home Telephone Company, and by the Supreme Court in 72 Ohio State, 60."

required to extend its underground system from time to time, as other telegraph and telephone companies should be required by the city authorities to do so. Outside of the underground district, the company was authorized to set poles in the public ways, but wherever practicable they were to be placed in alleys and wherever practicable in front of the dividing line between lots. The company was required to furnish and maintain at least one duct of sufficient size and capacity for the use of the city's fire alarm and police patrol wires. The company was also required to provide space on the top cross-arm of its poles for the city's wires, free of charge. The usual requirements in regard to the restoration of the streets and the filing of bonds, were inserted in the grant. It was specifically provided that the company should proceed diligently to construct and equip within the city "a first-class modern telephone plant, in character and extent sufficient to furnish all subscribers" a good first-class telephone service. The company was to have at least 3,000 subscribers connected with its system by December 31, 1903.

The rates fixed in this franchise were $44 per year for a business telephone on an individual wire with metallic circuit within the city limits, subject to a reduction of $1 per quarter if paid in advance, and $26 per year for each residence telephone on an individual wire with metallic circuit within the city limits, subject to a reduction of 50 cents per quarter if paid in advance. The rate for extension telephones was not to exceed $6 each per annum, nor for installing extension bells $5 each. Twenty-one sets of telephones were to be furnished, free of charge, to various city offices enumerated in the grant; and for use in connection with the city's fire alarm exchange system the company was to furnish one battery transmitter or microphone and one telephone for each engine house, provided that the total number of such transmitters and telephones should not exceed 25. For any additional telephones the city was to receive a discount of 25 per cent from the regular rates charged for business purposes. It was provided that the telephone equipment should be "of the best, most modern and improved central energy type", and that the service was to be first-class in all respects, continuous and unlimited for 24 hours in every day, except when interrupted by unavoidable causes. The company was

required to connect its lines as far as possible with any and all lines and systems outside of the city, in the states of Ohio, Indiana and Michigan, on reasonable terms and without discrimination, on condition that the owners of the outside lines desiring such communication should agree to furnish first-class service and to receive and transmit on like terms all of the company's messages. The company was forbidden to sell its franchise, directly or indirectly, to or for the benefit of the owner of any competing telephone system, on penalty of the forfeiture of its rights. The company was required to deposit with the judge, within 10 days after the date of the order of the Probate Court granting the franchise a certified check for $5,000, payable to the order of the city treasurer. If the company thereafter failed to execute the bonds required or to deposit with the court the detailed map and specifications of its proposed underground work, this check was to be forfeited to the city. Upon the petition of the company and the city, the court fixed the amount of the compensation to be paid by the company to the city for the restoration of pavements interfered with in the construction of the company's plant, at 50 cents for every pole set.

154. Local and long distance Independent franchises in the Twin Cities—Minneapolis and St. Paul.—In Minneapolis and St. Paul there is a dual system of telephones. Substantially identical franchises were granted by both cities in 1898 to the Independent companies. The Minnesota Central Telephone Company received a franchise for maintaining "public pay stations and instruments for private use, for connection with long distance telephone systems".[1] Under its franchises this company was not permitted to transfer its stock or any part of it, or its rights or property, to any other telephone company operating in Minneapolis or St. Paul, or to consolidate with any such company, without the consent of the city council, expressed by resolution passed by a two-thirds vote.

Under these franchises each city reserved to itself the right to purchase the company's system within its limits at any time after five years from the date of the acceptance of the franchise. The price was not to exceed "its actual and necessary cost of construction, less any depreciation in the value

[1] Minneapolis City Charter and Ordinances, 1905, p. 604; Compiled Ordinances of City of St. Paul, 1907, p. 1110.

thereof, by reason of wear and tear or from any other cause whatsoever". No value whatever was to be placed upon the franchise. If the city and the company were unable to agree on the purchase price, its value was to be ascertained by arbitrators, two of whom were to be appointed by the city council and two by the company. If these failed to agree, they were to call in a fifth. If the first four could not agree on a fifth arbitrator, then the full bench of the Minnesota judicial district in which the city is located was to select him upon the application of either party. The city was not to be bound to purchase the telephone and conduit system at the price fixed by the board of arbitration, unless it chose to do so, and it was to have one year within which to make the required payment. It was provided that the company should not bond, mortgage or in any way encumber its telephone and conduit system located within either city, for more than 75 per cent of the amount actually and necessarily used in their construction. In case of municipal purchase the city had the right to take over the system subject to such encumbrances, after deducting the amount thereof from the price to be paid. The company was required to furnish the city an itemized statement sworn to by its officers, showing the cost of construction, and for the purpose of verifying any such statement the company's books were to be open to the inspection of any officer or person designated by the city council for that purpose. The company was required to pay to the city five per cent of its gross earnings from tolls received within the city limits and also from tolls received outside the city on account of messages originating within the city. As further compensation, the city was to have the right to attach its fire alarm and police wires to the upper cross-arm of the company's poles. All poles were to be not less than 50 feet in length and 8 inches in diameter at the top. It was also stipulated that all of the company's aerial and underground conductors entering any building, must be provided, near the point of entrance to the building, with "some approved protective device which will operate to shunt the instruments in case of a dangerous rise in potential and will open and arrest any abnormal current flow". If the protector should be placed within the building, the wires of the circuit from the support on the outside of the building to

the protective device, were to be of such insulation and installed in such manner as required by the ordinances of the city for low potential electric light and power service wires.

In the franchise granted by St. Paul there was a special provision limiting the term of the grant to 25 years and providing that the company's rates should not exceed 10 cents for a 5 minute talk between the two cities, and requiring the company to make connection with any and all local telephone exchanges in St. Paul upon equal terms, so long as the company itself did not operate a telephone exchange in the city. It was provided, however, that this clause should not require the company to make any connection with the Northwestern telephone exchange, which is the Bell Company operating in the Twin Cities.

Local telephone franchises were received from the two cities at about the same time by the Mississippi Valley Telephone Company.[1] Under these franchises the maximum rates in either city were to be $48 per annum for a business telephone located within two miles of the post-office, and $30 per annum for a residence telephone within the same limits. An additional rental of 25 cents per month was permitted for each half-mile beyond the two-mile limit. For telephones furnished the city the rates were not to exceed the following:

Three telephones with switch-board service, $2.50 per month each.

Thirty-one telephones with switch-board service, $1.50 per month each.

Sixty telephones for police[2] calls, with care and maintenance $2.50 per year each.

The right was expressly reserved to the city, to increase the number of telephones used by it, according to this schedule of prices. It was also provided that if the city should purchase and use its own telephones, connected with its own wires or connected with wires furnished by the company, such fire alarm and police service as might be required to be connected with the general telephone system of the company should be furnished free of cost. It was provided that all telephones connected with the company's exchange should be "connected only by metallic circuits, and no grounded wire

[1] Minneapolis City Charter and Ordinances, *op. cit.*, p. 608; Compiled Ordinances of City of St. Paul, *op. cit.*, p. 1120.

[2] In the St. Paul ordinance the word "public" is used instead of "police."

or common return circuits, so-called", should be employed. It was also provided that "what is known as party lines shall, in no case, be used or operated under this ordinance, nor shall more than one set of telephone instruments be attached to any circuit, except when specially authorized" by the city council. The St. Paul franchise, however, was amended two years later by adding the provision that "two sets of telephone instruments may be attached to any one circuit when both such telephone instruments are used in residences, and party lines may be established to such extent".[1] The company was required to furnish the cities space upon its poles for fire alarm and police wires and, at its own expense, to string on its poles and draw into its conduits any such wires required by the cities. The company was not required, however, to permit, on its poles or in its conduits, any wires carrying a stronger electrical current than could be safely carried without impairing the efficiency of the company's service. But any question of interference arising in this connection was to be decided by the city council. There were provisions forbidding the transfer of the company's stock and reserving to the cities the right of purchase, similar to the provisions in the long distance telephone franchises already described, except that the option might be exercised at any time after four years instead of five. In the case of the local company, however, it was also provided that none of its directors should hold stock in any other telephone company operating a general telephone exchange in the city. Similar provisions were also included in regard to the bonding of the company's property, the payment of a gross receipts tax, and the inspection of the company's books. There was a further provision, however, that the company should not be required to pay the 5 per cent gross earnings tax on a number of business telephones and a number of residence telephones equal to the number of such telephones in use by actual subscribers to all opposition telephone companies not required to pay a gross earnings tax to the cities.

155. Telephones in a city of 15,000—Ann Arbor, Michigan.—The New State Telephone Company, representing the Bell interests, operates in the City of Ann Arbor under a franchise approved May 7, 1897.[2] This franchise contains provisions

[1] Compiled Ordinances of St. Paul, *op. cit.*, p. 1123.
[2] Charter and Ordinances of the city of Ann Arbor, 1908, p. 207.

in considerable detail in regard to the setting of poles, stringing of wires and other street work, and provides that the company shall furnish the city 10 telephones free and 10 other telephones at one-half the regular rates. The company must move any of the 20 telephones, without cost to the city, when required to do so by the common council; but may not be required to move them more than once a year. The maximum rates permitted under this franchise are $24 a year for business places and offices, and $18 a year for residences. The company is required to furnish a bond in the sum of $2,500 to protect the city from damage suits growing out of the company's negligence, and the city reserves the right to amend or alter the ordinance at any time and to make other and further rules and regulations, as public convenience and necessity may require, concerning the extension, operation or construction of the company's plant and apparatus. The franchise may be forfeited by a two-thirds vote of the council in case the company fails or refuses to perform its obligations. The company may also be required to remove its poles and wires from any street in the city, on condition that this requirement shall be uniform to all companies operating in the city. Provision is made that if the company consolidates with any other person, company or corporation, its franchises shall be null and void. It is also provided that when the company shall extend its lines to Ypsilanti, a city about 8 miles distant, and open an exchange there, communication shall be furnished, without extra charge, between the company's subscribers in the two cities. It is also provided that when the company shall extend its lines to Detroit, distant about 40 miles, communication may be had between the two cities at the rate of 10 cents for a 5-minute conversation.

Another franchise was granted by the City of Ann Arbor on June 10, 1902, and amended the following year.[1] This grant was made to individuals and was afterward transferred to the Home Telephone Company, an Independent concern. It was stipulated that the life of the grant should be 30 years unless sooner terminated by purchase by the city. Provision was made that on certain enumerated streets the company's lines should be laid in underground conduits. The rates to be charged under this franchise were the same as those named

[1] Charter and Ordinances, *op. cit.*, p. 228.

in the preceding one, $24 per annum for a business telephone and $18 per annum for a residence telephone; but these rates were to be granted on condition that the subscriber should enter into a written contract to use his telephone for three years or more. In the absence of such a contract, the grantees were authorized to charge $2 more per year for either a business or a residence telephone. It was also provided that no telephone should be required to be installed for less than one quarter's rental, and the grantees were authorized to charge not exceeding $1 a month extra for long distance telephones on full copper metallic circuits. The grantees were also authorized to rent out space in their conduits, on condition that such conduits should not be used for wires transmitting stronger electric currents than are required for telephones. The city reserved to itself the right to use one duct in all of the grantees' conduits, free of charge, and the grantees agreed to furnish the city 22 free telephones and any additional telephones required for city use at 20 per cent discount from the regular rates. Upon giving at least six months' notice, the city was to have the right to purchase the grantees' telephone system at the end of 10 years from the date of the ordinance or at the end of any 5-year period thereafter. In case of purchase the city was to pay the actual value of the plant, "which shall not be less than the actual cost of construction of such plant". It was provided that neither this franchise nor any of the rights and privileges under it should be sold, assigned or leased to any telephone company then located or doing business in the city, "so as to in any manner thereby prevent or remove legitimate competition".

156. Important points of a telephone franchise. —The telephone has come to be second in importance only to the street railway as a public utility. Although on account of its long distance connections it is not solely a local utility, nevertheless in all cases where local authorities have jurisdiction, the terms and conditions of telephone franchises are of great importance. Standing out as most important of all the problems connected with a telephone franchise is the matter of rates. While in small towns a system of flat rates, with a proper differentiation between residence and business places, may not work substantial injustice and on account of its

simplicity and convenience may be well suited to the tastes of the people, there is a growing conviction that in all important cities telephone service should be rendered on the measured rate plan. This is true because as cities increase in size, the differences in the amount of use by the different classes of telephone patrons become very much more marked, and also because with the extension of service to a large exchange the cost to each subscriber tends to increase so that unless measured rates are introduced no one can have a telephone even for necessary uses without paying for it on the basis of a luxury. In large cities, the neighborhood exchange plan, coupled with an additional charge for each connection with the central exchange, is a convenient solution of the difficulty for the suburban or semi-suburban districts. While there is no particular reason why the average householder connected with the central exchange of a great city should require the use of a telephone more frequently than a subscriber in a small town, it is desirable that every patron of a telephone should be able to connect, in case of need, with anyone else in the same city who has a telephone.

This leads us from the problem of rates to the problem of competition. Whatever may have been the advantages to the telephone business in the recent past arising from the rivalry of different systems and different companies, it is obvious from the standpoint of the telephone subscriber that the business should be operated as a unit. It should be frankly recognized in each community that the telephone company is a public servant delegated to perform a monopoly function subject to the control of the public authorities and bound to give good service and adequate extensions at reasonable rates, or else to go out of the business and let somebody else take it up who will do so.

The advantages of the automatic system, at least in cities of moderate size, are sufficiently marked so that a franchise for any considerable period of years ought to reserve the right to the public authorities to require the installation of this system if upon careful investigation it is deemed for the public interest to do so.

Another matter of importance is a requirement that the local telephone company shall provide connections with toll lines so that the local service shall be properly supplemented

with long distance service. While the number of long distance messages is small compared with the number of local messages, still the efficiency of a local system is largely dependent upon proper interurban connections.

It is important in a telephone franchise to insert specific requirements in regard to the publication of the telephone directory and the separate listings which shall be permitted to a subscriber either free or for extra compensation. It is important that a telephone directory should have not only an alphabetical list of all subscribers, but also a numerical list.

It is also to be desired that each subscriber should be at liberty to purchase standard telephone instruments in the open market for use on his own premises to be connected with the lines of the telephone company.

While it is desirable that rates should be simplified as much as possible, it seems necessary that special provisions should be made for special classes of service such as private branch exchanges, private lines, extension telephones, neighborhood exchanges, etc.

In common with telegraph and electric light franchises the franchise of a telephone company should reserve to the local authorities adequate control in the matter of the construction of pole lines and conduits and the proper insulation of wires. As with all other public utilities the principal desideratum in the case of the telephone is to reserve to the city full control of the streets, not only on account of the necessities of ordinary traffic but also in order that provision may be made from time to time for the symmetrical development of all public utilities. In the meantime the immediate requirement is for adequate service at reasonable rates so adjusted that the telephone shall not become a factor in the strengthening of privileged classes of the community, but shall rather be a democratic instrument of development helping to equalize conditions and to open to all citizens alike the advantages of intercommunication.

A telephone franchise, like any other, should reserve to the city the right to purchase the plant, and should make the status of the company's physical property and franchise rights, at the expiration of the grant, perfectly clear and definite.

CHAPTER X.

THE TELEGRAPH AND THE CONDITIONS IMPOSED UPON IT BY LOCAL AUTHORITIES.

157. History and importance of the telegraph as a public utility.—The telegraph was invented about the middle of the nineteenth century. The Western Union Telegraph Company was incorporated in 1851 under the name of the "New York and Mississippi Valley Printing Telegraph Company", and assumed its present name in 1856. In the early years of the telegraph business a great many companies were organized in different parts of the country for carrying it on. Most of these companies were, however, gradually absorbed by the Western Union Telegraph Company, which held a practical monopoly until the Postal Telegraph Cable Company came into the field. At the present time practically the entire telegraph business of the country is controlled by these two companies and their subsidiaries. Bulletin No 17 of the Bureau of the Census gives statistics for telegraph systems in 1902, and compares the status of the industry at that time with its status as shown by the census report for 1880.[1] The 77 commercial telegraph systems in operation in 1880 had dwindled to 25 in 1902, although the mileage of wires had increased from less than 300,000 to more than 1,300,000; the number of messages from less than 32,000,000

[1] "Telephones and Telegraphs, 1902," *op. cit.*, pp. 29 *et seq.*

to nearly 92,000,000; and the outstanding stock and bonds from $77,000,000 to approximately $163,000,000. The total revenue of the business had increased from less than $17,000,000 to nearly $41,000,000, although the average rate per message had decreased from 43 cents in 1880 to 31 cents in 1902. In the latter year there were upwards of 27,000 telegraph offices and about the same number of employes, including 13,000 operators. The total assets of the commercial telegraph systems in 1902 were reported as amounting to $195,000,000, including about $26,000,000 of stocks and bonds in other companies. Of the 1,307,000 miles of wire in operation, 98.5 per cent was overhead, leaving only 17,265 miles underground. Besides the commercial land telegraphs, there were 20 ocean cables with a total length of 16,677 miles.[1]

In addition to the commercial systems, there was a very large mileage of telegraph lines owned and operated by railway companies. Indeed, the number of railway companies reporting to the Census Bureau the maintenance of telegraph and telephone lines in connection with the transportation business, was no less than 684. A total of 1,127,000 miles of wire was operated along the rights of way of these companies. But of this total, only 21.5 per cent was owned by the railway companies themselves. The Bureau of the Census was unable to eliminate the duplications of mileage reported by the railway companies on the one hand and by the commercial telegraph companies on the other. The railway companies reported 31,278 telegraph offices, with over 30,000 operators. An interesting item of the somewhat meager statistics collected by the Census Bureau, is the comparison of the amount of copper wire and of iron wire in use by the commercial systems. There were only 333,000 miles of copper wire, as against 864,000 miles of iron wire, owned by these companies. Inasmuch as iron wire is much

[1] The Preliminary Report on Telegraphs for 1907, issued by the Bureau of the Census, Feb. 13, 1909, shows a considerable growth in the business during the preceding five years. The number of companies or systems remained the same, but the miles of single wire exclusive of ocean cable had increased to 1,578,000, or nearly 20 per cent; the miles of ocean cable had increased to 46,301, or 177.7 per cent. The total number of messages sent was a little short of 104,000,000 or 13.2 per cent more than in 1902; while the total income was $51,583,000, which represented an increase of 26 per cent in the five years. Outstanding capitalization, including stocks and bonds, had increased 35.2 per cent, to $220,293,000; while the average number of employees had increased only 1.5 per cent, as against an increase of 18.4 per cent in the aggregate amount of salaries and wages paid.

cheaper and less durable than copper wire, it is possible that the preponderance in the use of the former explains to a considerable extent the profitableness of the telegraph companies' business until recent years and the apparently troublous times to which they are coming. The reconstruction of the bulk of their lines with more expensive material when the money that should have been charged off for depreciation of the original plant has been paid out in dividends, will be likely to put a severe test on their financial ability.

But financial improvidence is not the only trouble that has come upon the telegraph business in recent years. The enormous development of the use of the telephone, both for long distance and for local business, has undoubtedly resulted in a serious check upon the growth of the telegraph as a public utility. As already described in the preceding chapter, the Western Union Telegraph Company in 1879 entered into an alliance with the Bell telephone interests, by the terms of which the Western Union received a bounty on all Bell telephones in use as a consideration for keeping out of the telephone business. The Western Union was also designated by the parent company of the Bell interests as the only telegraph company with which the Bell licensees were permitted and required to make connections for the purpose of receiving and delivering messages. The enormous development of the Independent movement in the telephone business and the advent of competition in the telegraph field itself, have rendered the ancient alliance less profitable and less dangerous to the public interests than it was formerly.

At the present time the Western Union Telegraph Company has capital stock to the amount of about $100,000,000 outstanding and almost $40,000,000 of bonds. The local telegraph business of the Western Union is handled through separate companies. The American District Telegraph Company of New York handles the Western Union messages in New York City, while the American District Telegraph Company of New Jersey, organized in 1901, has consolidated all of the Western Union's local subsidiaries outside of New York City. The Postal Telegraph Cable Company and its subsidiaries have been brought under the control of The Mackay Companies, a voluntary association formed in Boston, December 19, 1903, which now owns stock in up-

wards of 100 different cable, telegraph and telephone companies in different parts of the United States. The Mackay Companies has a capitalization of upwards of $90,000,000. It owns all of the $23,000,000 stock of the old Commercial Cable Company, and there are still outstanding $20,000,000 bonds issued by the latter company. The Mackay Companies is also the largest stockholder in the American Telephone and Telegraph Company. It remains to be seen, how far the development of wireless telegraphy will militate against the interests of the telegraph companies now in the field.

158. Peculiarities of the telegraph in its relation to municipalities.—In many respects the telegraph, as a public utility, bears a different relation to the cities whose streets it occupies, from that borne by any other public utility. In the first place, the principal use of the telegraph is for long distance communication. It is, therefore, not only interurban, but to a very marked extent interstate, and to a considerable extent international, in its operation. For this reason the nature and extent of the jurisdiction which can be exercised over it by the local authorities, are both limited. Furthermore, the telegraph is in a peculiar way allied with the steam railroads, both on account of its tremendous importance as an auxiliary to the operation of railroad systems and also because railroad rights of way have furnished convenient locations for pole lines outside of the immediate jurisdiction of the public authorities. In the second place, the telegraph, unlike the telephone, is not brought to the door of the individual patron by means of an elaborate system of local wires and fixtures. Messages are taken and delivered by the employes of the company. Even where a telegraph company needs to establish pole lines or lines of conduits in the streets, this need does not extend to all or a large proportion of the streets of a city, but only to such few streets as are required for the purposes of one or two through lines and a few branches. Accordingly, a telegraph franchise, like a street railway franchise, is ordinarily granted for specific routes. The interurban and interstate nature of the business has also been generally recognized in legislation, so that in many states a telegraph company incorporated under general laws has a right from the state legislature to occupy all the necessary streets and highways

with its fixtures, subject only to reasonable regulation by the local authorities. In these states a city has no authority to prevent telegraph companies from establishing their lines through its streets, but usually the local authorities have the right to specify the particular streets to be occupied by the company and the particular locations of poles or conduits in the streets. Another peculiarity of the telegraph in its relation to municipalities is that, inasmuch as the service is local only to a limited extent, the local authority ordinarily has no power to regulate rates, and maximum rates are seldom prescribed in a telegraph franchise. Some of these peculiarities are shared by the telegraph with the long distance telephone, especially those arising from the interurban and interstate nature of the business. The public station at which outgoing messages are received and from which incoming messages are delivered by messenger, is, however, a more essential part of the telegraph than of the long distance telephone, because in the case of the telephone physical connection may be made with the local telephone exchange, so that the patron of the utility is enabled to carry on his long distance conversations from his own house or office. The telegraph, on the other hand, requiring as it does an expert operator to interpret the message from the wire, cannot be connected with a local telegraph or signal system with the same result.

159. Usual characteristics of a telegraph franchise.—In view of the peculiarities of the telegraph business, as relating to municipalities, the provisions of local telegraph franchises are ordinarily limited to a comparatively few subjects of regulation. In common with telephone and signal franchises, there are regulations as to the location, character and maintenance of pole lines. There are provisions for preventing interference with ordinary traffic in the streets and providing for the removal of poles and wires when required by the local authorities. In the case of pole lines the local authorities have much more generally granted franchises, subject to repeal than in the case of other public utility fixtures. There is also the usual provision that the grantee must indemnify the city against any damages for which the city may become liable on account of the obstruction of the street or on account of injury to private property owners

through the placing of poles, the limitation of light and access, and injury to shade trees. As a general thing, a telegraph franchise also provides that the city shall have the use of the poles for fire alarm and police telegraph wires and sometimes that the city's call-boxes may be attached to the poles. There is frequently also a provision for the joint use of poles by different companies having lines in the same street. There is occasionally some provision for free telegraphic service to the city and frequently a provision to the effect that the franchise shall become void in case the company combines with its competitors. Perhaps most important of all is the provision that the company's wires shall be placed underground in the business section of the city and the reservation to the local authorities of the right to compel the grantee to place its wires in conduits throughout the city at any time when the safety and convenience of the public demand the removal of the overhead system. In brief, the provisions of a telegraph franchise have to do almost altogether with the maintenance of the city's control over the structures in the streets.

160. Special franchises subject to general law and general ordinances — Erie, Harrisburg and Lancaster.—Under the laws of Pennsylvania a telegraph company, when properly incorporated, is authorized to construct its lines along any of the public highways and across or under any of the waters within the limits of the state, by the use of wires, cables, posts, piers, abutments or subways, subject to the "reasonable regulation" of the municipalities through which the lines pass.[1] It is provided, however, that the companies shall not incommode the use of the streets or injuriously interrupt the navigation of the waters: and no telegraph company is authorized under the general law to construct a bridge across any of the waters of the state. It is provided that before the company exercises its powers, it must apply to the municipal authorities for permission to occupy the particular streets it desires to use. Such permission can be given by ordinance only, and such conditions and regulations may be imposed by the municipal authorities as they deem necessary. The local authorities have the power to charge a license fee against companies having poles, wires, conduits or cables in the streets. This fee may be imposed, however,

[1] Digest of Laws, Ordinances and Rules, city of Erie, 1907, Part I, p. 230.

only as compensation for the inspection and regulation of such fixtures, and in case a company deems the license fee unreasonable, it may have recourse to the courts. In such a case, after the taking of evidence, the court is required to "determine the amount of annual license fees which should be paid to said municipal corporation in order to properly compensate it for the necessary cost of the services performed, or to be performed, by it, for the inspection and regulation of the poles, wires, conduits or cables" of the company.[1] The amount so fixed is the maximum which the local authority may charge, and this maximum continues until altered by the court, and no application for such alteration may be made oftener than once in two years. There is a special provision in the general law to the effect that whenever any wire or cable is attached to any building or land or extends over it, "no lapse of time whatever shall raise a presumption, or justify a prescription of any perpetual right to such attachment or extension". There is another provision that owners of land adjoining streets where poles and wires are maintained may, in case of damage by reason of the cutting of trees in or along the highway, petition the courts and have the amount of damages assessed by viewers appointed for the purpose. The general law also provides that companies may enter into contracts for the use of each other's fixtures.

Supplementing the general law of the state, the City of Erie has a general ordinance governing the construction and maintenance of poles and wires in the streets.[2] By this ordinance it is provided that permission to erect poles and string wires shall not be granted to any person or company except by ordinance. One of the conditions of any such grant must be that the city reserve to itself the right to place and maintain one wire on any pole or poles erected by a grantee, without charge. The location of the wire is to be determined by the chief engineer of the fire department; but when it is "reasonably practicable", the city wire is to be on the top of the poles. Each company is to be responsible to the city for any damages which may result from the erection of its structures in the streets; and the construction of such fixtures, both as to location and as to manner of erec-

[1] Digest of Laws, etc., *op. cit.*, Part I, p. 232. [2] *Ibid.*, Part II, p. 289.

tion, is to be subject to the direction of the proper municipal authorities, and, particularly, the structures are to be placed in such a way that the wires will not come in contact with the wires of the fire alarm telegraph. A grant made by the city may be revoked at any time; and, when the grant is revoked, the grantee's poles and wires must be immediately removed from the streets. Whenever any company's wires intersect or cross the fire alarm telegraph wires, the company is required to set a post or pole, with cross-arms at least two feet apart, at the point of intersection and attach the different sets of wires to these cross-arms in such a manner that the wires cannot possibly come in contact with each other. Wherever practicable, the fire alarm wires are to be placed on the highest arm. No company is authorized to place its wires on the city's fire alarm telegraph poles without the written consent of the chief engineer of the fire department. When this general ordinance was passed, October 23, 1882, a provision was inserted revoking all licenses for the erection of poles and wires theretofore granted by the city. It was stipulated, however, that this revocation should not be construed as preventing the renewal of any such license upon application by the grantee and subject to the conditions of this ordinance. By a general ordinance adopted in 1897, the city provided that all poles erected by private companies to replace poles erected and owned by the city, should be the property of the city.[1] This ordinance also provided that it should be unlawful for any person "to post, tack or affix any advertisement or sign on any pole in the City of Erie, which is used or intended to be used for carrying or supporting a wire or wires".

Special permission was granted by an ordinance in 1890 to the Postal Telegraph Cable Company to erect poles and wires on certain streets in the City of Erie, subject to the conditions of the general ordinance already described, "but also subject to the condition that if the said company ceases to be a competing company, said poles and wires shall be removed from the streets immediately".[2]

The general ordinance regulating the construction and maintenance of poles and wires in Harrisburg provides that any company authorized to maintain such fixtures in the

[1] Digest of Laws, etc., *op. cit.*, Part II, p. 291.

[2] *Ibid.*, Part II, p. 221.

streets must secure a license from the commissioner of highways for the erection of any line of poles and pay a fee of $1 for each license so obtained.[1] The commissioner is required to inspect all poles within the city at least once a year and to notify the owner whenever he finds any pole defective. Upon such notification, the defective pole must be replaced with a sound one within 48 hours or the owner will be liable to a fine of $5 a day during the continuance of his neglect. It is provided that every pole shall be designated by the name or initials of the owner and shall bear a distinctive number legibly marked with oil paint upon the pole itself. The owner must once each year take out a license and pay a fee of 25 cents for each pole. The superintendent of the fire and police alarm department is authorized to order the repair or removal of poles that are in a dangerous condition and the removal of "dead poles" bearing no wires, and of "dead wires".

Under the general pole and wire ordinance of the City of Lancaster, it is provided that the erection or relocation of poles shall be under the direction of the street commissioner and the street committee of councils, and "the locating of any poles shall not be considered as permanent but subject to change by the party by whom the same shall be erected as directed by the street committee".[2] It is also specifically provided "that the removal of a pole shall mean the taking of it out of the ground, and that no pole shall be cut off and the stump allowed to remain in the ground".

161. Detailed regulations by ordinance—Newark.—The construction, maintenance, operation and use of telegraph and other wires in the streets of the City of Newark, are regulated by an ordinance of the board of street and water commissioners, approved January 2, 1895.[3] Under this ordinance no poles of a less height than 40 feet, measured from the surface of the ground, may be placed in the streets; and no wires may be attached to any pole or cross-arm at a height of less than 29 feet from the ground. As far as possible, telegraph and telephone wires belonging to the same company in the same street, must be cabled, and the cables be supported by suitable insulators. It was provided by this

[1] City Digest, Harrisburg, 1906, p. 487.
[2] City Digest, Lancaster, 1906, Part II, p. 83.
[3] Compilation of the Laws and Charters of the corporations using the public streets of the city of Newark, 1904, p. 690.

ordinance that after the date of its adoption not more than one line of poles should be authorized to be erected in any street for the use of any kind of electric wires other than street railway wires. It was provided that poles and wires already erected, if not maintained in conformity with the ordinances of the city, should, upon 10 days' notice from the superintendent of works, be removed by the person or company owning them, and that all poles and wires not in use should also be removed from the streets. It was provided that each wire or cable, for its whole length within the city limits, should be supported at a substantially uniform height except where one pole line crossed another, and at such points the height of the wires was to be determined under the supervision of the superintendent of works. Cross-arms upon poles were not to be less than two or more than four feet apart, and the poles were to be placed, as far as practicable, at uniform distances from each other, such distances to be not less than 75 or more than 150 feet. It was provided that the dip on any horizontal span of wires should not exceed 14 inches; that all poles should be "straight, sound and free from all imperfection"; that each pole should be painted at least once a year, and that no poles should be set with a diameter at the base exceeding 20 inches, except corner poles, which might be 24 inches in diameter.

In cases where two or more pole lines other than street railway pole lines already occupied the same street at the time of the passage of the ordinance, the company which had first been authorized to erect its poles was required at once to adjust its poles and wires to the provisions of the ordinance, and thereafter the company next authorized was to adjust its poles and wires in like manner. The city reserved the right, in cases where the safety of persons or property required it, to compel two or more companies to remove their separate and individual poles and use one pole line, the first cost and the cost of maintenance of this line to be divided equitably between the companies. The city also reserved the right to permit any other person or company having legal authority to string wires for any purpose in the streets, to use one or more cross-arms on such joint pole lines upon payment of an equitable share of the first cost and cost of maintenance. On all poles used by different

companies, the telegraph and telephone wires were to occupy the lower cross-arm, and the electric light and power wires the upper cross-arm. No telegraph wire strung upon poles was to be of a smaller diameter than eight-thousandths of an inch, and no such wire should be carried from the streets to or across the tops of buildings unless it was firmly supported at a distance of at least 10 feet above such buildings. All persons, companies or corporations owning or operating poles and wires in the city were required by this ordinance to file with the board of street and water commissioners within 90 days "maps and plans showing all such wires and poles, the character and quality of each wire, its height above the street and the current used thereon, the location, size and character of each pole and cross-arm, and the height of each above the street". Any poles or wires in the streets not shown upon this map or plan were to be removed at once by the superintendent of works at the expense of their owners. All poles and wires were required to be placed so as to cause the least possible obstruction to light and be "of the least danger and obstruction in case of fire"; and their erection and maintenance were to be at all times under the direction of the board of street and water commissioners and to the satisfaction of its superintendent of works. For purposes of identification, all poles were to be branded by their owners.

There are many special ordinances and resolutions of the City of Newark by which locations have been granted from time to time to various telegraph companies. As far back as 1865, the Insulated Lines Telegraph Company received permission to erect a telegraph line along certain streets on condition that the poles should be "not less than 30 feet high, measuring from the curb, straight and well trimmed, and painted with two coats of white lead".[1] The company was to repaint its poles when directed to do so by the common council, and was to allow the city to use them without expense "for a fire alarm and police telegraph". Four years later, in 1869, the Eastern Telegraph Company petitioned the city council of Newark for permission to build and maintain its lines through the city, "using choice cedar poles from North Carolina".[2] This petition was referred to the street committee, "with power".

[1] Compilation of the Laws and Charters, etc., *op. cit.*, p. 703. [2] *Ibid.*, p. 701.

In 1879 a location was granted to the American Union Telegraph Company, but the grant was made expressly subject to the provisions of the state law requiring that the company should first obtain "the consent in writing of the owners of the soil".[1] Under a grant made to the American Rapid Telegraph Company in 1881, the company was required to enter into a written agreement to furnish and place, at its own cost, upon its poles a wire stretching from the city limits to the corner of Broad and Market streets, for the use of the city fire alarm telegraph, and to maintain this wire in good working order.[2] The company was also to give the mayor free use of its line throughout its entire length for the transmission of messages relating to city business.

In 1894 the Western Union Telegraph Company received permission, by a special ordinance of the board of street and water commissioners, to place its wires underground through certain streets of the city.[3] Among other provisions governing the construction of the necessary conduits, there was one requiring the company, after it had replaced any pavement disturbed by its construction or repair work, to maintain it in as good condition as the surrounding pavement until the street was repaved. The conduits were to be made of iron pipe and to be laid not less than 18 inches beneath the surface of the street and not less than one foot outside of the curb line. They were not to occupy a space exceeding one foot in width and three feet in depth except where necessary to avoid obstructions. The manholes were to be constructed so as not to interfere with traffic along the street and were not to be placed at the intersection of streets except where a branch line of conduit separated from a main line, or the main line changed its direction.

162. Licenses, pole taxes, etc.—Jersey City and Trenton.—The woes of the terminal city, which is mainly a convenient place for great transportation lines to pass through, were faintly reflected in an ordinance adopted by Jersey City in 1881. The preamble of this ordinance recites that "the streets of Jersey City are now occupied by poles belonging to corporations, which poles are used for carrying wires for

[1] Compilation of the Laws and Charters, etc., *op. cit.*, p. 697.
[2] *Ibid.*, p. 699.
[3] *Ibid.*, p. 713.

telegraph purposes", and "such corporations, while reaping rich rewards from their own business, are of no material benefit to the city, inasmuch as they use the public thoroughfares without aiding or assisting our people to bear the burden of taxation".[1] Accordingly, the mayor and aldermen of Jersey City ordained that every company engaged in the business of sending messages for pay, "which business necessitates the erection of poles and wires through, or across, or over the streets or other thoroughfares or public places of Jersey City, or the laying of wires underground", should pay to the city treasurer an annual license fee of $500. Every company was required, before commencing business and before the designation of a route for its poles or wires, to enter into an agreement to pay this fee.

Under the general ordinance concerning telegraph poles in the public streets, passed the preceding year, the city had required that all poles, whether owned by telegraph companies or by departments of the city government, should be branded.[2] It was also provided that "every telegraph pole hereafter erected shall be at least 35 feet in height, above the ground, and shall be straight, well trimmed and painted, and kept painted, and in good order, and at least once in each year each pole within the city limits shall be painted with brown paint a distance of six feet from the surface of the ground, and the remainder of each pole shall be painted white". By an amendment to this ordinance adopted in 1885, it was made unlawful to erect any telegraph pole in front of the entrance of any dwelling-house, or within a distance of 50 feet from any other telegraph pole, or near the corner of any street upon a line with any cross-walk, or within a distance of 10 feet from any public street lamp.[3]

Under an ordinance of the City of Trenton, approved January 10, 1896, granting permission to the Postal Telegraph Cable Company to erect its structures in such of the public ways of the city as its business might require, it was provided that the company should pay annually, "as partial compensation for the franchise hereby granted", the sum of 50 cents for each pole erected or used and the sum of

[1] Revised Ordinances of Jersey City, Griffiths, 1899, p. 48.
[2] *Ibid.*, p. 45.
[3] *Ibid.*, p. 45.

$1 for every mile of wire maintained by the grantee within the city limits.[1] The company was to provide space on all its poles for the free use of the police and fire alarm telegraph system. The company's poles were not to be erected in front of any premises without first obtaining the legal consent of the owners, and no wires were to be attached to buildings without such consent. All poles were to be "neat, symmetrical and painted", and no pole was to be "less than 20 feet above the surface of the ground".

163 General regulations for poles and wires — Somerville, Mass.—Under the general laws of Massachusetts a telegraph company is authorized to occupy the public ways of the state, and the local authorities are required to "give the company a writing specifying where the poles may be located, the kind of poles, the height at which, and the places where, the wires may be run". The general provisions governing telegraph companies are substantially the same as those governing telephone companies, to which reference has been made in the preceding chapter.[2] By a special provision, however, a telegraph company is required to receive dispatches from or for other telegraph companies and from or for any person and, upon payment of the usual charges for transmitting dispatches, according to the regulations of the company, to transmit them "faithfully and impartially".

Under chapter 22 of the general ordinances of the City of Somerville, poles erected upon locations granted by the board of aldermen, and all other fixtures to which it is desired to attach wires, must be located as directed by the board, and their particular locations, if not designated by the board, must be satisfactory to the commissioner of electric lines and lights.[3] A plan showing the exact location of each pole and conduit, certified by this commissioner and satisfactory in all respects to the city engineer, must be made and filed with the city by the person to whom permission was granted, within 20 days after the erection of the poles or the construction of the conduits. Poles are not to be more than 45 feet or less than 25 feet in height above the ground,

[1] Charter and Ordinances of Trenton, 1903, p. 631.
[2] *Ante*, sec. 145.
[3] Somerville Municipal Manual, 1901, p. 118.

and not more than 14 inches in diameter at the surface of the ground, unless the board of aldermen directs that poles of other dimensions may be used. Wires must be constantly maintained at a height of not less than 20 feet from the ground at every point, and no wire may be attached to a pole by means of a bracket or other side fixtures, nor may the wires of more than one person or company be placed on the same cross-arm. The ordinance provides that "the poles shall be kept well painted, of a uniform color, and in good condition", to the satisfaction of the commissioner of electric lines and lights; that "the name of the owner, with a special number for each pole and owner, shall be distinctly painted in white letters upon a dark background upon every pole about seven feet from the ground, or the owners of the pole and all other persons and corporations having authority to attach wires, cross-bars or other things thereto, shall be otherwise designated thereon by words or figures", to the satisfaction of the commissioner.[1]

The exclusive use of the upper cross-bar and the top above the cross-bar of each pole, is reserved to the city, free of cost, for wires for municipal purposes. This cross-bar is to be placed at least three feet from the next cross-bar. The person authorized to erect poles or wires may not permit their use by any other person without permission from the board of aldermen. When directed by the commissioner of electric lines and lights, the owner of the poles must place steps on that portion of each pole more than 10 feet from the ground, and it is specifically provided that "no person shall climb any such pole by the use of spurs". It is also provided that "every location and permission granted" shall be void unless within six months from the date of the grant the poles shall have been erected, the conduits constructed, and the wires placed and put in operation. The location of any pole, conduit or wire shall become null and void, if so declared by the board of aldermen, in case the operation or use of it shall have been discontinued for a period of six months. Persons owning or operating electric wires are required to place them in cables whenever ordered by the board of aldermen to do so.

[1] Section 7 of ordinance, as amended, Nov. 15, 1907.

164. Combinations forbidden — Indianapolis; Tolodo; Newport, Ky.; Minneapolis.—The extreme eagerness with which boards of aldermen have attempted to prevent monopoly in public utilities through specific provisions in franchise grants, is nowhere better illustrated than in the history of telegraph franchises. I may add that the futility of such efforts also receives an excellent illustration here. As far back as July 26, 1856, the common council of the City of Indianapolis granted a location to the "Union Telegraph", predecessor of the Western Union Telegraph Company.[1] In 1876 the city granted a location to the Atlantic and Pacific Telegraph Company, on condition that its poles were to be "shaved and of respectable appearance".[2] This company's lines were absorbed by the Western Union in 1881.

On January 16, 1882, the city granted a franchise to the Mutual Union Telegraph Company of New York.[3] This company was absorbed by the Western Union in 1883. The city had reserved the right to repeal the Mutual Union franchise, and to impose a tax upon the company for the privilege of using the streets with its poles and wires. On April 28, 1884, an ordinance was passed repealing the franchise and providing that the Mutual Union Telegraph Company or its successors should remove the poles and wires from the streets.[4] There was a proviso, however, that if the company or its successors should within 30 days pay the annual tax of $2 per pole required by the city's general licensing ordinance, the poles and wires need not be removed and the repealing ordinance should be void. It is authoritatively stated that the Western Union Telegraph Company has paid this annual pole tax ever since that date.[5]

On July 7, 1884, the city gave a franchise to the Baltimore and Ohio Telegraph Company.[6] It was provided that "in case said company or its successors or assigns shall at any time merge or consolidate the same with the Western Union Telegraph Company or any other telegraph company, or lease to or otherwise turn over its said line of telegraph to said Western Union Telegraph Company, then, and in that event, the rights hereby granted shall be null and void, and the poles and wires of said company may be removed

[1] Laws and Ordinances, *op. cit.*, p. 1100.
[2] *Ibid.*, p. 1101.
[3] *Ibid.*, p. 1103.
[4] *Ibid.*, p. 1105.
[5] See note, *Ibid.*, p. 1106.
[6] *Ibid.*, p. 1101.

from the streets and alleys of said city". At the foot of this ordinance, as published in the official collection of "Laws and Ordinances" of the City of Indianapolis, revision of 1904, there appears the following note:

"All of the lines of this company were purchased by the Western Union Telegraph Company on October 15, 1887, and have since formed a part of that company's system."[1]

On July 7, 1884, another franchise was granted to the Bankers' and Merchants' Telegraph Company, which has since been absorbed by the Postal Telegraph Cable Company.[2] There was contained in this franchise a provision against consolidation with the Western Union, similar to that contained in the Baltimore and Ohio Telegraph Company's franchise. The city reserved the right to impose a tax of not less than $2 or more than $5 a year on each pole maintained by the company.

In 1896 the board of public works of Indianapolis entered into new and more elaborate franchise contracts with the Western Union Telegraph Company and the Postal Telegraph Cable Company, both of which were ratified by ordinance of the common council.[3] Under the Postal Telegraph franchise the company agreed to furnish free telegraphic service to the amount of $75, calculated at the regular rates, and also to set aside, for the exclusive use of the city, four conductors of the company's underground cables and to keep them in repair, whether such cables had been laid in the company's own conduits or in ducts purchased or leased from any other company. No such provision was contained in the Western Union contract. Both companies were authorized and required to place their wires underground within a certain district of the city, and in the contract with the Western Union there was a proviso to the effect that "the rights herein granted to go underground shall not enlarge, curtail or change any rights or privileges in the City of Indianapolis, which the company now has, except the right to go underground".[4]

By an ordinance approved February 20, 1896, the city made it unlawful "for any telegraph company having in its possession a telegram or message for anyone within the cor-

[1] Laws and Ordinances, *op. cit.*, p. 1102.
[2] *Ibid.* p. 1107.
[3] *Ibid.*, pp. 1108, 1115.
[4] *Ibid.*, p. 1120.

porate limits of the city", to make a special charge for the delivery of such message.[1]

Toledo has also attempted to preserve competition in the telegraph business. A franchise was granted by this city November 7, 1881, to the Mutual Union Telegraph Company of New York, containing a provision that in case the company should at any time thereafter "consolidate with any of the competing companies at present in existence," its rights and privileges under the franchise should be at once forfeited and its poles, lines and wires constructed under the franchise, should "thereby revert to the City of Toledo".[2] This company was absorbed by the Western Union; but in the various discussions of the advantages and disadvantages of municipal ownership that have come to the writer's attention, he has not noticed any reference to a system of telegraph poles and wires owned by the City of Toledo as a result of this combination.

In a franchise granted by Toledo to the Michigan Postal Telegraph Company, December 10, 1883, there were even more elaborate provisions against combination.[3] It was ordained that if the company "shall sell or lease its franchises, or any of its privileges hereby granted, to any telegraph company now having an office in the City of Toledo, or shall consolidate with such company, or combine with any companies whatever, in any manner so as to prevent or remove legitimate competition of rates, then the rights hereby granted shall be forfeited and this permission shall cease and be of no effect". In case of the breach by the company of any of the conditions of the franchise, "all the property rights and franchises of said company within the City of Toledo immediately revert to and become the property of said city". This franchise was later acquired by the Postal Telegraph Cable Company. The latter company was given a new franchise in 1893, with a similar provision against consolidation of interests and for the forfeiture of property to the city in case of breach of franchise conditions.[4]

An ordinance granted by the City of Newport, Ky., December 18, 1895, to the Postal Telegraph Cable Company,

[1] Laws and Ordinances, *op. cit.*, p. 1121.
[2] Special Ordinances, *op. cit.*, p. 700.
[3] *Ibid.*, p. 703.
[4] *Ibid.*, p. 708.

provided that if the company or its successors should "lease, rent or consolidate" so much of its system as is located in the City of Newport with any other corporation or person "engaged in the same or like business", or should enter into any "combination, trust or arrangement" with any such corporation or person, "with reference to said business, or the rates to be charged for services performed by said company", the rights and privileges under the franchise should become absolutely null and void, and all the company's fixtures in the streets, placed there in pursuance of this or any other ordinance, should be at once removed by their owner or lessee.[1] It was also provided that the company should maintain an office in the City of Newport for receiving and transmitting messages and should not charge a greater rate than that charged by the Western Union Telegraph Company for similar services under like conditions. The company was required to file a written acceptance of the ordinance, subject to all its limitations. As a matter of fact, the company did not accept the ordinance in writing; but the court held that the ordinance was valid and the company's acts in proceeding to erect poles, wires and other structures, constituted an acceptance.[2]

Among the many other cities which have attempted to prevent consolidation of companies by franchise stipulations, is Minneapolis. In a franchise granted by this city in 1884 to the Rapid Transit Telegraph Company, it is provided "that whenever any other telegraph company doing business in the City of Minneapolis shall obtain the control or management of the company herein named, or of its successors or assigns, then and in such case all right, license and privileges hereby granted shall cease and become forfeited without any further action by the city council".[3]

165. Free service to city—Milwaukee; Springfield, Ill.; Cedar Rapids.—Mention has been made in preceding paragraphs of two or three instances in which telegraph franchises were granted on condition that a certain amount of free service be rendered to the city. A franchise granted by the City of Milwaukee, December 28, 1891, to the Western Union Telegraph Company also contains an important pro-

[1] Special Ordinances, City of Newport, p. 435.
[2] See note, *Ibid.*, p. 435. Postal Telegraph Co. vs. City of Newport, 25 R. 635.
[3] Charter, Ordinances, etc., *op. cit.*, p. 601.

vision for free service.[1] It is provided that so long as the ordinance remains in force, the company shall issue to the officers of the city designated by the mayor "annual franks authorizing the free transmission over any of the lines of the telegraph company in the United States, of messages relating strictly to the corporate business of the City of Milwaukee to an amount not exceeding $400 per annum". The tolls on these messages were to be calculated at the regular commercial day rates, and the city agreed to pay one-half the regular tolls on all official messages in excess of the $400.

In a franchise granted to the Postal Telegraph Cable Company, February 7, 1884, by the City of Springfield, Illinois, it was stipulated that the company should maintain an office and an operator or operators at some convenient point within the city for the purpose of affording telegraph facilities to the public, and that it should do the official telegraphing of the city free of charge, and furnish pole room for the city fire alarm wires if required.[2] The ordinance was declared to be in the nature of a contract and was accepted by the company shortly after its passage.

In a franchise granted by the City of Cedar Rapids, Iowa, March 20, 1891, to the Western Union Telegraph Company, it was provided that "in consideration of the rights above granted", the company should allow the city the use of its poles for the police and fire alarm wires, and should "furnish to said city, free of charge, an electric clock, such as is maintained for private use, and operate the same, said clock to be placed in such position in the city building as may be selected by the mayor".[3]

166. Miscellaneous regulations—Nashville; South Bend; Portland, Ore.—A franchise granted to the Postal Telegraph Cable Company by the City of Nashville in September, 1890, provided that in case of fire the members of the fire department would have the right, if necessity should arise, to cut the company's wires in the vicinity of the fire, without compensation being claimed for the damage necessarily inflicted in this way.[4] It was also provided that if the removal of any pole or wire belonging to the company should be de-

[1] Ordinances relating to Franchises, 1896, p. 1133.
[2] Franchise Ordinances, City of Springfield, 1907, p. 16.
[3] Revised Ordinances, City of Cedar Rapids, 1906, p. 366.
[4] Laws of Nashville, *op. cit.*, p. 992.

manded by the erection of a building or for any other reason of a public or quasi-public nature deemed sufficient by the board of public works and affairs, the company should, on three days' written notice, remove such pole or wire temporarily or permanently and accept a new location along the same route. The company's poles were to be wooden and were to be kept at all times "nicely painted". The exact place of location and "depth of hole" were to be determined by the board of public works and affairs. In case the company should fail or cease to operate its lines for a period of 60 days, on written notice from this board it was to remove its fixtures from the streets.

In a franchise granted during the succeeding year to the Western Union Telegraph Company, a provision was inserted that if any wire erected under the authority of the franchise should cease to be used for a period of 30 days, it should be deemed and known as a "dead wire" and should be forthwith taken down and removed by the company.[1] The city reserved the right further to regulate the operation of the company's wires, and also to repeal the ordinance whenever in the judgment of the mayor and city council its repeal should be demanded by the public welfare. Such action could be taken by the city without incurring any liability to the company.

In a franchise granted by the City of South Bend, December 11, 1882, to the Postal Telegraph Company, a provision was inserted to the effect that the company's poles should be erected "along the outer curb of the sidewalks, just inside of said curb, in such a manner as not to injure the curbstones or plank, or shade trees along the same, and so as not to be in front of the door of any person's house, or of the entrance of any person's house, barn or lot".[2] The poles were to be painted with red lead within three months after their erection.

The City of Portland, Oregon, granted a franchise January 6, 1887, to the Pacific Postal Telegraph-Cable Company, which provided, among other things, that whenever any person or company had obtained permission from the committee on streets and public property of the city to remove any building through the streets, the telegraph com-

[1] Laws of Nashville, *op. cit.*, p. 997.
[2] Revised Ordinances, City of South Bend, 1905, p. 86.

pany should, on due notice, raise, remove or adjust its lines, at its own expense, so as to allow an unobstructed passage for the building.[1] This ordinance also contained a clause declaring it to be unlawful for any unauthorized person to interfere with any of the company's poles, wires or other apparatus.

In a franchise granted by the City of Portland to the Western Union Telegraph Company, July 21, 1893, provision was made to the effect that the grant should not be exclusive, the city reserving to itself the power to make a similar grant to any other telegraph company on condition that it should not interfere "with the reasonable and proper exercise of the privileges herein granted".[2] The company was required to furnish the use of its poles, free of charge, for the attachment of the city's fire alarm boxes.

167. An up-to-date telegraph franchise — Chicago.—An ordinance granting a franchise to the People's Mutual Telegraph Company was passed by the Chicago City Council, March 22, 1909.[3] Under this franchise the company was authorized to construct and operate telegraph lines on the structure and right of way of the Metropolitan West Side Elevated Railway Company along certain streets, with the latter company's consent. It was also authorized to place its wires in the conduits owned by the Commonwealth Edison Company, with like consent. It was also authorized to lease the right to maintain its telegraph wires in the underground conduits or tunnels of any other person or corporation theretofore or thereafter authorized by the city to maintain such tunnels and conduits. In order to make necessary connections for its lines, the company was further authorized to construct underground conduits for itself, none of them to exceed 600 feet in length or 18 inches in diameter. The rights granted by this franchise were to expire January 1, 1929. The company was required to change the location of its ducts or wires whenever necessary in order to prevent interference with any municipal improvement. There was also a provision that if the city should construct a municipal subway, the company should, at its own expense, remove its wires to such subway upon terms and conditions prescribed by the city council. The city re-

[1] Revised Ordinances, *op. cit.*, p. 154.
[2] *Ibid.*, p. 155.
[3] Journal of Proceedings of City Council, March 22, 1909, p. 3522.

served the right, after the expiration of three years, to amend the franchise ordinance for the purpose of regulating the company's rates. The right to regulate and fix maximum rates by ordinance once every three years thereafter during the life of the grant was also reserved. Whenever the city might desire to take up the matter of regulating rates, the company was bound, on 30 days' notice, to furnish the city with "all the facts, data and information in its possession which the city may require to assist the city to make such proper and reasonable regulation of rates". If at any time the company should contest the rates fixed by ordinance and, pending litigation, should collect rates in excess of those so fixed, and if thereafter the rates fixed by the ordinance were sustained, the company was bound to refund to all its patrons the amount of its excessive collections with 5 per cent annual interest.

In case the city should pass any special ordinance changing this company's rates or any general ordinance regulating the rates of all telegraph companies, the company would be required to file with the city annually on March 15 a report for the preceding calendar year setting forth in reasonable detail, according to the forms prescribed by the city comptroller, "the character and amount of business done by said telegraph company in the transmission over its lines, from Chicago, of telegraph messages, and showing the amount of receipts from such business, and the expense of conducting said business; and giving full information on all such other matters relating to the rates on such messages as may be from time to time specified by the city council". The original books and vouchers of the company were to be open to the city comptroller for verification of this report. The company was required, as long as it continued in business, to maintain its principal office in the City of Chicago and keep there "a complete set of records, books, accounts, contracts and original vouchers of receipts and expenditures", and was forbidden to remove any such books or records, except bond registry and stock transfer books, beyond the limits of the city.

For the first three years, and until changed by ordinance, the company was limited to the following maximum rates:

For a message, from Chicago to St. Louis, of ten words, exclusive of

address and signature, 25 cents and not more than two cents for each additional word.

For a similar message, from Chicago to Kansas City, 30 cents, with two cents for each additional word.

It was stipulated that if the company should extend its telegraph lines to other cities than St. Louis and Kansas City, the rates for the transmission of messages from Chicago should not be greater in proportion to the St. Louis rate than the ratio of distances from Chicago, with the provision, however, for a minimum charge of 20 cents per message of ten words, and two cents for each additional word. The company was required to pay the city an annual fee of two and one-half cents per wire for each street crossed by its wires, whether carried on the elevated railroad structure, in the company's own conduits or in ducts leased from other companies. A further annual fee of 50 cents per lineal foot of underground ducts owned by the company itself was imposed. The company was required to file an annual statement, itemized and sworn to, showing the number and location of its wires and the fees due the city. Failure to pay these fees within 60 days after they became due would result in the forfeiture of the franchise.

It was specifically provided that the company's wires should not be used for the transmission of telephone messages and that the company's conduits should be constructed and its wires placed under the supervision of the Commissioner of Public Works and the City Electrician. Before securing a permit, the company was required to file plans showing the location of its proposed conduits and wires and the time within which its work was to be done. The company was required, at its own expense, to restore the streets and alleys to a condition satisfactory to the city authorities. At the termination of the franchise the company was to "remove all wires placed or attached by it, pursuant to authority herein given, in a manner satisfactory" to the city, and in case it failed to do so, the city reserved the right to remove the wires at the company's expense.

The company agreed to assume all liability for damages resulting from the construction or maintenance of its lines, and to execute a bond in the sum of $25,000 to enforce this liability. This bond was also to be conditioned upon the company's protecting the city from any loss or expense result-

ing from any lessening of the responsibility of the companies whose structures this company might use. It was made a condition of the grant that the company should have a properly equipped telegraph line in operation as far as St. Louis not later than January 1, 1911. It was further provided that the company, in addition to any office it might maintain in the Board of Trade Building, should also maintain an office in the Loop district of Chicago "open at all times during the day and night to the general public for the transmission of telegraph messages". Failure to fulfill either of the conditions last mentioned was to result in the forfeiture of the grant.

An elaborate provision was made to prevent the transfer of the grantee's franchise to a competing telegraph company. Inasmuch as this provision represents one of the most recent and most intelligent attempts to prevent consolidation of public utility enterprises, I quote section 13 of the ordinance in full as follows:

"Said People's Mutual Telegraph Company shall at no time during the life of this ordinance sell, lease or convey the lines of wire, plant, franchise or property owned or used by it in connection with the permission and authority hereby granted, to any other person, firm or corporation engaged, directly or indirectly, in the business of the transmission, from Chicago, of telegraph messages, nor shall said company consolidate or combine, directly or indirectly, with any person, firm or corporation so as to unite the lines of wire, plant, franchise or property used in connection with the authority and permission hereby granted, with the wires, plant, franchise or property of any person, firm or corporation engaged, directly or indirectly, in the business of the transmission, from Chicago, of telegraph messages, and said company shall not at any time during the life of this ordinance enter into any agreement or combination with any other company heretofore existing or hereafter created concerning the price to be charged by the said People's Mutual Telegraph Company in the City of Chicago for the transmission of telegraph messages from the City of Chicago to any point on its telegraph lines; but the said company shall at all times during the life of this ordinance maintain and operate the plant, franchise and property hereby granted as an independent enterprise and free from any connection with any person, firm or corporation engaged competitively in the same occupation; provided, however, that the rights and privileges granted to the People's Mutual Telegraph Company under this ordinance may pass to any successor of said telegraph company except a competitor in the business of transmitting telegraph messages, by assignment, mortgage or otherwise, subject to all the terms and conditions of this ordinance, and said successor or successors shall file with the City Clerk its acceptance of said terms and conditions."

The city reserved, in express terms, "the right to pass any ordinance which, under its expressed, implied or inherent police power, it possesses, or may hereafter possess, the power to enact". The city also expressly reserved the right to exercise any authority which it might secure from the State legislature to pass a general ordinance fixing and regulating the rates of telegraph companies for the transmission of messages from Chicago, or licensing, regulating or taxing telegraph companies. It was also expressly stated that the grant was not exclusive and that neither the city nor the State should be in any way bound or its right to fix rates affected by the price paid or the valuation fixed for the property or rights of the company in connection with any lease, sale or transfer or in connection with any consolidation or merger of the company.

Before the company could avail itself of the privileges granted by the ordinance, it was required to cause to be filed with the city written instruments executed by the West Side Elevated Railway Company, the Commonwealth Edison Company and any other companies whose structures this company might use, to the effect that this franchise should not be "held to enlarge, alter or affect" the rights and privileges granted to these various companies under their franchises, except to the extent necessary to enable this company to enjoy the privileges conferred by this ordinance.

CHAPTER XI.

MESSENGER AND SIGNAL FRANCHISES.

168. Variety of uses of electric signals.—The importance of franchises for electric wires to be used for signaling is not so generally appreciated as the importance of other public utility grants. This is partly due to the fact that the various services rendered by means of signals are not so heavily capitalized as other utilities, and partly to the fact that the use of these services is for the most part confined to offices, factories, business houses and a comparatively few residences. Local messenger service is generally furnished as an adjunct to the telegraph business and is carried on by separate local companies, which are controlled and officered by the big telegraph companies. Indeed one of the chief uses to which a signaling system is put, is the calling of messengers for the purpose of taking telegrams. The functions of the district messenger companies, as described by the Bureau of the Census in its bulletin on telephones and telegraphs, are, on the one hand, the handling of telegraph messages for companies like the Western Union Telegraph Company and the Postal Telegraph Cable Company, and, on the other hand, the carrying of urgent written messages and the distribution of parcels and packages.

Another important function of signaling and one that is

now of long standing, is the fire alarm and police telegraph service, which is practically always owned and operated by the city, although in many cases the service is connected with the telephone system or with an auxiliary fire alarm system of a private company. Signaling systems have also been established to provide for burglar alarms, night-watchmen's service, carriage call service, and ordinary messenger service. Electric wires are sometimes used for the operation of clocks and are now beginning to be used for the transmission of music. These various systems of signals maintain more or less close relations with telephones and telegraphs, partly because the signals may be used as auxiliaries of the telegraph and telephone business, and partly because they use the same kind of wires, which may be conveniently placed in the same cables, and attached to the same poles or run through the same ducts. In some cases telephone companies actually operate the messenger service. Not infrequently, however, companies or individuals operating these various signal systems lease the poles, wires and conduit space from the larger companies.

169. Maximum rates, option to purchase, etc. — Grand Rapids, Mich.—One of the most interesting franchises for an electric night-watch, fire service, burglar alarm, and messenger service, of which the writer has knowledge, is the franchise granted by the City of Grand Rapids October 30, 1905, to the Grand Rapids Messenger and Packet Company.[1] The grant includes the right to enter upon the streets, bridges, alleys and public places of the city for the purpose of constructing, maintaining and operating conduits, mains, conductors, etc., and for the erection of poles, wires and other appliances and fixtures for light tension electric service. It is provided, however, that the grantee must receive permission from the council for each respective alley, street or public place, before placing fixtures there. The poles set by the grantee in connection with its business are to be reasonably straight and of such height, kind and quality as may be approved by the council. The grantee's conduits are to be laid in a line parallel with the curb and if possible within three feet of it. They are to be laid under the supervision of the board of public works and placed in such parts of the

[1] Compiled Ordinances, 1907, p. 188.

street and at such depth as the board may direct. However, after any conduit has been laid, it is not to be changed without the consent of the council. The city reserves the right to use one duct in each conduit for the city fire alarm telegraph wires. Otherwise the conduits are to be used exclusively by the grantee in the business described in the franchise. Wherever possible, the grantee must use alleys in place of streets and avenues in the construction of conduits and the erection of pole and wire lines. Wires and cables are not to be put over the fire alarm telegraph wires, nor within 25 feet of the ground over any street or alley. Wires entering any building are to be so trained and arranged in accordance with the best approved methods of electric wiring as to insulation and as to safety from fire and other injuries to persons and property and so as to cause the least possible obstruction. The grantee is required to comply with any ordinances of the city existing at the time of the grant or thereafter adopted, relative to placing wires underground and also relative to poles in the streets, the cutting of shade trees, the stringing of wires through trees, etc. At least 24 hours before any street is to be opened for the construction or repair of a conduit, the grantee must notify the board of public works, and all work done in the street by the grantee must be done under the supervision of this board. No street may be allowed to remain open or encumbered longer than necessary to execute the work for which it was opened; and whenever the work requires special skill, as in the laying of pavements or the setting of curbstones, the grantee must employ only skilled workmen familiar with the particular kind of work they have to do. The supervision of street work exercised by the board of public works is to be without expense to the city, the grantee paying the cost of inspection. After the streets have been restored to their former condition, the grantee is required to maintain the pavements in good repair for a period of three years. One dollar per box per month for a watch signal station, is fixed as the maximum price for the grantee's services.

It is provided that if the grantee or the grantee's assigns shall ever consolidate with any person or company carrying on a similar business in the City of Grand Rapids, or attempt to do so, or to form a combination precluding or tending to

preclude competition in the business, the ordinance shall immediately become null and void. Any attempt by agreement with rivals to establish rates and preclude open and free competition in the business will also operate as a forfeiture of the franchise. The grant is not assignable except by an ordinance of the common council passed by a two-thirds vote of all the members elect.

It is expressly agreed by the grantee, in the acceptance of the ordinance, that the franchise may be assessed for taxation as an asset of the company. The term of the franchise is 20 years, and the grantee is required to pay the city an annual license fee of $75. It is provided that if the grantee's business should increase 50 per cent within 5 years, as shown by the annual reports required from all public utility corporations under the city charter, the annual fee shall be proportionately increased after the expiration of the five-year period. Default in the payment of the fee for 30 days may work a forfeiture of the franchise at the option of the council.

At the expiration of 15 years from the time of the grant, the city may purchase and take over the grantee's property and plant in its entirety, upon payment of a fair valuation to be determined by three appraisers. The value of the grantee's franchise, however, is not to be taken into account in such appraisal. In case of purchase the grantee's plant shall become the property of the city as soon as the city has paid for it and without the execution of any instrument or conveyance from the grantee. The council also reserves the right to declare the franchise forfeited by a two-thirds vote of all the aldermen elect in case the grantee should fail to render sufficient and efficient service or to maintain the property in good order and repair throughout the term of the grant. The council reserves the right to amend the ordinance "at any time when it considers and deems the interest and welfare of the city may require any amendment thereof". The franchise was granted subject to the section of the city charter which provides for the optional referendum on all franchise ordinances. On this particular grant the referendum was not used, however; and the grantee filed a written acceptance as required by the council.

On June 17, 1907, the city of Grand Rapids gave a franchise to the Michigan Auxiliary Fire Alarm Company,

authorizing it to use any streets of the city for the purpose of stringing wires on poles or placing them underground in galvanized pipes in connection with the business of establishing fire alarm boxes.[1] Under this franchise the maximum rates for fire alarm boxes were to be "$36 per box a year for three boxes, and $10 per year for each additional fire alarm box in excess of three boxes furnished to each customer". The common council reserved the right to revise these rates either by ordinance or by a reference to arbitrators.

170. Use of other poles; amount of service; rates, etc.—Salt Lake City.—An interesting franchise was granted December 8, 1897, by Salt Lake City to Gustavus S. Holmes, his successors and assigns, for the purpose of establishing a messenger, night-watch and fire alarm service.[2] The grant was for a period of 20 years and the grantee was authorized to erect and maintain the necessary wires and other appliances upon the poles of telegraph, telephone, electric light and railway companies within the paved district of the city, under such reasonable regulations and for such compensation as might be agreed upon between the grantee and the owners of the poles. It was specifically provided that the grant should not authorize a service by telephone. Outside of the paved districts of the city the grantee was authorized to erect poles of his own, subject to the laws and ordinances of the city and state relative to this matter. The grantee was required to supply the city, free of charge, five messenger boxes located in specified municipal offices, and to give, during the life of the franchise, free official communication and messenger service in connection with these boxes. The grantee's messenger service was to be in full operation within the paved district of the city, with not less than six uniformed messengers, by April 1, 1898. The maximum charges for messenger service, when performed on foot, were not to exceed 30 cents per hour, or, when performed by street car, 35 cents per hour. A penal bond in the sum of $5,000, with two sureties approved by the city council, was to be executed by the grantee, guaranteeing the city against damages of any nature that might result from the grantee's acts or from the exercise of the franchise. Written acceptance of the franchise was re-

[1] Compiled Ordinances, *op. cit.*, supplement, p. 14. [2] Ordinances, p. 386.

quired to be filed within 20 days after the grant had been approved by the mayor, and any failure to comply with the terms of the grant was to work an absolute forfeiture of it.

171. Construction not to interfere with local improvements; relinquishment of former rights—Seattle.—On March 2, 1904, the City of Seattle granted a franchise to the Instantaneous Alarm Company for the operation of auxiliary fire alarm, district telegraph, burglar and police alarm systems.[1] Under this grant the company was required to use, wherever practicable, poles already constructed in the streets. The company's wires were to be placed in conduits in the underground district. The company's line was to be constructed, and all of its connections with fire alarm boxes made under the direction of the board of public works. It was provided that nothing in the ordinance should prevent the city from making any street improvement without being liable for damage resulting to the company; and the company was required, whenever the grade of any street was changed, or the extent, size, position or location of any public utility modified, to remove, raise, lower, or otherwise modify its structures at its own expense, so far as might be necessary. The city reserved the right to use the company's poles for the wires of the city fire alarm system, police patrol, electric light or telegraph system, or any other electric system exclusively belonging to the city, without making any compensation for such use other than the grant of the franchise. The city also reserved the right to use all surplus space which it might need in the company's pipes and conduits for similar purposes on the same conditions. The company was required to make such connections with the police and fire department headquarters as should be necessary to communicate to them any alarms received over its lines. The wires of the company were to be carefully insulated throughout their whole length and were to be connected and fastened so as not to come into contact with any object through which a "ground" circuit could be formed. Before taking up any sidewalk or digging into any street or alley, the company was required to file with the board of public works a petition with a diagram drawn to scale, setting forth the public places to be disturbed, and get a permit for the work.

[1] Charter and Ordinances of Seattle, 1903, p. 583.

A deposit was to be made of such sum of money as the board of public works might require, to be used by the city for the purpose of restoring the streets and side-walks in case the company failed to complete its work within a reasonable time, and to pay the city the reasonable cost of any necessary inspection. The company's wires were to be raised or removed on 48 hours' notice so far as might be necessary to permit the removal of any building for the removal of which permission had been lawfully obtained. The city expressly reserved the right to repeal, change or modify the ordinance in case the franchise was not operated in accordance with its provisions, or at all. A clause was inserted making it unlawful for any unauthorized person to interfere with the company's fixtures. The term of the franchise was to expire December 31, 1930, and within 30 days after the passage of the ordinance the company was to file its written acceptance, together with a relinquishment and surrender of all the rights and privileges it held under former franchise grants.

172. An electric clock franchise — Kansas City.—On November 16, 1887, Lumas H. Holmes received for himself, his successors and assigns, a franchise to erect and maintain wires and transmitters on the streets of Kansas City for a term of 30 years, "for the purpose of conducting electrical currents to be used in running and regulating electrical clocks and other time-pieces operated by electricity and for no other purpose whatever".[1] The city reserved the right at any time to require the grantee's poles to be taken down and his wires and transmitters to be placed underground, and also to require that any pole, wire or transmitter should be replaced. Poles could not be erected under this grant until the city engineer had given permission in writing and designated their location. The grantee was to indemnify the city for any expense or loss caused by the exercise of the franchise. The work of putting up the system of clocks and time-pieces to be operated by electricity was to be commenced within one year after the approval of the ordinance, and at least one-half mile of wire was to be erected and put into actual use within six months after the work was commenced. In default of such action, the franchise was to be forfeited. The grantee was required to file a written acceptance of the

[1] Franchise Ordinances for Public Utilities, Kansas City, 1908, p. 109.

terms and conditions of the ordinance. This acceptance was filed the day the ordinance was approved. Although this franchise is published in the official collection of franchise ordinances for public utilities, issued on the authority of the utilities commission of Kansas City in 1908, it is said that the electric clock enterprise was a failure and has long since been forgotten by the citizens.

173. Routes described; free call boxes for city—Denver.—It is difficult to explain why the City of Denver, in all its general franchises, should waste page after page of the official documents in the enumeration of a large proportion of the streets and alleys of the city as the streets and alleys upon which the various franchises may be exercised. It is obvious that this peculiar exercise of municipal discretion operates to increase the city's printing bills, a consummation devoutly to be wished by certain citizens in every community. Perhaps, however, the practice should be attributed to the city's pride in its wonderful street names, which are paraded in couples on either side of the alleys through which the public utility fixtures are to run. While it is to be presumed that any ordinary utility service running through the alleys between Josephine and Columbine, Apple and Banana, Lemon and Melon, Orange and Plum, etc., would be highly efficient and so attractive as to result in a rapid and profitable expansion of the business, there may be some doubt as to the effect of such an environment upon the promptness of messenger service. However this may be, by a franchise granted April 17, 1890, to the American District Telegraph Company, the City of Denver made legal provision for a local messenger service which the company had already furnished for the preceding seven years without franchise rights.[1] Of the nine printed pages covered by this ordinance, eight are filled with the list of streets and alleys upon which the company was authorized to operate. The only conditions attached to the grant were that the company should supply on request of the mayor, free of charge, messenger boxes in the city hall and in the fire stations situated in that part of the city where the company's lines extended; that the council reserved the right to pass any ordinance with reference to the company's poles and wires, which the comfort and safety of the people might require,

[1] Franchises and Special Privileges, Denver, 1907, p. 749.

and also reserved its legislative and police powers and functions with respect to the streets; that the term of the grant should be limited to 20 years: and that the company should file a bond in the sum of $10,000 to indemnify the city against damages resulting from operation under the grant. This franchise is now held by the Colorado Telephone company.

174. Auxiliary fire alarm service—Harrisburg; Erie; New York City.—A franchise was granted May 18, 1896, by the City of Harrisburg to the Gamewell Auxiliary Fire Alarm Company "to construct and operate its auxiliary system and to connect manufacturing establishments and others" with its system under rules and regulations to be prescribed by the city councils and subject to the approval of the chief engineer of the fire department and the superintendent of the fire alarm.[1] The company was authorized to connect its auxiliary system with the fire alarm and police telegraph system of the city, at its own expense. The use of the poles of the fire alarm and police patrol system was also allowed to the company. The grant was not exclusive. The company was required to indemnify the city against damages resulting from the exercise of the franchise, and was to place, in consideration of the grant, an auxiliary fire alarm box in the mayor's office and another in the city clerk's office, free of cost to the city, and to pay an annual license tax of $10.

In Erie the American District Telegraph Company, Limited, secured a franchise in 1884 "for telephonic purposes".[2] Among the conditions imposed by this grant was one requiring the company to make every telephone connected with its exchange a fire alarm signal station without cost to the city, and to keep in repair, under the direction of the fire committee, the fire alarm lines of the city, and to erect poles and wires for the use of the fire department at such points as should be reasonably necessary.

In 1895 the Pneumatic Fire Alarm Telegraph Company presented a petition to the board of electrical control of the City of New York, asking for a franchise or permit to run electrical conductors for signal purposes in the streets of the city.[3] At the same time the Manhattan Fire Alarm Company

[1] City Digest, Harrisburg, 1908, p. 424.
[2] Digest of Laws, Ordinances, etc., *op. cit.*, Part II, p. 219.
[3] Minutes of the Board of Electrical Control, City of New York, Vol. II., pp. 1442, 1473, 1483.

petitioned for a similar franchise. The committee appointed to consider these applications reported that both companies had complied with the laws of the state and appeared to be financially responsible and abundantly able to serve their customers and had also obtained the sanction of the board of fire underwriters and permission from the city fire department to connect with its headquarters. The committee thought that the companies would materially assist the fire department. The franchises were accordingly granted on condition that the company's conductors should be laid by the Empire City Subway Company, Limited, which owns and operates the low tension electrical conduits of the city. The variety of signal enterprises in operation in old New York prior to consolidation, is indicated by the list of companies reported to be operating low tension circuits on December 31, 1897.[1] Besides the two fire alarm companies just mentioned, the New York Telephone Company and the several general telegraph companies doing business in the city, the list included the American District Telegraph Company for local messenger service, the Holmes Electric Protective Company for burglar alarm service, the Mason Carriage Call Service, the Mercantile Electric Company, the New York Thermostatic Fire Alarm Company, the Automatic Fire Alarm and Extinguisher Company, the Special Fire Alarm and Electric Signal Company, and the Tubular Dispatch Company. The company last mentioned operated certain electric wires as an auxiliary to the operation of pneumatic tubes.

175. Compensation to the city; mode of arbitration in case of purchase—Portland, Ore.—By an ordinance approved April 8, 1904, the City of Portland gave a twenty-five year franchise to the City Messenger and Delivery Company for the construction and maintenance of poles, wires and conduits in the streets "for the transmission of electrical currents, to be used solely and exclusively in connection wth a messenger system and service and a call box system".[2] The council reserved the right at all times "to reasonably regulate, in the public interest, the rights, privileges and franchises" granted by this ordinance. The Executive Board of the city

[1] Minutes of Board of Electrical Control, *op. cit.*, Vol. II., p. 1641.
[2] Revised Ordinances of the city of Portland, Ore., in force Jan. 2, 1905, *op. cit.*, p. 157.

having submitted to the council an estimate of the cash value of this franchise, the company was required to pay as compensation for it $100 a year for the first five years; $200 a year for the second five years; $400 a year for the third five years; $600 a year for the fourth five years; and $800 a year for the fifth five years of the grant. It was stipulated that at the expiration of the twenty-five year period the city might "at its election and upon payment therefor" purchase the company's property and plant in its entirety so far as it was situated within the lines of the streets and public places or used in connection with the property so situated. In case of purchase, the city was bound to pay a "fair valuation", but in fixing this valuation the value of the franchise was not to be taken into account. Before having the right to purchase, however, the question would have to be submitted to the voters of the city and other requirements of the city charter be complied with. The valuation of the property was to be fixed by arbitrators, one to be appointed by the company and the other by the council, but in case these arbitrators were unable to agree upon a valuation of the property within a reasonable time, they were to elect an umpire. In case the company failed to select an arbitrator, or the two first selected were unable to agree upon an umpire, then the council of the city of Portland was to appoint "both such arbitrators and umpire, and the decision of a majority of such arbitrators shall be final and binding as to the valuation" of the property. The company was required to maintain its poles, conduits, wires and messenger and call box systems in good order and repair and render efficient service throughout the term of the grant. In case of failure to do so the council might declare the franchise forfeited, and it was stipulated that "upon adjudication of forfeiture by a court of competent jurisdiction, this franchise and all the rights and privileges conferred thereby shall become and be null and void". It was provided, however, that no decree of forfeiture should be made in case the company remedied its default before the decree was rendered. These elaborate provisions applied to a franchise under which the estimated total cost of original construction work was $2000 and the estimated yearly amount to be expended on the plant was $1250. The erection of the company's poles, the construction of its conduits and the

placing of its wires were to be subject to regulation by the Executive Board of the city.

176. Free police alarm boxes; city may use poles—Butte.—By an ordinance approved May 20, 1891, the city of Butte, Mont., granted to the Citizens' District Messenger and Burglar Alarm Telegraph Company the right for twenty years to string wires over and across the houses on certain streets with the consent of the houseowners, and to cross the streets without erecting any posts or poles in them.[1] On certain other streets, however, the company was authorized to erect and maintain poles and wires on condition that these fixtures should not be used for any other purpose than the one named in the grant, or by any other company without the city's consent. The right was expressly reserved to the city to cut away or remove any poles or wires in case of necessity on the occasion of a conflagration. The company agreed to construct and maintain without expense to the city ten "police alarm boxes" to be used in case of fire. The company agreed to transmit all calls from these boxes and to furnish free of charge all necessary instruments, wires, batteries, etc., for registering the calls at the police station. In case the city desired any additional boxes, the company was to furnish them for $35 each.

On April 29, 1893, a franchise was granted to certain individuals to construct and maintain the Gamewell Auxiliary Fire Alarm system to be connected with the street fire alarm boxes of the fire department.[2] It was expressly provided in this ordinance that any one opening a signal box connected with the fire alarm system of the city or with the auxiliary fire alarm system of the grantees for the purpose of giving a false alarm of fire and any one interfering in any way with the signal boxes except in case of fire should be liable to a penalty of from $1 to $100. It was provided that the grantees "shall have no rights in said city which shall be exclusive or which shall not at all times be subject to control and modification by the City Council of the city of Butte". This grant also was for a period of twenty years.

Another district messenger and burglar alarm fanchise was granted August 2, 1893, this one to the Fred B. Puddington

[1] Franchise Ordinances of the City of Butte, p. 442.
[2] *Ibid.*, p. 488.

Company.[1] Under this franchise the company was to furnish the city free of cost "ten or a less number of instruments to be used in the public buildings". Ten police alarm boxes were also to be furnished free connected with the company's wires. Additional boxes desired by the city were to be furnished at the rate of $25 each, "perfectly connected and set in operation".

On April 17, 1895, the City of Butte granted a franchise to certain individuals "for the purpose of constructing a parcel delivery and telegraph call system within said city".[2] These grantees were required to furnish eight police alarm boxes free of charge at points to be selected by the proper authorities. In this case also additional boxes furnished the city would cost $25 each.

177. Special provisions of signal franchises in various cities—Nashville; Springfield, Ill.; Minneapolis.—On April 16, 1891, the City of Nashville gave a franchise to the Postal Telegraph Cable Company for the maintenance of a system of "messenger district telegraph service".[3] Under this franchise the company had no right to erect poles, but was required to place its wires on poles already in the streets, with the consent of the owners, or, where there were no such poles or the consent of the owners could not be obtained, then on any buildings for which consents could be obtained. It was provided that if the company, at the date of the passage of the ordinance, had already erected one or more wires, it should immediately furnish a list of them to the board of public works and affairs and should remove them if they were not found to be strung in compliance with the ordinance.

A franchise granted by the City of Springfield, Ill., March 31, 1893, to certain individuals is of special interest because of the full statement it contained of the purposes of the grant.[4] It was provided that the grantees should, within 12 months from the approval of the ordinance, establish and maintain within the city "a system of police and fire alarm and district messenger service through the agency of electrical and mechanical appliances, metallic conductors, bat-

[1] Franchise Ordinances, *op. cit.*, p. 496.
[2] *Ibid.*, p. 502.
[3] Laws of Nashville, *op. cit.*, p. 994.
[4] Franchise Ordinancee, City of Springfield, 1907, p. 19.

teries, agents and messengers, whereby the residents of said City of Springfield, patrons thereof, may give timely notice of all demands for police and fire service to the proper departments of said city, and, in addition thereto, may at all times, from a central depot for that purpose to be established and maintained, secure the prompt attendance of messengers for immediate messenger service to any part of the city".[1] This grant was for a period of 20 years.

In a franchise granted April 7, 1883, by the City of Minneapolis to the American District Telegraph Company for the maintenance of a district telegraph, burglar, police and fire alarm system, it was provided that the company should at once establish "a complete circuit to include its own central office, headquarters of fire department, police headquarters and chemical engine house", and should, subject to the approval of the chiefs of the fire and police departments, "put in all apparatus and perfect all connections required in order to enable those having the call boxes of said company to instantly summon either of said departments whenever necessary".

178. Modern franchise for general signaling service—New York City.—On June 11, 1909, the Board of Estimate and Apportionment of New York City granted a franchise to the United Electric Service Company for the Borough of Manhattan for the operation of "an electrical signal system for the calling of messengers, an electrical burglary alarm system and a fire alarm system, and for no other purpose whatsoever".[2] The term of the grant was to be 15 years, with the right of renewal for 10 years. The property in the streets was to revert to the city without cost at the termination of the original or renewal period. The city was to receive $5,000 in cash for the franchise and annual payments ranging from a minimum of $1,200 or 2 per cent of the gross receipts during the first 5 years, to $4,500 or 4 per cent of the gross receipts during the last 5 years of the original grant. In case of renewal there was to be a revaluation of the franchise either by agreement or by appraisal; and the annual rate of payment for the renewal period was not in any case to be less than the sum required to be paid during

[1] Charter, Ordinances, etc., *op. cit.*, p. 598.
[2] For form of contract between city and company, see City Record, May 14, 1909, p. 5657.

the last year of the original grant. The compensation provided for was not to be considered as a tax or in lieu of taxes. The company was not to assign its franchise, consolidate with another company or enter into any agreement to prevent competition without the consent of the board and was to install messenger call boxes or fire alarm signals in city offices and furnish service at 75 per cent of the regular rates. The company's construction work and the operation of its system were to be under the supervision of the city authorities, and all the company's wires and cables were to be placed in conduits to be leased from the companies controlling them under contract with the city. The company was to have 2,000 messenger call boxes in operation within two years and to file with the board of estimate maps showing the location of its ducts and wires. Absolute power to regulate the charges of the company for the service it rendered was to be reserved to the board of estimate, limited only by the provision that the rates so fixed should be reasonable and fair and also by the maximum rates for messenger service fixed in the ordinance. The maximum rates referred to were as follows:

For 10 city blocks	10 cents.
For 11 to 15 city blocks	15 cents.
For 16 to 20 city blocks	20 cents.
For 20 to 30 city blocks	30 cents.
For each additional 20 city blocks	5 cents.

It may be stated that in the Borough of Manhattan it takes about 20 city blocks to make a mile. It was provided that the company should not receive from its subscribers any deposit or advance payment in excess of what was reasonably necessary to insure the payment of current bills, and that the company should pay interest at the statutory rate on any such deposits held by it for more than a month. Unpaid bills, unless due from the owner, were not to be charged against the property; and no person not himself in arrears was to be denied service because any previous occupant of the same premises had not paid the company for its service. The company was to keep accurate books of account and make a verified report to the city comptroller once a year. The company was also to submit annually to the board of estimate a report giving the amount of its stock

issued for cash and for property, the amount of its funded and floating debt, the average rate of interest paid on its bonds, the amount of dividends paid during the year, the amount paid for damages, the total income of the year in detail, the total expense for operation, including salaries, and such other information in regard to its business as might be required by the board. Most of these provisions and some others which I have not described, are in accordance with the standard form of franchise adopted by the city authorities of Greater New York within the last few years.

179. Transmission of music by electricity proposed in New York.—On May 10, 1907, the New York Cahill Telharmonic Company applied to the board of estimate and apportionment of New York City for a franchise for the purpose of generating and distributing music electrically.[1] The company had been incorporated under the Transportation Corporations law, as amended by the laws of 1907 to permit the formation of companies for this purpose with powers and duties similar to those of telegraph and telephone companies. In reporting upon this application, Engineer Harry P. Nichols stated that the company's equipment would consist of a distributing plant and a central station. At the central station the company would have the apparatus used to generate and control the music. It was said that the plant already in existence had cost about $300,000 and consisted of numerous alternating current dynamos and "keyboards similar to that of a piano, upon which the musicians play in order to produce any class of music within the range of the apparatus". "The keys", continued Mr. Nichols, "are really electric switches, each controlling an electric circuit of one or more dynamos. The frequency of pulsation of the current produced by each dynamo is identical with the frequency of sound waves required to produce a certain musical tone. These electrical waves are changed into sound waves by means of the ordinary telephone receiver. Thus, when the player closes the electric circuit by operating the keys upon the keyboard, he completes an electric circuit which carries the electric waves produced by the dynamos to the point of music outlet, such as a dwelling, hotel, restaurant, music hall, etc. At the point of music outlet, a telephone

[1] Report by the Division of Franchises, May 31, 1907.

receiver is attached; here the pulsation of the current is changed by means of the diaphragm in the telephone receiver into sound waves having the same frequency as that of the current in the wire. The music thus produced may be made to imitate closely other musical instruments, such as the piano, flute, violin, etc. Representatives of the company state that when a more complete equipment is installed, it will be quite possible to imitate a full orchestra." Mr. Nichols said that each subscriber to the service was to be provided with one or more outlets which could be governed by the subscriber as to the kind and volume of music desired. He was to be furnished a switch for regulating the force and volume of the sound. By another switch he could govern the class of music, that is to say, he could turn it one way and get the effect produced by a piano, or turn it another way and get the effect produced by a full orchestra, and so on.

Mr. Nichols recommended a form of franchise to be granted to this company, but no action has been taken upon it. The franchise was to run for a period of 25 years, with the privilege of renewal for 25 years more upon a proper revaluation. The company's property in the streets was to revert to the city without cost at the end of the grant or be removed by the company, at the option of the board of estimate. The city was to receive $25,000 in cash for the franchise and a minimum payment of $5,000 a year, or 1 per cent of the company's gross receipts, for the first 5 years; $10,000 a year, or 2 per cent of the gross receipts, for the second 5 years; $20,000 a year, or 3 per cent of the gross receipts, for the third 5 years; $35,000 a year, or 4 per cent of the gross receipts, for the fourth 5 years; and $60,000 a year, or 5 per cent of the gross receipts, during the last 5 years of the original grant. The right was to be reserved to the board to direct the company to install, free of charge, "music outlets" and the necessary appurtenances in all the free wards of the city hospitals situated in the territory for which the franchise was granted. The board was also authorized to direct the company to install, free of charge, "music outlets" in the assembly halls of the public schools. It was provided, however, that the company should not be required to extend its wires to a greater dis-

tance than 2,500 feet for the purpose of connecting with any school, and the company would not be compelled to equip more than 10 schools a year except schools situated within blocks bounded by streets in which the company had wires. The music for hospitals was to be furnished free, and for the public schools at one-third of the regular rates to private patrons. The franchise was not to be assigned without the consent of the board, and the company was to commence construction within six months and have 4,000 "music outlets" in operation within three years. The right to change and regulate rates was to be reserved to the board of estimate. The company was not to require any excessive deposits or advance payments from its subscribers, and unpaid bills were never to be charged against the property occupied by the subscriber.

CHAPTER XII.

ELECTRICAL CONDUITS.

180. Various ways of providing electrical conduits.—The need for conduits or subways for electrical conductors in cities is based upon two important facts. In the first place, the presence of a multiplicity of overhead wires in the streets is both unsightly and dangerous. In the second place, the exposure of overhead wires to various forms of interference renders the overhead system of maintenance expensive. This trouble is due not only to unusual wind and snow storms, which are likely to blow over poles or break down wires, but also to the interference of growing trees and occasional interferences in connection with fires or the moving of buildings through the streets. For these reasons electrical conduits or subways have become a necessity in the business portions of all important cities. The electrical conduit, as a public utility, is peculiar. It is a utility for utilities, rather than for individuals. In other words, conduits are built, not for the use of individual patrons, but for the use of the various companies which are themselves rendering various kinds of public service requiring the maintenance of electrical conductors in the streets. On account of this peculiar condition, provision for conduits has been made in a variety of ways. Perhaps the most usual method is by ordinance requiring each company maintaining wires in the

streets to place them underground. Under such circumstances, electrical conduits are merely a special kind of construction connected with each individual utility. The limited amount of sub-surface space in the streets and the great disadvantage arising from the digging up of pavements by many different companies at different times, have combined, however, to induce co-operation in many cases. This co-operation may take several forms. The several companies may be required to lay their conduits at the same time and in the same trenches, or one company may be permitted to lay conduits with sufficient duct space to accommodate, for a proper rental, all other companies having wires in the streets, or an independent conduit company may be given a franchise for the sole purpose of building electrical subways to be rented to all electrical companies not having conduits of their own. It is only one step from this last method to that adopted in New York City, where by special contract the electrical subway company was given a monopoly of the construction of the necessary conduits, subject to municipal regulation. The difficulties arising from these various modes of providing conduits, have led the cities in a number of instances to construct municipal conduits and to compel their use by the various companies maintaining electrical conductors.

181. Important features of conduit franchises.—In granting a franchise for the construction of electrical conduits, a city has first to consider the necessity of maintaining its control over the sub-surface space in the streets and in preventing any unnecessary destruction of street pavements or interference with street traffic. The removal of all overhead wires in the congested portion of a city and the providing of locations for them underground, impose an added burden of considerable magnitude upon the available sub-surface space. Ordinarily, conduits must be placed on both sides of the street. They are more bulky than most other sub-surface structures. It is imperative, therefore, that they should be laid strictly under the supervision of the public authorities and in accordance with a general plan, so as not to interfere with existing structures any more than is necessary. Conduits have these advantages; that they do not have to be placed below the frost line and do not have to be

constructed with reference to the influence of gravity. It is only necessary that they be placed far enough below the street surface to be protected from damage through heavy traffic.

Another matter of equal importance in connection with any conduit franchise, is the provision that the conduits shall be so constructed, with such dividing walls, man-holes and system of ventilation, as to render their use as safe and economical as possible. Particular provision must be made to prevent explosions through the collection of gas in the conduits and man-holes and also to prevent damage and interference with service by electrolysis, caused by insufficient insulation or improper separation of high tension from low tension wires.

After providing for continuous control of the streets and the efficiency of the conduits from a mechanical standpoint, it remains for the city to control the use of the conduits. The expensiveness of conduit construction and the existence of ordinances forbidding overhead wires, give to a company having a system of conduits already in the streets a great advantage over other companies seeking to establish an electrical service either of the same or of a different kind. Companies operating auxiliary fire alarm or district messenger wires, for example, can ill afford to go to the expense of constructing an entirely separate system of conduits for their own use. When the most available space has already been occupied by others, it is a great burden, even upon a corporation supplying an important service like the telephone or electric light and power, to install a new system of conduits. For these reasons it is always important that the city should provide in its conduit franchise that the use of duct space shall be granted without discrimination to all applicants with proper credentials, and that the rental rates shall be subject to municipal regulation or to arbitration.

It is also generally regarded as important that provision should be made in conduit franchises for the right of the city to purchase the conduits within a reasonable period of time. Because of the fact that the use of the electrical conduit, like the use of the street itself, is necessary to various public service companies for the performance of their functions, there is a very general acceptance of the idea that con-

duits are a legitimate and ultimately necessary subject for municipal ownership. Indeed, as it is often urged that street railway tracks should be owned by the city as a part of the permanent way of the street, so with at least as much force it may be argued that the conduit should be owned by the city as a subway for limited use.

182. General franchises for all wire-using companies—St. Louis; Nashville.—By an ordinance approved September 8, 1896, the City of St. Louis established an underground conduit district, within which all wires, tubes or cables conducting or transmitting electricity, except clock, burglar alarm, commercial printer, night watch, and other messenger call-box wires carrying currents for low tension and not fastened to poles, were to be placed underground.[1] There was, of course, the necessary exception for electrical conductors placed inside of posts or brackets, used in connecting lamps or signal boxes with underground conductors, and also for such wires and cables as were necessary for local distribution. It was provided that any person or company already authorized, or that might be authorized within 90 days from the passage of the ordinance, to operate electrical conductors for public use and desiring to place them underground, should have authority to construct conduits. This authority was conditioned, however, upon the granting of a permit by the board of public improvements upon application accompanied by detailed plans showing the route, capacity and dimensions of the conduits, ducts, man-holes and other appurtenances to be constructed. Upon receiving any application for such a permit, the board was required to give 15 days' public notice of a hearing on the application, this notice to include a statement of the streets and alleys in which the applicant desired to build conduits. It was provided that after this hearing the board "shall consider all of the applications, statements, plans and details presented, and examine into the space available for conduits or ducts under the streets, alleys and public places named in the advertisement, and shall decide upon, prepare and approve such plans, details, construction, conduits, ducts, manholes, materials and conditions, as in their opinion the public interests seem to demand". The board was required to in-

[1] Ordinance No. 18,680. See Report of Electrical Commission of Baltimore City, 1896, p. 183.

clude in its plans enough ducts, man-holes, etc., for the use of the police and fire alarm circuits and telephone service of the city, to be constructed and maintained by the parties receiving the permit and to be used by the city free of charge. If more than one application was presented at the same time, the board was authorized to compel all applicants to build and maintain joint conduits, the expense, in case of disagreement among the interested parties, to be apportioned by the board. It was provided that all parties failing to appear and submit applications on the day of the public hearing, or failing to accept in writing the apportionment of costs made by the board within 10 days after receiving notice of the board's finding, should be excluded from all right to obtain conduit, duct or man-hole facilities in the particular streets or portions of streets named in the notice of the hearing. It was provided, however, that for all streets not then assigned or which, having been assigned, should not be occupied as contemplated by the ordinance, applications and assignments could be made at a later time. The board was required to grant permits, according to the terms of the ordinance, to any properly authorized person or company filing with the proper city officer a bond in the sum of $50,000 to protect the city from damages that might arise in connection with the underground construction contemplated and as a guaranty that all laws and ordinances concerning conduits, ducts and underground wires would be complied with.

The city reserved the right to purchase, at any time after 15 years from the date of this general ordinance, all the conduits or ducts constructed under its authority. In case the city desired to exercise this option, it was required to pass an ordinance authorizing the purchase of any or all of the ducts. Thereupon the mayor, the comptroller and the president of the board of public improvements, or a majority of them, were authorized to give 30 days' notice in writing to any owner or occupant of any conduit, of the city's intention to purchase the whole or any part of it, at a valuation to be determined by three arbitrators, one to be chosen by the mayor, one by the owner or occupant, and the third by the other two. In case of failure to agree upon the third arbitrator, he was to be appointed within a specified time by the presiding judge of the St. Louis Circuit Court. Each of the

parties to the arbitration was to pay one-half of the arbitrators' fees, which were limited to $50 a day for each arbitrator while actually employed in making the award. After the award had been filed, the city was given 90 days within which to pay the amount determined and take possession of the conduits.

It was required that all conduits, ducts, man-holes, etc., should be maintained by their owners without cost to the city, to the satisfaction of the board of public improvements. Failure to observe this requirement would constitute a breach of the bond to which reference has been made. The city reserved the right at all times to inspect, superintend and control the construction of the work and to order any changes from time to time, either in the construction, the material, or the manner of maintenance, or any changes in the locations in the street. All such changes or alterations were to be made without expense to the city. Whenever the plans approved by the board of public improvements required two or more applicants for conduits to use a common trench, all such applicants were to carry on their work of construction as nearly at the same time as possible, and any company refusing to fulfill this requirement in the manner directed by the board, would be deemed to have waived its right to conduit privileges at the particular point in question. Any permit granted under the ordinance would become void unless work was commenced within 60 days and proceeded with continuously in good faith until completion. This ordinance was not to apply to existing companies authorized to maintain their wires under contract for lighting the streets of the city, unless such companies should accept the terms of the ordinance and file a release of the city from its agreement to pay a portion of the expense of placing their wires underground. The rights conferred and authorized by this ordinance were to terminate April 15, 1940, and until that time the prices charged to customers for telephone and electric light and power service by companies obtaining underground conduit privileges were not in any case to exceed the prices charged for similar service on January 1, 1896. No person or corporation building conduits under this ordinance was to have the right to lease or sublet space in the

conduits, or to use the conduits for any other purpose than that required by the grantee's individual needs.

Another general ordinance of a somewhat similar nature is that adopted by the City of Nashville, June 30, 1906, providing for the removal of overhead telegraph, telephone, electric light and other electric service lines within a prescribed district prior to July 1, 1907.[1] Under this ordinance companies were required to make written application for permits to the board of public works, stating in detail the plan of the conduits they proposed to construct. It was required that this plan should show:

(1) the materials to be used;
(2) the number and size of ducts necessary for the reception of wires then in operation;
(3) the number and size of ducts necessary for the reception of not less than 50 per cent more wires than the wires then operated by the applicant;
(4) the grouping of the ducts;
(5) the proposed route of the conduits;
(6) the size and location of all man-holes;
(7) the location of all sub-distribution poles and boxes.

The board was authorized to make any feasible changes or alterations in these plans which in its judgment should be necessary for space economy or for public convenience or safety, and to settle any differences between two or more applicants. There were detailed provisions in the ordinance giving to the board of public works the control of the plans and the work of construction. It was specifically required that all conduits should be laid in the same excavation, but should terminate in separate man-holes. It was also provided that the man-holes should contain a brick, stone or concrete partition separating high tension wires from low tension wires; also that work in the construction, alteration or repair of a conduit should not be done on any one continuous line for a greater length than two blocks at the same time. All persons or companies constructing conduits under this ordinance were required, after the work was completed, to file with the board of public works detailed plans of the construction and the disposition of all electrical conductors and apparatus connected with the conduits, "so that a complete record of all such conduits, with their appurtenances and above-ground connections, together with the electrical

[1] Laws of Nashville, *op. cit.*, p. 536.

conductors and apparatus installed in connection therewith, shall at all times be on file with said board of public works." This ordinance contained a provision that no person or company owning or having rights in any conduit should sell, lease or sublease any property or right in connection with such conduit without first obtaining the consent of the city, and also provided against the consolidation of companies or the use of conduits otherwise than for the specific purpose indicated in the plans submitted to the board of public works prior to construction.

183. A monopoly franchise in the form of a contract—New York City.—As early as 1884 the legislature of the State of New York passed a law requiring all telegraph, telephone and electric light wires and cables, in any city of the state having a population of 500,000 inhabitants or more, to be placed underground before November 1, 1885.[1] It was provided that if the wires were not removed within the time specified, the local governments of the cities affected should without delay remove all such wires, cables and poles, wherever found above ground, within their corporate limits. It was provided also that "no city in this state shall grant any exclusive privilege or franchise under this act to any corporation or individual by which a monopoly may be created or competition prevented on equal terms". In the following year another act was passed providing for the appointment of boards of electrical subway commissioners in New York City and Brooklyn, the two cities affected by the act of the preceding year.[2] It was made obligatory upon all companies that were required to place their wires underground, to file with the board of electrical subway commissioners maps showing the streets or avenues which they desired to use for the purpose and giving the general location, dimensions and course of the underground conduits to be constructed. Before any construction was undertaken, however, the approval of the plan by the commissioners was required. It was made the duty of the commissioners to investigate any and all methods proposed by the various companies. In case no suitable plan was proposed or in use within 60 days after the passage of the act, the commis-

[1] Laws of New York, 1884, chapter 534.
[2] *Ibid*, 1885, chapter 499.

sioners were required to devise and prepare a general plan to meet the requirements of the law and were given full authority to compel all companies to use the subways so prepared. The commissioners were authorized, however, to permit the maintenance of overhead wires in the suburbs and in sparsely inhabited portions of the city and in other places where underground construction and operation were deemed impracticable.

Under the authority of these acts the board of electrical subway commissioners of New York City devised a general plan of electrical subways and entered into an exclusive contract with the Consolidated Telegraph and Electrical Subway Company for the construction and operation of such subways. The first agreement, entered into on July 22, 1886, provided that the company should furnish the capital necessary to build the subways (not less than $3,000,000) and should build, equip, maintain and operate them.[1] The company was to have the management of the subway and the rental of spaces in it, but such management and rental were to be wholly subject to revision, alteration, amendment and reversal by the electrical subway commissioners. The commissioners, however, were not to interfere with such management or rental except for the purpose of more fully carrying into effect the intent of the contract or of the laws of the state or of the ordinances of the city. The company agreed to keep full and accurate accounts, showing the amount of space of its subways occupied and the names of the occupants; the number and kind of electrical conductors, with the names of their owners; the gross and net rentals in detail and charges of all kinds collected by the company, with the names of those paying such rentals or charges; a detailed statement of all expenditures of every kind made by the company, with the names of the persons to whom payments were made. These accounts, together with all the books and records of the company, were to be open at all times to the inspection of the commissioners, who were authorized to make full copies of them.

The subways were to be built in accordance with the plans and specifications furnished by the commissioners and were to be kept at all times in good repair. The company was to

[1] See copy of contract on file with the Public Service Commission for the First District, New York, Document F. 2277.

adopt, subject to the approval of the commissioners, any improvements that would increase the efficiency of the subway system, and the commissioners reserved the right at any time to make such modifications in the plans, specifications, construction and material of the subways as experience should show to be desirable. The company agreed to furnish the commissioners, at its own expense, all maps, plans, drawings, etc., and all data and information requested by them, and to reimburse them for all expense incurred in superintending and inspecting construction. The spaces in the subways were to be leased by the company "to any authorized company, person or firm operating or intending to operate electrical conductors" in the streets of the city, upon application. It was stipulated that no space not actually needed for occupation by its electrical conductors in the due conduct of its business should be leased to any company to the exclusion or detriment of any other company needing space in the subways and able and willing to pay for it. The subway company was required to furnish the city without charge all space in the subways necessary for the electrical conductors of the municipal departments. In case at any time the space in the subways should not be sufficient for all companies applying, the subway company was required to provide the necessary additional space by means of new construction.

The rental to be charged any company for the use of space in the subway was not to exceed "the present cost" of maintaining its electrical conductors, that is to say, the cost of maintaining them overhead. But this provision was not to prevent the making of any contract between the subway company and other companies on any terms that were mutually satisfactory. The subway company was authorized to fix a fair scale of rents to be charged, according to the kind of conductors and the amount of space required, and these rents were to be at the same rate to all occupants. It was stipulated that whenever the net annual rentals from the subways, after paying charges and expenses, should exceed 10 per cent of the value of the capital invested by the subway company, the excess should be divided into three equal portions, of which one should be distributed among the companies occupying the subway, one should be paid to the city, and one should be retained by the subway company.

It was stipulated that all companies occupying space in the subways should own their conductors and should have full management and control of them, except where otherwise agreed upon between them and the subway company, subject, however, to the approval of the commissioners. The subway company, however, was authorized to make reasonable rules and regulations in regard to the management, maintenance and repair of the electrical conductors occupying the subways. In case of dispute between the subway company and any company desiring to occupy space in the subways, the commissioners were to act as arbitrators and their decision was to be final. The subway company was required to give a bond in the sum of $500,000 to secure the performance of its contract with the city and the construction of the subways provided for, and also to protect the city against suits arising from the infringement of patents or from the construction and maintenance of the subways. The expense of compelling the owners of overhead wires to enter the subways was to be paid by the city in the first instance and afterwards to be collected from the companies themselves. The company's bond was also to guarantee the city that the company would replace pavements and other property removed in the course of construction, without injury. In case at any time there should be a substantial failure on the part of the subway company to carry out the provisions of the contract and it should be so adjudged by a competent judicial authority, the city reserved the right to enter into possession and control of the subways, and the company agreed to "quietly and peaceably" surrender the possession of them. The city granted the company the right to build the subways in accordance with plans furnished from time to time by the subway commissioners and also agreed to use all lawful means to compel companies or persons using electrical conductors to comply with the law and place their conductors in the subways to be built by the company and to pay a fair rental for the space occupied.

A modified contract was entered into under date of April 7, 1887.[1] Under this agreement it was expressly stipulated that the subway company should not make any contract with any electrical company on terms not requiring the payment,

[1] Minutes of the Board of Commissioners of Electrical Subways, etc., Vol. I. p. 112.

by the latter, of rents at the regular fixed rates; also that not only the subway commissioners but the city comptroller, or any person deputed by them or him, should have the right to examine the company's books. It was also stipulated that the company should file with the comptroller a statement on the first day of October of each year in such form and with such verification as the comptroller might prescribe. The clause of the old contract relating to the sharing of net profits was changed, so that all excess over 10 per cent annual profits upon the actual cash capital invested by the company in providing, constructing and equipping the subways, should be paid into the city treasury. If, however, the company's net earnings for any year or years prior to the time of earning such excess had not equaled 10 per cent per annum, then the company was entitled first to recoup itself out of the excess for the difference between its actual earnings and the 10 per cent standard profit, it being the intention that no payment should be made to the city out of excess earnings until the company had first actually earned and received 10 per cent for each year theretofore.

The subway company was also required to secure a permit from the commissioner of public works before opening any particular street. It was expressly stated that the company should not be deemed the servant or agent of the city in doing any act under the contract, but should be dealt with by the city and by all other persons as an independent party contracting with the city and having such rights for itself as this contract secured to it. The amount of the company's bond was reduced to $250,000.

The provision for taking over the subways in case of a substantial failure on the part of the company to carry out the terms of its contract, was somewhat modified. In the case mentioned the subways were to be surrendered by the company, "subject to any valid mortgages or liens then thereon outstanding, not exceeding 50 per cent of the actual cost of such subways, and all leases or contracts then existing for the use thereof". A new section was added, providing that after January 1, 1897, upon the demand of the sinking fund commissioners of the City of New York the company should transfer to the city all of its subways and contracts or other property held in connection with them, subject to

leases, mortgages or contracts theretofore lawfully made, within the limitations already described, upon payment by the city of not less than the cost of such subways and property. In case, however, the company had not earned 10 per cent per annum on actual cost during the term of its contract, the city was required to make a further payment "in addition to the cost, not exceeding 10 per cent on such cost, to the extent of such deficiency in annual earnings". This agreement was expressly ratified by act of the legislature in 1887.[1]

Two or three years later it was deemed desirable to separate the control of the conduits used for low tension wires from the control of conduits used for high tension wires. The Empire City Subway Company (Limited) was incorporated for the purpose of taking over from the Consolidated Telegraph and Electrical Subway Company all conduits used for telephone and telegraph wires and for low tension wires of the Edison Electric Illuminating Company, and for the purpose of constructing all additional conduits required for these uses. This division of ownership and operation was effected with the approval of the board of electrical control, which had succeeded to the authority of the board of electrical subway commissioners, and was expressly authorized by act of the legislature.[2] The board of electrical control entered into a separate contract, May 15, 1891, with the Empire City Subway Company (Limited).[3] This contract contained substantially the same provisions as the modified contract already described.

On December 10, 1890, after hearing a long argument on behalf of the various companies interested, the board of electrical control fixed the annual rentals to be charged for trunk line ducts in the subways at $900 per mile for 3-inch ducts, $800 per mile for 2½-inch ducts, and $700 per mile for 2-inch ducts.[4] In 1894 the Empire City Subway Company entered into two contracts for maintaining and keeping in repair its subways.[5] One of these contracts was with the Union Subway Construction Company, which appears to have been a subsidiary of the Metropolitan Telephone and

[1] Laws of New York, 1887, Chapter 716.
[2] *Ibid.*, 1891, Chapter 231.
[3] Minutes of Board of Electrical Control, Vol. II. p. 1122.
[4] *Ibid.*, Vol. I. p. 1016.
[5] Gas and Electric Light Investigation, New York, 1905, Vol. II. p. 1674.

Telegraph Company. Under the terms of this agreement the construction company received $100 a year for each mile of single duct occupied by telephone and telegraph wires. Under the other contract the Edison Electric Illuminating Company received $200 a year for maintaining and keeping in repair each mile of single duct occupied by its own wires. The subway company explained to the city commissioner of accounts that this disparity in the allowance for maintenance of Edison conduits and telegraph and telephone conduits was due to the greater cost of construction of the former, to the fact that they were more expensive to keep in repair, and to the further fact that practically all of the Edison ducts were in use while only about one-half of the others were then in service. "If it were permitted me to leave the realm of fact and indulge in a flight of fancy," commented the accountant,[1] "I think I could give a reason more in harmony with the facts in the case than those recited above."

The chief engineer of the electrical commission of Baltimore, in his first report in the year 1900, compared the annual rentals charged for the use of conduits in Philadelphia with the rentals charged in New York.[1] The rates in Philadelphia were for a 3-inch duct, 5.7 cents per foot for the first mile; 4.7 cents per foot for the second mile; and 3.8 cents per foot for the third mile. In New York the rates were 28.4 cents per foot for a 3-inch distributing duct; 18.9 cents per foot for a 3-inch main duct, and 15.2 cents per foot for a 2-inch main duct. "While rental figures for Philadelphia," said the engineer, "show only an arbitrarily fixed revenue from duct space, which would otherwise be wholly unproductive, those for New York illustrate the opposite extreme." He explained that in Philadelphia the municipal conduits had been constructed solely for city purposes, but that incidentally private companies having conduit systems of their own occasionally rented additional space in the city conduits.

In its last report, dated December 31, 1897, the board of electrical control summarized the work done under its direction. It stated that the total construction of electrical subways in New York up to that date included 223 miles of

[1] Gas and Electric Light Investigation, 1905, *op. cit.*, Vol. II. p. 1676.
[2] Report of the Chief Engineer to Electrical Commission of Baltimore for the years of 1898 to 1905, p. 112.

ducts for the Edison low tension wires; 739 miles of ducts for high tension electric light and power wires; 983 miles of ducts for telephone and telegraph wires, and 58 miles of ventilating pipe.[1]

"No provision for ventilation was made when the subways were first built," said this report,[2] "and the necessity for it could not be foreseen, but soon after frequent explosions occurred, usually at points where man-holes were placed, and they were found to be due to illuminating gas. The gas, escaping from leaky and worn-out gas mains, collected in the subways and was held there by their practically air-tight condition. A system of blowers was provided at various points, by which the gas was forced out by air driven under pressure through ventilating pipes placed parallel with the subways and having apertures at the man-holes, by which system, the resistance of air being greater than the pressure of gas, the entrance of the latter was prevented.

"This method gives satisfactory results; since its first introduction it has been kept in constant operation and is always under close inspection. The cost of maintaining this system of ventilation and air pressure involves a large expense to the subway companies, and we have on several occasions suggested that means should be found to compel the gas companies to safeguard their mains and keep their product where it belongs. It is wholly wrong to impose the expense of rectifying the results of their carelessness and the defects in their service upon the subway construction companies, which are themselves without fault in the premises."

These contracts have been successful in one particular. They have brought about the removal of the overhead wires from the streets of old New York. As a matter of fact, the Consolidated Telegraph and Electrical Subway Company has come under the control of the New York Edison Company through stock ownership, and the Empire City Subway Company has in like manner fallen under the control of the New York Telephone Company. Consequently, the two companies owning and operating subways nominally free to all authorized owners of electrical conductors, have themselves become the property of the two great monopoly companies of the city operating wires. It is needless to add that rival telephone or electric light companies are not admitted to the subways unless they can show good cause.

In 1903 the city's commissioner of accounts made an examination of the books of the two subway companies for the purpose of ascertaining the cost of construction of the subways and the earnings of the companies. He found a financial mess rivaled only by the similar mess made by the

[1] Minutes, Vol. II. p. 1638.
[2] *Ibid.* p. 1640.

notorious ring that manipulated the Metropolitan Street Railway Company. Instead of themselves furnishing the capital for the construction of the conduits, the subway companies had secured their funds through subsidiary companies, and the actual cost of the conduits was hopelessly concealed. Even from the records of the company as shown by its books, the commissioner of accounts was able to reduce the alleged cost of the high tension subways to approximately $4,200,000, while the outstanding bonds of the Consolidated Telegraph and Electrical Subway Company amounted to $5,536,000.[1] In the same way, the cost of the low tension subways was reduced to $6,259,000, while the outstanding bonds of the Empire City Subway Company (Limited) amounted to $5,005,000.[2] It is to be remembered that under the contracts the city was authorized, in case of purchase or in case of default by the company, to come into possession of the conduits subject to mortgages and liens amounting to not more than 50 per cent of the actual cost of construction. As a result of this report, the city brought suit against both companies to secure an accounting and the surrender of the subways to the city on account of the alleged violation of the companies' contracts. These suits are still pending. It is needless to add that under these conditions the city has received no share of the companies' net profits.

184. General systems of municipal conduits—Baltimore; Erie, Pa.; New Britain, Conn.—By an act of the legislature of Maryland, approved May 30, 1892, the City of Baltimore was authorized "to provide a series of conduits under the streets, lanes and alleys of said city, or any part or parts thereof, for the use of telephone, telegraph, electric light and other wires, either by constructing said conduits themselves or by authorizing their construction by any person or corporation, upon such terms as may be agreed upon, and to provide for the appointment of an electrical commission with such powers and duties as the said Mayor and City Council may deem necessary or appropriate for carrying out the purposes of this act; and to require all such wires, or any part or parts thereof, and the poles carrying the same, to be removed from the surface of the streets, lanes and alleys of said city, or any part or parts thereof, and to require such wires to be placed

[1] Gas and Electric Light Investigation, *op. cit.*, Vol. II, pp. 1662, 1663.
[2] *Ibid.*, Vol., II. p. 1673.

in such conduits, all under such penalty as they may prescribe; and to prescribe and establish reasonable rentals to be paid by any company or person using any of said conduits, by whomsoever the same may be constructed".[1] In 1896 the Maryland legislature authorized the city to issue bonds to the amount of $1,000,000 to secure funds for building these conduits.[2] The bond issue was subject, however, to the approval of the electors of the city. Under the authority of these acts an electrical commission was appointed, plans for a municipal conduit system were prepared, and the required issue of municipal bonds was approved by the people.. Later a second issue of $1,000,000 of bonds for conduit purposes was authorized, and up to December 31, 1908, the date of the latest available report, $1,616,000 had been expended on the construction of the conduit system, and 7,252,000 feet of ducts had been laid.[3] Only about 22 per cent of the total duct feet constructed had been occupied up to January 1, 1906.[4] The city was confronted with difficulty in designing its conduit system on account of the fact that the two railroad companies and the three electric lighting companies at that time requiring conduit accommodations were supposed to be on the verge of consolidation, and it was difficult to arrange the system of municipal conduits with reference to the needs of these prospective tenants without having more extensive information than was available. The difficulty was particularly marked with reference to the electric light and power companies. The principal telephone company of Baltimore was already operating an underground system under a special ordinance granted in 1889. Under the circumstances the electrical commission thought it desirable to plan the municipal conduit system on a considerably larger scale than immediate needs would require. The commission also determined to construct a single conduit system for all classes of electrical conductors, as distinguished from the separate system for high and low tension wires, which obtains in New York. Particular attention was paid to the ventilation of the subways to prevent explosions from quantities of gas collected in man-holes, and to the prevention of electrolysis resulting from the action of stray electric currents in the ground.

[1] Acts of Assembly, Maryland, 1892, Chapter 200.
[2] *Ibid.*, 1896, Chapter 350.
[3] Annual Report of the Comptroller of Baltimore City, 1908, p. 310.
[4] Report of Chief Engineer, etc., 1898 to 1905, *op. cit.*, pp. 74, 76.

By an ordinance approved Dec. 10, 1900, the rate of rentals to be charged for the use of the municipal conduits was fixed at 7 cents per annum per duct foot up to 5,000 feet; 6½ cents per duct foot from 5,001 to 25,000 feet; 6 cents per duct foot from 25,001 to 50,000 feet; 5½ cents per duct foot from 50,001 to 100,000 feet; and 5 cents per duct foot for more than 100,000 feet.[1]

In the form of lease which the city requires of any company using municipal conduits, there is a provision that rentals shall be paid semi-annually in advance.[2] It is also provided that the use of the conduits shall conform to the rules and regulations of the electrical commission, and that the lease may be terminated in part or in whole by the lessee on six months' notice, or at any time by the electrical commission if, in its judgment after investigation, the further use of the ducts by the lessee is such as to be detrimental to the cables of other lessees in the same conduits or unsafe to other persons or property. The lessee must occupy the duct space assigned to it within six months of the date when its application is granted, and must execute a bond to the city in a sum equal to $100 per mile of duct to be used by it. Under the rules of the commission no limit is put upon the voltage of conductors to be placed in the conduits. All work on the conduits, including repairs and additions, is to be done by the commission. Entrance into the man-holes or tampering with the conduits or any of the cables in them without a permit from the commission, is to be prosecuted as trespass. Appliances used for drawing in and handling cables must be approved by the commission. The lessee must repair unsatisfactory cables in the city conduits whenever required by the commission to do so. All cables must be properly tagged with the name of the owner and the number of amperes, the character of the current, and the potential at which the cable is operated. Whenever cables are installed in the conduits, it is first determined by actual test in which man-holes it will be necessary to bond the cables to the railway return system in order to prevent electrolytic action, and such bonding is then done under the direct supervision of the commission with the knowledge and approval of the United Rail-

[1] Report of Chief Engineer, etc., *op. cit.*, p. 152.
[2] *Ibid.*, p. 195.

ways and Electric Company. The commission reserves the right to amend the rules and regulations at any time.

The City of Erie, Pa., also has a system of municipal conduits, which are under the control of the city electrician.[1] Any application for space in the city's conduits, after approval, is submitted by this official to the city solicitor, who prepares the necessary bond for the protection of the city. The city, as a part of its conduit system, furnishes the terminal poles and the necessary distributing poles. The rental charged for the use of ducts in the city's conduits is fixed at 5 cents per lineal foot per annum for each 3-inch duct. This rate applies to tile, iron or wooden pipe ducts below or above the ground. Applications for space in the municipal conduits must specify the name of the company; the term for which space is wanted; the number and location of ducts required; the number, material and dimensions of conductors to be used; the class of service to be rendered; the number of conductors and their disposition in the cable; the maximum electro-motive force carried by each conductor; the style of cable proposed; the nature of the insulating material; the thickness of the insulating material, and the thickness of the lead covering. Applications for permits to place wires in conduits or to repair them, must show a complete indentification of the wires or cables to be repaired or altered and the particular man-holes to which access is desired. All cables or conductors drawn into the municipal conduits must be plainly marked with a metal tag in every man-hole with the name of the person or corporation owning them, and all cables containing conductors carrying a current of more than 100 volts must be marked so as to indicate the potential carried. The right is reserved to the city electrician to inspect all work in connection with the installation or repair of wires and cables. Whenever a man-hole is opened, before commencing work the applicant must see that it is free from gas and, if it is not, he must ventilate it. The city electrician provides a fan or blower for this purpose. Every lessee of space in the municipal conduits is required to prohibit his employes from smoking in or around the man-holes, and no one under the influence of liquor may be allowed to engage in work in the municipal conduit system. The entire system,

[1] Digest of Laws, Ordinances, etc., Erie, 1907, p. 104.

as constructed up to January 1, 1906, comprised 195,000 feet of ducts. Space in these ducts was rented by one telegraph and two telephone companies. The ducts were also used by the municipal fire and police signal system, but were not used for any high tension wires.[1] Only a little more than 40 per cent of the total duct mileage was in actual use.

The City of New Britain, Conn., was authorized by an act of the state legislature, approved June 20, 1899, to provide for the placing of all electric wires underground; to build and maintain "main and lateral conduits, with man-holes and ventilating shafts, and all other appurtenances pertaining to conduits for telephone, telegraph, fire alarm, electric light and all other electric wires"; and to cause such wires to be placed in the municipal conduits.[2] The city was authorized to charge reasonable rentals for the use of its conduits, sufficient to provide for interest on the cost of construction and a sinking fund to cover repairs and maintenance and to wipe out the original investment. The sum charged for the use of the conduits was to be apportioned among the users according to the number of ducts occupied by them. The aggregate rentals received by the city for the year 1907 amounted to about $3,200.[3] The superintendent of the electrical department reported that the wires of the fire and police system in the underground conduits were beginning to give trouble on account of electrolysis and would have to be replaced in the very near future.[4] At the time of his report they had been in service seven years.

Under the original act authorizing the construction of the New Britain subway, a bond issue of $50,000 was provided for. Two years later, however, in 1901, the act was amended, reducing the amount of bonds that might be issued to $36,000, the amount then outstanding, and the city was prohibited from building any more conduits without further authority from the general assembly. In 1907, however, the authorized bond issue was increased to $100,000 to enable the city to make certain specific extensions of its conduit system.[5]

135. Conduit franchises incidental to other public utility services—Chicago; Troy; Rochester; Buffalo.— As early as 1882

[1] Digest of Laws, etc., *op. cit.*, p. 113.
[2] Charter of the City of New Britain, p. 117.
[3] Municipal Record, New Britain, 1907, p. 41. [4] *Ibid.*, p.166. [5] *Ibid.*, p. 360.

a franchise was granted by the City of Chicago to the Chicago Sectional Electric Underground Company to build conduits for commercial purposes.[1] This company built about seven miles of conduits in the business district and in 1890 was renting space in them at the rate of $1,000 per duct-mile per year. One duct, however, was reserved for the use of the city without cost. This franchise expired in 1907; and in the ordinance passed in March, 1908, governing the rates to be charged by the Commonwealth-Edison Company, the City of Chicago provided that if the Edison Company should acquire the conduits constructed under this old franchise, it would be permitted to continue to operate them under existing leases, on condition that it should pay the city an amount equal to 10 per cent of the gross rentals received from the operation of such conduits.[2] Most of the conduits in use in Chicago are owned and operated by the city for municipal purposes and by the various individual companies having electrical conductors in the streets.

In a franchise granted by the City of Troy, June 6, 1901, to the Troy Telephone and Telegraph Company, permission was given the company to construct conduits for its own use.[3] The company was authorized, however, to provide space in its conduits for carrying the wires and cables of other companies duly authorized to carry on business in the city, upon such terms as might be agreed upon between the companies interested.

In the City of Rochester, likewise, the Rochester Railway and Light Company owns conduits not only for its own use but also for the use of the Rochester Telephone Company.[4] The 77 miles of conduits in the city January 1, 1906, were owned by the Rochester Railway and Light Company, the Bell Telephone Company and the Western Union Telegraph Company.

In Buffalo, when overhead wires were ordered removed, any company granted permission to place its wires in underground conduits was required to construct conduits of sufficient capacity to accommodate its own wires and any other electrical wires on the same street, and also to provide for an

[1] Report of Electrical Commission of Baltimore City, *op. cit.*, p. 158.
[2] *Ante*, section 130.
[3] Municipal Ordinances of the City of Troy, 1905, p. 178.
[4] Annual Reports, 1905, Department of Public Works, Rochester, pp. 123, 135.

increase to the extent of at least 50 per cent.[1] The wires of the city were to be carried in the conduits free of charge, and the several companies operating in the same streets were authorized to use the conduits constructed by one of their number upon such terms as could be agreed upon or, in case of disagreement, upon terms fixed by arbitration.

186. Independent conduit franchises not exclusive—Syracuse; Kansas City; Minneapolis; Duluth.—On September 15, 1896, the City of Syracuse granted a franchise for the construction, maintenance and operation of underground electrical subways or conduits to Eugene Hughes & Company.[2] All construction work was to be done in accordance with plans and specifications approved by the common council and in a manner satisfactory to the commissioner of public works. Not more than two blocks in any one street were to be disturbed at one time. The pavement was to be restored to as good condition as it was in formerly, but no asphalt, brick or sandstone pavement or gutter could be torn up without special permission of the city authorities. Authority was reserved to the commissioner of public works to appoint necessary inspectors to superintend all street work, the expense of such inspectors to be paid by the grantees. The conduits built by the grantees were to be "suitable and sufficient," and in their construction and repair no sewer, water or gas pipe, telegraph, telephone, fire alarm telegraph, police signal, or electric light wires, cables, pipes, subways or conduits, or other structures or appliances, were to be permanently disturbed or interfered with. The grantees were required to adopt all necessary means to increase the usefulness and efficiency of their proposed system of subways. Changes in the construction or location of the subways deemed reasonable and necessary by the common council, were to be made by the grantees at their own expense. Complete maps, plans and specifications of the system of subways and conduits to be constructed were to be filed by the grantees before any streets were dug into or disturbed. Such maps and plans were to show the exact location, depth and alignment of the proposed subways, the number of ducts and the details of construction, and were subject to the approval of the common council.

[1] See Report of Electrical Commission of Baltimore, *op. cit.*, p. 168 and *ante* section 131.

[2] Transcript of Ordinance furnished by Dr. Chas. W. Tooke.

The grantees agreed to furnish the several departments of the city with necessary ducts for the use of the municipal wires of the fire alarm telegraph, police call or signal system, or city wires for "other purposes that may now or shall hereafter be required." If at any time the conduits constructed by the grantees proved to be insufficient for the use of the city and the individuals and corporations applying for them, the grantees were required to construct additional conduits or additional ducts in conduits already constructed. The franchise was taken by the grantees subject to all ordinances and regulations already enacted or to be enacted thereafter by the common council. It was expressly stipulated that the grant should not be construed as an exclusive right or privilege, or so as to prevent the granting of similar privileges to other individuals or companies.

Several other franchises, for electric light and power and telephone and telegraph purposes, granted by the City of Syracuse from time to time, carried with them the right to construct conduits for the individual use of the several grantees upon terms otherwise generally similar to the terms of the Hughes franchise.

A franchise was granted April 16, 1900, by the City of Kansas City to the Kansas City Electrical Wire Subway Company, for the purpose of laying conduits under the streets and renting space therein.[1] This franchise was for the period of 30 years. It contained many of the usual provisions for the supervision of plans and construction work by the municipal authorities. It also required the company to deposit with the city $1,000 as a special fund to be used by the board of public works in making the necessary repairs and changes for which the company was liable. Whenever the board notified the company to make any repairs required under the ordinance, if the company neglected or refused to make them, the expense of the work was to be taken out of this fund and the company was required, upon 10 days' notice, to deposit with the city comptroller enough money to restore the fund to the full amount of $1,000. Upon failing to do so, the president, manager or superintendent to whom notice had been sent would be deemed guilty of a misdemeanor and subject to a fine of from $50 to $100 for each offense. In case

[1] Franchise Ordinances for Public Utilities, *op. cit.*, p. 76.

the company, its successors or assigns, should fail or refuse to comply with any of the substantial provisions of the ordinance for a period of 30 days after notice, then all rights and privileges under the ordinance would *ipso facto* cease. It was specifically provided that the company "shall be a common carrier and shall permit any person or persons, company or companies, to use said system of underground conduits upon such terms as may be agreed upon by the respective parties, and in case they cannot agree, such terms may be fixed by arbitration." The company was required to pay the city, in addition to all other taxes assessed by law, a sum equal to two per cent of its gross receipts, and its books were to be subject to inspection by the city comptroller or by any committee appointed by the common council for the purpose. At the expiration of 20 years the city was to have the right to acquire the company's plant upon paying its "actual value." In case the parties could not agree, this value was to be ascertained by one of the judges of the state circuit court then having jurisdiction over the trial of causes in the city. If the city desired to purchase, it was required to pass an ordinance declaring its intention to do so. Thereupon it was to file a petition with the court, asking that one of the judges, to be named in the petition, should proceed to value the plant. Notice of the filing of the petition was to be given to the owner of the plant at least 15 days in advance. It was stipulated that in estimating the value of the plant the judge "shall have regard alone to the actual value in money, at the time of making said estimate, of the conduits, machinery, engines, instruments, appliances, fixtures, lots of ground, buildings, and all other property of every kind, owned or controlled and used by said grantee and necessary to the maintenance and operation of the system as then in use" in the city. It was provided, however, that "the value of the unexpired franchise and the value of the stock and the earning capacity of said plant, shall not be considered in said valuation".

On October 10, 1887, a franchise was granted by the City of Minneapolis to the National Subway Company, authorizing it to "construct, maintain, repair and operate conduits or subways, pipes, mains, conductors, man-holes and service pipes in the streets, avenues and alleys throughout said city,

for and during the term of thirty consecutive years from the date of the passage of this ordinance, for the purpose of distributing and maintaining a line or lines of electrical and other wires, together with all necessary feeders and service wires or other electrical conductors to be used for the transmission of electricity for any and all purposes".[1] The grantee was required to permit other companies to use its conduits upon such terms as could be agreed upon or, in case of disagreement, upon such terms as should be determined by arbitration. The usual provision was made requiring the grantee to furnish the city space in its conduits, free of charge, sufficient for carrying the city's fire and police alarm and telephone wires and "all other wires used for automatically or telegraphically receiving or transmitting fire, burglar or police alarm". Under this franchise the company was required to have two continuous miles of conduit ready for use by December 1, 1888, and thereafter to extend its system at least one mile a year until all the territory within the fire limits of the city, as existing at that time or as they might thereafter be extended, was fully provided with conduits and other conveniences for underground wiring. The franchise was declared not to be exclusive, and the company was not permitted to use more than one-fourth of the space in the streets at that time set apart by ordinance for underground wiring. If at any time the company's subway proved unsatisfactory and "an encumbrance and a nuisance in the streets", the city reserved the right to require the company to remove it at its own expense.

By an ordinance passed April 25, 1892, amended the following year, a franchise was granted by the City of Duluth to the Northern Electric Subway Company, to construct and operate conduits throughout the city for a period of 30 years.[2] These conduits could be used by the grantee or rented to others to be used for the transmission of electricity for any and all purposes. The company was not authorized, without special permission of the common council, to lay more than one subway in any street. On east and west streets such subway was to be on the southerly side of the street, and on north and south streets on the easterly side of the street. The company was authorized to charge for the use of its

[1] Charter, Ordinances, etc., *op. cit.*, p. 592. [2] Franchises, Duluth, p. 383.

conduits $1,000 per mile per year for each 2½-inch duct, $1,200 per mile per year for each 3-inch duct, and for larger ducts at proportionate rates. The company was required to commence construction within three months after being directed to do so by the common council and, within six months after the date of commencement, to complete the construction of one mile of subways, ready for the conveyance of all the electric wires of persons or corporations desiring to use the subway. Thereafter the company was to construct its subways as directed by the common council, "provided that it shall satisfactorily appear that the public requirements and prospects of immediate rental warrant said company in building such line or lines of subways". The company was to provide free space for the city's telegraph, police telephone and fire alarm wires. The city reserved the right to purchase the plant, at the end of 10 years or at the end of any 5-year period thereafter, at a price to be agreed upon with the company or, in the event of disagreement, to be determined by arbitrators. The city was required to give 6 months' notice of its desire to purchase and to pay the amount of the award within 6 months after it had been made. The value of the franchise, however, was not to be considered in fixing the purchase price.

187. Electrical conduits in the City of Washington.— Under authority of an act of Congress approved August 6, 1890, President Harrison appointed a special commission to consider the location, arrangement and operation of electric wires in the District of Columbia, with a view to securing the construction of a safe and convenient system of conduits and subways for their accommodation. This commission, of which Professor Henry A. Rowland, of Johns Hopkins University, was a member, reached the conclusion that overhead wires were objectionable; that underground wires were practicable for all kinds of electrical service; that efficient cables for all kinds of electrical service could be manufactured at reasonable cost; that conductors carrying high potential currents could be placed close to telephone or telegraph wires without interference by induction; that with proper protection currents of the highest potentials could be safely used; that efficient management of electrical matters required a permanent municipal bureau or department; that where

electric wires alone were to be accommodated in the subways, conduits on either side of the street, constructed on the "drawing-in" plan, were preferable to a single subway in the center of the street; and, finally, that the interests of the city would be best subserved by public ownership, while the method of having conduits built by a subway company and renting them to electric companies would result in great trouble and inconvenience to all concerned.[1] These recommendations were not adopted by Congress.

On February 8, 1896, Mr. John W. Ross, President of the Board of Commissioners of the District of Columbia, submitted to the chairman of the House committee on the affairs of the District a special report on a bill that had been introduced into the House for the purpose of incorporating a new telephone company and giving it a franchise in the City of Washington. Mr. Ross stated that it had been the uniform policy of the commissioners, in reporting upon similar bills, to take ground adverse to the granting of privileges of this kind to new companies.[2] He said that the business carried on by such companies "was under such conditions as to make a monopoly desirable if not necessary", and that "aside from the great damage to the pavements and inconvenience to the public occasioned by digging up miles of public streets, it is not necessary or wise to duplicate any gas pipes or conduits in the public streets, for Congress has full power to regulate the rates to be charged by such companies, as well as to correct any other evils". He stated that none of the telephone and electric light companies had as yet extended their conduits beyond a small number of the more important streets, and that such conduits should always be laid on both sides of the streets in order to avoid cutting the pavement for the purpose of making house connections. He stated, moreover, that all electric wires, including telegraph wires, should be laid in the same conduits. Referring to the value of public franchises, he said:[3]

"It may not be desirable or practicable at present for the District to establish a gas plant, or an electric light plant, for the manufacture and sale of gas and electricity, but it can and ought to own every conduit and subway in the public streets. It is the exclusive privileges incident

[1] See Report of Electrical Commission, House of Representatives, Executive Document No. 15, Fifty-Second Congress, First Session, p. 19.
[2] Report of Electrical Commission, Baltimore, *op. cit.*, p. 141.
[3] *Ibid.*, p. 146.

to such ownership that create a monopoly in these companies, and give to them large revenues which of right belong to the public. Such franchises should never be granted to corporations, except for a limited period, to the highest bidder, under proper restrictions, and always with some provision for ultimate ownership by the District, similar to that which has resulted in so much profit to Paris and other cities.

"In view of the demands upon the current revenues for pressing public needs, which are likely to continue with the growth of the city, it may not be deemed wise by Congress to enter at this time upon any extended plan of acquiring existing conduits by the District or of laying new conduits of sufficient capacity to contain all the telephone, telegraph and electric light and power wires, which the commissioners believe would afford the only complete and permanent cure for existing evils growing out of the occupancy of the public streets by corporations using overhead wires, and which pay nothing for such privilege.

"There should be no permanent partnership with corporations in the use of the public streets for the purposes mentioned, and provision should be made to terminate all such rights that have been acquired as early as practicable. When the District owns the conduits it will be in receipt of all the revenues to be derived from the use of the subways, and will then be able to permit all companies to compete for the privilege of laying wires therein for public and private lighting, as well as for telephone service, without injury to the streets or inconvenience to the public. Until this plan can be carried out the commissioners recommend that they be authorized to advertise for proposals, and to rent to the highest responsible bidder the exclusive privilege of laying and maintaining conduits in the public streets and alleys of the District for a period of thirty years ; the conduits to be constructed in accordance with plans to be approved by the commissioners, and under their supervision, reserving a sufficient number of ducts for the use of all public wires, and providing that the conduits shall belong to the District at the expiration of said period."

Along with his report, Mr. Ross submitted a bill approved by the commissioners, which, if enacted into law, would have given them the right to grant to the highest responsible bidder, after advertisement for proposals, the exclusive right to lay and maintain electrical subways in the District of Columbia for a period of 30 years. These subways were to be constructed under the supervision of the commissioners, and to be of sufficient capacity in their judgment to contain all wires and cables then in the streets or that might be necessary thereafter, except those laid near the middle of the streets for street railway purposes. The franchise to be granted under the act was to carry with it the right to use the subways and to sublet them at fair and reasonable rates, and any company would have the right to rent any unoccupied duct for its necessary uses at a fair and reasonable rental or on such terms as might be agreed upon by the parties in interest, or,

in case of disagreement, on such terms as should be determined by the Supreme Court of the District. There was to be reserved, in all conduits constructed under the authority of the act, the free use of a sufficient number of chambers to contain all public wires or cables. The commissioners were to require a bond of $50,000 from the successful bidder for the franchise. Under the proposed act it would be necessary for the grantee of the franchise or contract to construct subways in any paved streets whenever the commissioners deemed it necessary for the public interest, and in all other streets in advance of paving. At the expiration of the franchise period all the subways constructed under the authority of the act would be the property of the District. Furthermore, in case the franchise-holder should neglect to comply with the terms of his contract for a period of six months, all the subways, and man-holes would become the property of the District and the franchise would come to an end. It was provided that after the passage of the act it should be unlawful to lay any conduit or subway in any street of the District except under the authority of the act, and that as soon as a subway was built by the grantee of a franchise under this act, all wires on or over the street in which the subway was situated should be placed underground within 30 days after the construction was completed. The successful bidder was to pay the amount of his bid in equal annual instalments.

The bill just described never became a law. From time to time Congress authorized different companies operating electrical conductors in the District to build underground conduits for their accommodation. By an act passed May 26, 1900, the commissioners were authorized to grant permission to lay conduits for the transmission of electricity and pipes for the transmission of steam in the alleys of the District.[1] By another act, approved June 6, 1900, the commissioners were authorized to grant permits for the repair, enlargement and extension of existing electric lighting conduits; and in every conduit to be constructed under such permission three ducts were to be reserved for the use of the United States and the District of Columbia.[2] As a condition of this grant, electric lighting rates were not to exceed a certain maximum

[1] Laws Relating to Gas, Electric Light, etc., Companies, *op. cit.*, p. 41.
[2] *Ibid.*, p. 42.

prescribed in the act. By another act, approved June 20, 1902, it was provided that all telephone wires within a certain portion of the District should be placed underground and any company maintaining a telephone plant was authorized and required to submit to the commissioners a plan for the construction of underground conduits to receive its wires.[1] As soon as such plan was approved and a permit granted, the company was bound to proceed diligently to construct and put into operation the required conduits. In each conduit the District was authorized to use not to exceed three ducts for carrying its low potential wires, free of charge. This act was passed for the benefit of the Chesapeake and Potomac Telephone Company.

It appears from the report of the engineer department of the District of Columbia that on June 30, 1908, underground conduits in the District were owned by one telephone company, two electric light and power companies, two telegraph companies, six railway companies, the United States government, the District of Columbia, and private parties.[2] The total amount of construction at that time was 1,160,000 feet of conduits and 5,972,000 feet of ducts. These figures, however, appear not to include the conduits owned by the District of Columbia, of which there were in use, for District cables, 98,726 feet.

[1] Laws Relating to Gas, Electric Light, etc., Companies, *op. cit.*, p. 43.
[2] Report of the Commissioners of the District of Columbia, 1908, Vol. II, Engineer Department, p. 103; also Vol. I., p. 195.

CHAPTER XIII.

WATER WORKS AND WATER SUPPLY FRANCHISES.

188. Municipal vs. private ownership of water franchises.—In the Manual of American Water Works, issue of 1891, it was stated that 57 per cent of the water works plants of the United States were owned by private companies, although the amount of capital invested in municipal plants was much greater than that invested in private plants.[1] This disproportion was explained by the fact that the majority of the plants in the larger cities were owned and operated by the municipality. The Municipal Year Book published in 1902 showed that out of 1475 urban centers having a population of more than 3,000 each, which had water works, there was municipal ownership in 776; private ownership in 661; both public and private ownership in 33; joint ownership in 14; while in one the ownership was not reported.[2] Of the 135 cities with a population of more than 30,000 each, 88 had public ownership; 36 had private ownership; 7 had both public and private ownership; and 4 had joint ownership. We have no accurate statistics of the ownership of water

[1] See Engineering News, for Jan. 9, 1892, Vol. 27, p. 37, for summary of franchise requirements, taken from "Manual of American Water Works" for 1891.
[2] Municipal Year Book, p. xxix.

works in the United States at the present time. It is well known, however, that the movement toward municipal ownership has been going on steadily and that the number of important cities in which the water works are owned by private companies decreases from year to year. The special report of the United States Census Bureau, giving statistics of cities with a population of over 30,000 in 1905, showed that the water works in 110 out of a total of 154 were owned by the municipality. Of the 38 cities having more than 100,000 population, there were only 9 in which the water works were owned by private companies. Of these nine, New Orleans has already established a municipal system; Omaha is in the throes of litigation for the purchase of its water works; San Francisco has voted by a great popular majority to establish a municipal system bringing water from Yosemite Park; and Denver has just had an appraisal of the private plant, looking toward purchase. This leaves Indianapolis, New Haven, Scranton, St. Joseph, Mo., and Paterson, which, so far as the writer knows, still maintain the policy of private ownership.

The question of municipal as against private ownership of water works, has a somewhat different status from that relative to the ownership of most other public utilities. Even the opponents of general municipal ownership of public utilities are usually free to admit that a city should own the water works and operate them for the benefit of the public. This admission is due partly to the nature of the utility and partly to the fact that the policy of municipal ownership of water works has become well established in this country. Wherever the water works remain in private hands, however, the holders of the franchises cling to them with the utmost tenacity. Indeed, private water works afford an unexcelled field for the exploitation of the people at the hands of those who hold special privileges. The total cost of municipal water works in 110 cities owning water plants and having a population of more than 30,000, was upwards of $581,000,000, as reported in 1905.[1] New York City alone is now undertaking water works improvements the estimated cost of which is about $162,000,000. Los Angeles is constructing an aqueduct

[1] Special Reports, Bureau of the Census, "Statistics of Cities having a population of over 30,000, 1905," p. 246.

230 miles long, which is expected to cost $23,000,000. The Spring Valley Water Company of San Francisco has a plant upon which it claims to have spent about $30,000,000. The new water works of New Orleans have cost nearly $7,000,000, and the people of Omaha have just voted a bond issue of $6,500,000 for the purchase of the water plant. If we had the figures for the hundreds of municipal and private plants in the smaller cities, to add to the figures just given, we should probably find that the total investment in water plants for municipal supplies would be considerably more than a billion dollars. It is clear that in a field requiring such enormous expenditures and supplying the public utility which, of all public utilities, is most essential for the common welfare and the individual life of the denizens of cities, private interests, if given any considerable leeway, would establish an intolerable tyranny.

189. Uses of water derived from public supplies.—I have referred in a preceding section to the paramount importance of water as a municipal utility. Except in those portions of the country in which the rainfall is scanty, it is comparatively easy for individuals to supply themselves with water for necessary uses until population becomes congested. With the growth of towns, however, the uses of water multiply and the supply available to individual enterprise becomes greatly restricted. Wells, which in the country and in the small towns furnish drinking water, may fail on account of congestion or become polluted through the influence of sewage and other wastes, so that the individual citizen becomes absolutely dependent upon co-operative enterprise for the supplying of this fundamental necessity of life. The wastes which, unless removed, tend to contaminate the local sources of water supply, cannot be removed except by means of a public system of water works. In other words, in order to remove the cause of the pollution of individual water supplies in cities, it is necessary to have a public supply; a sewerage system is impossible without water works. The growth of cities not only lessens the relative supply of water for drinking, but creates another demand which is almost equally important. The terrible catastrophes which have befallen Boston, Chicago, San Francisco, Baltimore and other cities, in spite of the existence of water works maintained at great

expense and fire departments specially equipped for extinguishing fires and preventing conflagrations, only show how impossible life in cities would be if they had no fire protection. But the fire department not only demands a great deal more water for use at particular times than is needed for drinking, but also demands that the water shall be supplied under special conditions of pressure that make the water works much more expensive. In those sections of the country in which the rainfall is inadequate, the use of water for irrigating gardens and sprinkling lawns and roadways is also important for the welfare of the people of cities. Indeed, the uses of water in a great city are so multifarious that almost every important function of the life of the community is dependent directly or indirectly upon a satisfactory supply. The health of the individual requires pure water for drinking and plenty of water for flushing closets and sewers. The comfort of the citizen demands an abundant supply of water for bathing and for sprinkling lawns and streets. The economic interests of the citizen require water for cooking, for laundering, for watering gardens, and in many cases for power. The pleasure of the citizens demands water for skating ponds, public fountains, and ponds for boating and various other purposes in the parks.

190. Franchise features peculiar to water works.—The characteristics of a franchise for a public utility are dependent upon the uses of the utility and the means necessary for its supply. Water is almost alone among public utilities in the fact that it is a natural rather than an artificial product; although it must be said that the process of filtration, where it is necessary, is equivalent to a process of manufacture. Pure water must be "produced" where it cannot be procured. In order to procure a sufficient supply of water, it is usually necessary for a municipality to go outside of its own limits. This immediately introduces a question of jurisdiction which is of great importance both in the relations of the city to other governmental agencies and in the relations of the franchise-holder to owners of private property. A water supply for a city, being a public use in the highest degree, frequently necessitates the exercise of the power of eminent domain for the condemnation of water rights, either by the city directly or by the company which undertakes to supply the water. In

those districts in which irrigation is necessary, as well as in those sections of the country in which population is dense and cities numerous, there frequently arises a conflict of interests relative to water rights, which cannot be solved without placing important limitations upon the uses of available water supplies. If the city procures its water supply from the mountains or from lakes or rivers in a sparsely settled district, it requires special authority to protect its sources of supply from wilfull or careless pollution. A private water company also must have similar authority.

If water can be brought from an elevation considerably higher than the highest point in the city which is to be supplied, the power of gravity may be depended upon for the distribution, even for the pressure necessary for the extinguishment of fires. If, on the other hand, the water must be pumped from a river or a lake or from wells in the earth, expensive and powerful machinery must be provided, adequate for all emergencies. In any case, for safety in time of special need, reservoirs or standpipes must be built. Furthermore, water is a thing that is subject to the action of frost, so that special precautions must be taken to prevent interruption of the supply in winter. For this reason the construction of mains and house connections is expensive, because in a cold climate they must be laid deep in the ground where they cannot be reached by frost in the coldest weather. Otherwise it will be necessary at times to let the water run to waste in order to prevent freezing or to incur great expense and inconvenience in frequently thawing out and repairing frozen pipes.

The operation of water works, as a business proposition, is considerably affected by the competition of bottled water for drinking purposes and of well or cistern water for general domestic purposes, the use of which still prevails in many cities of considerable size. On the other hand, the demand of the municipality for water for public purposes is much greater than its demand for any other utility. The demand for water in connection with fire protection alone, not so much in the quantity of water used as in the special construction of mains, hydrants and reservoirs and the extraordinary pressure required, constitutes a considerable proportion of the total business of the water works. Not infre-

quently, the regular income derived from the city for water supplied to fire hydrants forms the backbone of a company's financial system.

A private company authorized under the law to supply a great city with water, must be clothed with extraordinary powers in order that it may secure an adequate source of supply, protect the purity of the water, and be enabled to distribute the water to those who need it. Such a company must, furthermore, be bound down with extraordinary restrictions in order to insure adequate service at reasonable rates. The demand is universal; the necessity, absolute; the supply, except for the precarious competition to which I have already referred, is monopolistic.

191. Characteristics of a model water franchise.—In a paper read before the American Water Works Association on May 17, 1892, Mr. J. Nelson Tubbs, C. E., outlined a model water franchise.[1] His suggestions were based upon the theory that whenever a water franchise is granted, there is the expectation that the city will eventually buy the plant. With this assumption in view, he stated that the city, when about to grant a franchise, should proceed as carefully as if it were about to build the works.

"The usual and proper action in the latter case," said he, "would be to secure the services of a competent hydraulic engineer to make a thorough examination of the whole subject, and to prepare a detailed report as to the quantity and quality of water required, the best source of supply, the best plan for obtaining the same, the head under which it should be delivered to private consumers and to the municipality for the suppression of fires, the size, character and quality of the mains to be employed, and the required performance of the pumping machinery, if such is to be used."

Mr. Tubbs suggested that every water franchise should contain detailed provisions under the following heads:

(1) The minimum quantity of water to be available from the source of supply in a dry season. This should be sufficient to meet the maximum expected demand at any time during a period of at least twenty years in the future.

(2) The methods should be prescribed by which the quality of the water is to be tested, and the general characteristics of the water demanded by the city should be definitely set forth in the franchise.

(3) The city should reserve the right to determine the size and character of the conduit to be constructed by the water company.

(4) Where pumping is required, the franchise should contain general

[1] *Engineering News*, May 19, 1892; Vol. 27, p. 518.

specifications as to the engine and boiler-house, chimney, pumping machinery, etc.

(5) The franchise should specify the capacity and character of standpipes, or reservoirs required.

(6) Authority should be reserved to the city officials to determine the character and location of the pipe mains in each street, the depth below grade, and the location and style of gates, hydrants and other fixtures.

(7) The franchise should contain a provision to the effect that the size of mains should be determined by the city in accordance with a general plan prepared with the advice of an expert engineer.

(8) The material and workmanship of service pipes and the manner of doing street work, should be detailed. The city should be protected from all liability for accidents.

(9) Provision should be made in the franchise for the protection of other subsurface structures.

(10) The terms and conditions upon which extensions of the water plant may be required, should be specifically set forth.

(11) The franchise should contain a clause describing the tests to be applied to the company's plant before the city accepts the work and permits operation.

(12) The franchise should contain a detailed schedule of rates to be charged private consumers.

(13) There should be a definite time limit of the franchise. The original limit probably should not exceed ten years, with provision for extension of time if desired by both parties. The grant should be as nearly exclusive as possible.

(14) A clause should be inserted to the effect that if the city purchases the plant, it shall have to pay nothing for the franchise or good will.

"It seems to the writer," said Mr. Tubbs, elaborating this point, "that in the nature of things the municipality does not and cannot sell and permanently alienate the franchise itself. It is an inalienable function of the government, and the municipality can only lease, for a valuable consideration, the right to temporarily exercise the rights and privileges of the owner, and at the termination of the grant or lease, the municipal corporation resumes the active exercise of this function, which had been temporarily entrusted to an agent."

(15) The franchise should describe in detail the methods of fixing the price to be paid by the city for the plant in case of purchase. The several kinds of property to be included in the purchase should be enumerated.

(16) The franchise should contain generally comprehensive as well as detailed provisions calculated to secure a system of water works well adapted to its prospective uses and needs and to insure the management of the water works according to business principles.

Mr. Tubbs argued that the pursuance of a franchise policy in accordance with the suggestions just outlined, would be of benefit both to the city and to the franchise-holder. On the one hand, the city would be sure of getting an adequate water supply for the needs of the community, with the reserved

right to purchase at some future time a well designed and properly constructed plant. On the other hand, the company would be protected, through the very definiteness and elaborateness of the conditions under which it was operating, from the criticisms of the public and from the financial disasters which are likely to follow careless engineering and promotion schemes. With a good plant to start with, the company would be in position to demand and receive an adequate price at the time of purchase by the city. It is perhaps unnecessary to add that the private ownership men in the American Water Works Association did not give Mr. Tubbs a unanimous vote of thanks for his suggestions. They were especially offended by his statement that when a municipality resumes a water franchise, it should be under no obligation to pay for it.

192. A water franchise in a small university town—Ann Arbor.—The City of Ann Arbor, Michigan, with a present population of only about 15,000, is the seat of a great university. One advantage derived from this fact is seen in the terms of its water works contract, entered into between the city and the Ann Arbor Water Company on May 6, 1885.[1] Under this contract, which was ratified a few weeks later by the city council, the company acquired the exclusive right to construct water works in the city. In return for this privilege the company agreed to build a complete system on the reservoir and pumping plan. The top of the reservoir was to be located not less than 155 feet above a certain designated point in the business district of the city, or at the point designated on a certain map and plans of Professor Charles E. Greene, of the Engineering Department of the University of Michigan, then on file in the office of the city recorder. It was specified that the reservoir should be made of earth, be puddled with clay, be paved on the bottom and sides with cobble stones, and have a capacity of not less than 2,000,000 gallons. The company agreed not to allow the supply of water maintained in the reservoir to fall below 750,000 gallons except when necessary for cleaning or in case of unavoidable accident. At any such time the company was required to maintain by direct pressure a sufficient supply of water for fire and domestic uses. It was provided that the reservoir

[1] Charter and Ordinances, City of Ann Arbor, 1908, p. 180.

should be cleansed whenever necessary and that the inlet pipes should be one foot above the bottom and be so arranged that the water, when pumped in, would pass in a pipe up through the water in the reservoir and then fall over on a stone rockery for the purpose of aeration. The banks of the reservoir were to be seeded and sodded. The company was to furnish pumping machinery capable of pumping 50,000 gallons of water per hour into the reservoir and " of ample power and capacity for all requirements ". It was provided that the water works should at all times be capable of throwing, by reservoir pressure, six streams 80 feet high at the court house at one time and, by direct pressure, the same number of streams 110 feet high at the same place. The works must also be able to throw five streams 54 feet high at the university campus by reservoir pressure, or 90 feet high by direct pressure. The size and location of distributing pipes, except where changed by mutual consent, were to be in accordance with the plans already submitted by Professor Greene, these plans being made a part of the contract. The company was to lay 14 miles of pipes ranging in diameter from 16 inches to 4 inches, but not more than one mile of 4-inch pipe was to be laid. All pipes were to be first-class, cast-iron pipes, and were to be laid below the freezing point. The company was required to place and maintain 100 fire hydrants and furnish them with the necessary supply of water, and the city reserved the right to place additional hydrants. There was a clause in the franchise specifying three particular makes of hydrants, any one of which might be used. The city reserved the right to send an expert to the foundry at which the pipes were being cast, to inspect them; and the company agreed that the pipes should be subjected to a hydraulic pressure of 300 pounds to the square inch at the foundry as a test. If the city decided not to send its expert to the foundry, then the company was to furnish a sworn statement that the pipes had been tested according to contract. The company agreed to subject its entire system of pipes, gates and hydrants to a pressure of 150 pounds to the square inch before the rental to be paid by the city should commence. It was specified that the company should set not less than 75 valves or gates answering to certain general requirements. The company was required to lay a service pipe from its main to the curb

stone for any person who might make application for water during the first season after the franchise was granted. When the company had completed its works, it was required to deposit with the city recorder a map showing the size and location of all its pipes, gates, hydrants, etc. It was specified that the entire works should be "first-class in every respect, suitable for all these requirements, full, efficient and ready to respond at all times, unavoidable accidents excepted." The city reserved the right to use the water to test its hose and to afford reasonable practice for its firemen. The water works were to be completed and the water turned on not later than January 1, 1886. The city agreed to pay the company a rental of $4,250 a year for the water supplied for public purposes. In addition to this, if the city desired additional hydrants, it was to pay the company the first cost of them; but the company was to supply them with water free. It was also provided that hydrants should be placed on the mains at the request of private parties and at their expense, water in these cases also to be furnished free. The company agreed to extend its pipes beyond the 14 miles specified, whenever ordered to do so by the city; but for every 700 feet of 6-inch pipe in any such extension there was to be placed one hydrant, for which the city was to pay a rental of $40 a year.

The company was bound to furnish at all times on request a sufficient supply of water, suitable for domestic purposes, to any inhabitant of the city living adjacent to one of the company's mains, "at reasonable rates, and not exceeding in amount the average sums paid by inhabitants of other cities of Michigan similarly situated and of like population, and supplied by private companies". The company was to furnish water for manufacturing purposes and for railroad companies on as reasonable terms as the terms on which water was being "furnished by the average of other companies in this state and at a sum not to exceed 2 cents for 100 gallons". All pipes and special castings were to be subjected "to a bath of coal tar and linseed oil, according to Dr. Angus Smith's formulas". The company agreed to furnish water to the two steam railroads entering the city for depot and engine purposes at a rate not exceeding $600 a year each. The company was to supply water for the seven public school houses of the city and the three fire engine houses for $250

a year; water for washing gutters and flushing sewers for $100 a year; water for two public drinking fountains for $150 a year; and water for any additional school houses in the future at the rate of $25 a year each. For the prices mentioned the city was to have all the water it might require at the places designated "for water closets, urinals, drinking purposes, washing, washing hose, for supplying steam boilers, and for the use of hand hose, for washing windows in all the above buildings and for sprinkling the lawns, including the court house lawn, connected with the same". The city agreed not to allow the water to run to waste and not to use it for motive power, and also agreed not to permit water to be taken from the public drinking fountains for private use. The company was to protect the city from law suits and claims resulting from the construction or maintenance of the water works and to furnish a bond for the purpose. The company's franchise rights were to extend to all streets of the city and no competitive grant was to be made by the city until it had purchased the water works or the franchise had been forfeited or the company's rights had expired with the expiration of its charter, the life of all corporations being limited to thirty years in Michigan. The city reserved the right to purchase the entire water plant "at any time they choose", and in case the parties could not agree as to the price, three commissioners were to be appointed by a judge of the Supreme Court of the state to make an award, which should be binding on both the city and the company.

By an ordinance approved March 16, 1906, the City of Ann Arbor fixed the schedule of maximum rates, repealing a previous schedule that had been fixed some years before.[1] The flat rate for dwelling houses was $2.50 a year for the first four rooms occupied by one family and 50 cents for each additional room. For each regular boarder 25 cents was added; for one bath tub, $2.50; and for each additional bath tub, $1; for one self-closing water closet and wash bowl with faucet, $3; and for each additional water closet, $1; for a hydraulic pump operated by city water, schedule rates for the fixtures served by the pump; and for yard hydrants where the water was to be used for domestic purposes, $3 in addition to the sprinkling rate. Any water consumer was authorized

[1] Charter and Ordinances, *op. cit.*, p. 344.

to install a meter on his premises, but he was required to keep it in good condition and repair at his own expense. The meter rates were fixed on a sliding scale, beginning with 20 cents per thousand gallons for a daily consumption of less than that amount; 15 cents a thousand for a daily consumption of from 1,000 to 3,000 gallons; and 10 cents a thousand for a daily consumption in excess of 3,000 gallons. The minimum charge for metered water, however, was to be $5 a year. A sprinkling rate of $4 a year was fixed, and the sprinkling season was to extend from April 1 to October 31. Each person paying the sprinkling rate was entitled to use one stream of water through a 3-16 inch nozzle four hours each day during the season; but no sprinkling was to be done during a fire alarm. Special building rates were fixed, and it was provided that rates not named in the ordinance were to be subject to agreement, but without discrimination as between different applicants for any particular service. The company was authorized to collect its rates quarterly in advance and to turn off the water from any premises for non-payment. For metered water the company could make monthly collections.

On the same date when the ordinance just described was passed, the council created a "board of complaint" to consist of three freehold electors appointed by the mayor.[1] Upon this board was conferred the power to "hear, investigate, report upon and advise the council upon every complaint relative to the water supply and service to the city and its inhabitants, whether made by individuals or by the Ann Arbor Water Company." Complaints, however, were to be made in writing and a public hearing was to be had if desired by either party. This board was required to report at least once a month to the council, setting forth the number and nature of complaints made before them; their conclusions, with the reasons therefor; and such recommendations as they might deem proper.

On the same date also another ordinance was passed requiring the company to make and file with the city clerk, under the oath of one of its officers, an annual report showing the total amount of money actually invested in the property; the actual amount of investment derived from the sale of

[1] Charter and Ordinances, *op. cit.*, p. 348.

bonds, from payments on stock and from earnings; the gross income for the year, specifying separately the amounts received "from the city, from the University of Michigan, from commercial purposes, and from domestic services"; the total operating expenses for the year, specifying separately the amounts paid for salaries, fuel, repairs, taxes, insurance and other operating expenses; the sums paid for renewals, extensions, interest and dividends; the number of services of each of an enumerated list of kinds and the revenue received, and the total number of gallons of water pumped for each month during the year.[1]

193. A city dominated by a water company—New Haven.—In Connecticut local franchises are granted by direct act of the state legislature. The privately owned water works which supply the City of New Haven were made the subject of expert inquiry by the National Civic Federation Commission on Public Ownership and Operation, which reported in 1907. The inquiry in regard to the franchises and general history of the New Haven company was conducted by Professor John H. Gray, now of the University of Minnesota.[2] As early as 1853 the City of New Haven voted to issue bonds for a municipal water supply. A provisional contract was entered into by the board of water commissioners; but opposition developed and the next year, when the matter came up for final ratification by the people, the scheme was voted down. The New Haven Water Company had been chartered by the legislature in 1849 to supply the City of New Haven with water. The amount of its capital was not to exceed $200,000. There was no reference in its charter to the issue of bonds, no restriction upon rates or dividends, no provision for audit and nothing as regards the source of supply. No mention was made of taxes or compensation, and there was no provision for making returns to the city or the state or for public reports. The water supplied by the company was to be "pure" and the company's books were to be open to the inspection of the stockholders. This charter was amended in 1851 so as to give the company the right to take water from any stream below the point where power was used for

[1] Charter and Ordinances, *op. cit.*, p. 350.
[2] See "Municipal and Private Operation of Public Utilities"; Part 2, Vol. 1, pages 1 to 135.

mills. The company was also authorized to construct the necessary reservoirs and canals and to exercise the right of eminent domain for the acquisition of private property needed for the enterprise. In 1856 the legislature permitted an increase of capital stock to $450,000 and authorized the company to borrow money at a rate of interest not exceeding 7 per cent, the total amount of loans to be limited to one-half the amount of capital stock paid in and invested. In 1859 the company undertook the construction of a water works plant. By an amendment of its charter in 1860 the company was authorized to establish public hydrants wherever it desired, to lay pipes to any house or building with the owner's consent, to regulate the use of water supplied by it within and without the City of New Haven, and to "establish the prices or rents to be paid therefor". The company was also given authority to prevent the waste or stealing of water and for this purpose had the right of entry to private property. Anyone who wantonly injured the water or property of the company was required to pay treble damages. In 1863 the company's charter was amended, specifically authorizing the issue of $200,000 of bonds, it being recited in the legislative act that the company had already expended $400,000 on its plant. In 1871 the company's charter was further amended so as to authorize a total capital stock of $1,000,000 and a total bond issue of one-half the amount of stock issued.

In the meantime the company had been subjected to the danger of competition and had felt itself compelled to oppose in the legislature various attempts on the part of other companies to secure the right to furnish water in the same territory. After several years' struggle a competing company got a charter from the legislature, which was conditioned upon its being ratified by popular vote of the city. At the election the people favored competition by a vote of 2,978 for, to 116 against. The new company was absorbed, however, by the New Haven Water Company in 1876.

In 1880 the company's authorized capital stock was again increased to $1,500,000, to be paid in cash or its equivalent, and the company was required to offer its new shares to existing stockholders. In 1889 the authorized capital stock was still further increased to $2,000,000, with a similar provision that new shares should be offered, not below par, to existing

stockholders. The bonds issued by the company were not to exceed $1,000,000 and were not to exceed one-half of the sum "actually expended in the construction or purchase of its works". It was not till 1895 that specific legislative sanction was secured for the consolidation with the competing company, which had been effected 19 years earlier. Finally, in 1897, the company's authorized capital stock was increased to $3,000,000, and the limitation of the bonds to one-half the amount actually invested in the company's works was omitted. The only limitation upon bond issues was that they should not exceed one-half of the capital stock outstanding at that time. By amendments to its charter at various times, the company secured the right to serve a considerable number of towns outside the City of New Haven.

The first contract which the company entered into with the city was ratified by a city meeting February 15, 1862. Under this contract the company agreed to furnish water for public purposes for a period of 20 years wherever its pipes were at any time laid. At the date of the contract 16 miles of pipes had been laid, and the company agreed to lay 10 miles more within six years. The city reserved the right to annul the contract for wilful neglect or refusal on the part of the company to furnish water. The city was to establish at its own expense as many hydrants as it saw fit. The price to be paid by the city for water for public purposes was arranged on an increasing scale until it reached a maximum of $6,000 a year in 1868, this rate continuing from that time on until the end of the contract period. The city under this contract was given the right to purchase the property and franchises of the company after 10 years by paying the company the amount it had actually expended on its works, plus a sum sufficient, with the dividends that had been actually paid by the company, to make a 10 per cent annual return on the investment up to the date of purchase. If the company wilfully neglected or refused to furnish water under its contract, it was bound to pay, in case of conviction, a minimum of $10 for actual damages. The city had the right to renew the contract at its expiration on terms to be fixed, in case the parties could not agree, by a commission to be appointed by a judge of the superior court on the city's application. This commission was to consist of one stockholder residing in the

city and two persons not stockholders, one residing in the city and one outside.

As the end of the twenty-year period covered by this contract approached, a demand for public ownership developed. An act of the legislature was procured authorizing the company to sell and the city to purchase under the conditions named in the contract, and requiring the question of purchase to be submitted to popular vote in November, 1881. The company was required by this act to submit an itemized statement of its investment, its paid-up capital stock, and the amount it considered that the city would have to pay under the terms of the contract. The act also authorized the appointment of an investigating committee, with expert accountants, with power to summon witnesses, take testimony and inspect the company's books in order to determine what amount should be paid for the works. The city was authorized to issue bonds to the amount of $2,000,000 at 5 per cent for the purchase of the plant. Professor Simeon E. Baldwin was appointed chairman of this committee. The company submitted a statement to the city, claiming $2,222,236 as the sum which the city would have to pay under the contract. The committee, upon investigation, found this sum to be $1,464,297. The chief difference in the two estimates was due to a claim on the part of the company for compound interest at 6 per cent on the 10 per cent annual dividends allowed under the contract. This claim was denied by the committee. The committee recommended the immediate purchase of the works and declared that under the contract the plant could be bought for much less than it was worth on the basis of its earnings. The corporation counsel was instructed by the city to apply to the Superior Court for a determination of the amount to be paid to the company. The petition was filed with the court on September 15, 1881, less than two months before the date fixed under the statute for the election. The board of appraisers appointed by the court did not organize until October 5. They made their report on November 2, six days before the popular vote was to be taken, fixing the total sum to be paid by the city at about $1,100,000. The report of the appraisers was not immediately confirmed by the court; and the company, by active political methods, secured a vote of the people adverse to public ownership, the

exact vote, as recorded, being 3,198 for, to 5,068 against. The company thereupon entered a remonstrance against the court's approving the report of the board of appraisers on the ground that the vote of the people had settled the matter. The city, on the other hand, claimed that nothing had been settled by the popular vote, inasmuch as there was still two months' time under the contract for the city to exercise its option of purchase, and claimed that the company had wilfully carried on a campaign before the election to make the people believe that the court would award over $1,800,000 as the price to be paid by the city. The city also claimed that the company had improperly spent large sums of money, amounting to many thousands of dollars, for influencing public opinion, "to bribe, corrupt, mislead and unduly influence large numbers of said freemen to vote against said purchase". No definite action having been immediately taken by the court, the city soon entered into negotiation with the company for a new contract. Professor Baldwin had seen clearly that the question at issue was the value of the franchise and warned the people in a public letter that if they did not buy under the old contract, they would never have another opportunity to take over the plant without paying full value for the company's franchise rights, which in his opinion were worth $1,000,000. "Professor Baldwin knew a good thing when he saw it," reports Dr. Gray; "he soon afterward became a shareholder of the company, and also counsel for the company."

The second general contract entered into by the city with the New Haven Water Company was dated December 15, 1881, and was to run for a period of 10 years, with the option on the part of the city to renew it indefinitely for ten-year periods on terms to be fixed, in case of disagreement, by three arbitrators. The company was not bound under this contract to extend its pipes, but it agreed to furnish water for all public purposes, except the alms-house, within the city limits for $16,000 a year. This contract provided that rates for water to private consumers should never be increased above the rates charged at the time. The purchase clause under the new contract provided that the city might take over the works and franchises of the company at any time at a fair cash value to be fixed by arbitrators. The company

agreed not to compel consumers to use meters, but to give them the choice of flat rates or metered service. Any person within reach of the company's mains, or who would lay connections to the mains, was to be supplied by the company. If the company charged a higher rate than was allowed under the contract or refused to carry out the provision requiring it to supply water, it was required to pay a minimum of $20 as punitive damages. The city agreed to drop its pending litigation for the purchase of the plant, and both the city and the company agreed to ask the legislature to ratify this contract and make it a part of the company's charter and also a part of the city charter. This action was taken by the legislature at its next session.

This contract was renewed in 1891 without much excitement, but ten years later there was a general agitation for a new arrangement. The company had perpetual rights in the streets under its charter from the legislature, and by its contract with the city in 1881 had placed itself in a position where it was safe against municipal purchase except on condition that the city pay the full value of these perpetual rights. When the matter of renewing the contract came up in 1901, the president of the common council and several other members were employes of the company and the corporation counsel was the brother of the secretary of the company. Through its whole history the company, according to Dr. Gray's report, "had always exercised a very large influence on the political life of the community, and had never been without powerful friends in official positions in the city government". It is no wonder that the special committee appointed by the president of the council in 1901 was friendly to the company's interests. It should be noted that in New Haven the legislative body consists of two branches, the common council and the board of aldermen, and that the investigation of important matters is undertaken by joint committees. The action of the first committee not being satisfactory, it was discharged and the rules of the common council were changed so as to deprive the president of the right to appoint the committeemen. A new committee was appointed only three weeks before the date on which the existing contract would expire. Those opposed to the company's demands claimed that they never had a fair hearing.

They carried on an active campaign to influence public sentiment and charged fraud, corruption and bribery in connection with the negotiations. The company submitted three propositions to the city. It was willing to take a ten-year contract, renewable on the same terms for successive periods of ten years at the city's option, with provisions that the city should pay $20,000 a year for public water, that rates to private consumers should not be increased, and that the city should have the right to purchase for a just and fair compensation at any time. As a first alternative, the company was willing to accept a thirty-year contract under which it would furnish public water free and agree not to raise rates for private consumers. Under this proposition the city was to have the right to purchase only after a judicial determination to the effect that the company had violated its contract. A further provision in this second offer required the city to protect the company from the payment of any other taxes than those that were being paid at the time. At the end of the thirty-year contract, if the city did not wish to renew the agreement for another period of the same duration, the plant might be purchased without any proof that the contract had been violated. The other alternative offered by the company, the one which was finally accepted, was in form a perpetual contract, with free water for all public purposes. The city was authorized to erect as many hydrants as it pleased. The city also reserved the right to have the rates to private consumers readjusted by arbitration once in five years. It was provided, however, that the arbitrators should not fix the rates at a point too low to pay all operating costs, renewals, extensions, and every other kind of expense, including interest on funded and unfunded debt, and in addition thereto an 8 per cent dividend on the company's existing capital stock, together with a reasonable return, not exceeding 8 per cent, upon other capital that might be invested from time to time in additions or extensions of the plant. This clause for readjustment of rates is evidently a fraud. Under it the company has the right to provide for renewals and extensions out of earnings, so far as it can do so under existing rates. This would enable the company to keep up and build up its property at the expense of the consumers, all the time receiving a guaranteed dividend of 8 per cent on the capital stock

now outstanding. Whenever the city desired to purchase the works, however, it would be compelled to pay a price which would cover not only the amount of investment represented by the outstanding share capital, but also the additional investment that had been made from current earnings. In this way the shareholders secure a practically guaranteed return far in excess of the average return upon invested capital, with the prospect of securing a price at the time of sale much larger even than would be warranted on the basis of the dividend rate. Under this contract the city has the right to purchase at the end of 25 years and at the end of each succeeding 25-year period.

The city has bound itself, under this contract, not to distribute water, but must take its supply from the company. Inasmuch as the city has no authority to grant a franchise to any other company, the contract is in effect an exclusive one and binds the city, hand and foot, in its dealing with the problem of water supply.

The provision in regard to taxation contained in the company's original proposition, was somewhat modified. As it now stands, the city has the option of holding the company harmless from other taxes than those on tangible property, or, in lieu of that, of paying the company an annual rental of $20 per hydrant for water used for fire purposes and of paying, for water used for other purposes, 25 per cent less than the lowest meter rate to private consumers.

There was a great outcry against the passage of this contract. Its opponents insisted on an investigation of their charges of bribery and fraud, and a secret investigation was made by the city attorney and the assistant state's attorney. Nothing came of it, however. The fight was carried to the legislature and before the governor, but without effect. This contract, like that of 1881, was confirmed by the legislature and made a part of the company's charter and a part of the city charter. The opponents of the contract, although unable to prevent its passage and ratification, had sufficient influence with the people so that, of all the members of the common council who voted for it, only one was reëlected.

The history of the New Haven Water Company, in connection with its charter rights secured from the legislature and its contract rights secured from the city, clearly illustrates

the danger of private ownership of public water supplies. The spectacle of a city government passing upon a contract involving the essential rights of all the citizens of a great city, when many of the most influential members of the government are at the same time on the pay-rolls of the company securing the contract, is one that ought not to be possible in an enlightened community, the home of a great American university.

194. A city having adequate power of control—Indianapolis. —Under the Indiana general municipal corporations act of 1905, the city council of Indianapolis has the power to license and regulate the supply, distribution and consumption of water, to regulate the laying of mains and pipes, to fix the price of water by contract or franchise, and to compel the performance of contracts for the extension of mains.[1] The city also has the right to regulate the making of connections with water pipes and to compel property owners to make such connections before streets are improved. The council has the right to investigate "the affairs of any corporation, firm or person in which the city may be interested, or with which it may have entered into a contract, or may be about to do so". For such investigation the council may require the production of books and papers and may compel anyone to testify, even against his own interests. The board of public works is authorized to contract for a supply of water for public or private uses. This board may, if authorized by ordinance approved by popular vote, purchase the necessary lands and materials and construct and operate a water plant, or it may purchase and hold stock in water companies. In case municipal water works are established, the city's jurisdiction will extend ten miles beyond its limits for the purpose of preventing pollution of the source of supply. The city is also authorized to take over a private plant either by purchase or by condemnation; but this power is radically limited by a provision that the indebtedness incurred in connection with the purchase or construction of water works, added to the other indebtedness of the city, shall not make a sum in excess of two per cent of the value of taxable property within the city limits. The city is authorized, in granting a private water franchise, to agree with the company upon the terms and

[1] National Civic Federation Report, 1907, *op. cit.*, Part II, Vol. 1, p. 65.

prices for public and private use, "as well as for reasonable license fees, or other compensation" for the franchise. Such franchise must be limited to 25 years, and the city is authorized to borrow money for the purpose of purchasing stock in any water company to which it has granted a franchise. There appears to be no limit upon the amount which it may borrow for such purpose. Under the law a private company has the right to condemn necessary lands and waters within or without the city.

It will be seen from this outline of the Indiana law that the City of Indianapolis is in a much better position to deal with the problem of water supply than is the City of New Haven, whose troubles were described in the last section. As a matter of fact, the City of Indianapolis, on January 3, 1870, granted a water franchise to a private company, which had been incorporated during the preceding year.[1] This grant included the right to construct, maintain and operate water works, with all the necessary structures and fixtures, to supply the City of Indianapolis "with pure, filtered and wholesome water". The company was given the right to use all the streets of the city as it existed at the time or as it might be enlarged at any time thereafter. The company was required to give the street commissioner three days' notice before commencing work in any public street. The company was also required to restore the street to as good condition as it was in before it had been disturbed. Upon failure to do so, or in case the street surface subsequently became "out of good condition because of imperfect repairs", the city reserved the right to make the proper repairs and charge them up against the company. The company was bound to assume the usual liability for damages resulting from the operation of its franchise. In the construction of its works the company was required to adopt the "Holly System", with all its latest improvements, and to provide a maximum capacity of 6,000,000 gallons a day. The works were to be maintained in a condition capable of throwing eight streams at once 100 feet vertically through one-inch nozzles for use when required for extinguishing fires. The company was required to furnish, along the lines of its pipes and con-

[1] Laws and Ordinances, *op. cit.*, p. 1188.

duits, such quantity of water as the city council might require "for public use, drainage and fire purposes". As many fire hydrants or fire plugs as the city required, were to be erected by the company. The city reserved the right to draw from these hydrants all water necessary not only for the prevention and extinguishment of fires, but also for washing, cleaning, cooling, flushing or sprinkling the streets, gutters, alleys, sewers and public grounds. The city was also authorized to attach to each hydrant a faucet from which water might be drawn by passers-by for the use of persons and animals.

The company was required to furnish the citizens with as much water as they might desire, upon the streets and avenues in which mains were laid. The company had the right to charge rates equal to "the average price paid by other cities of the United States, and the citizens thereof, of like population, that are supplied with as efficient water works, unless a less price may be agreed upon". In case the company and the city council were unable to agree upon a schedule of rates, then the rates were to be determined by five disinterested persons, non-residents of the city, two of whom were to be chosen by the company, two by the city, and the fifth by the other four. Either the city or the company had the right to demand a readjustment of rates at any time after the expiration of one year from the date of the preceding adjustment. In no event was the city to be charged more than $50 a year for each hydrant. The water to be supplied by the company was to be taken from wells dug near the White River, "not connecting with the river or any other open stream or channel, so that the water of the wells shall be derived from the natural filtering or percolation through the gravel in its natural place, provided the same can be so obtained".

Provision was made for a forfeiture of the franchise if the company failed, by its own fault, to have five miles of water pipe laid and in operation within 18 months from the date of the grant and 15 miles within 27 months. The grant was also to be forfeited if the company failed to furnish the city and its citizens with pure, filtered and wholesome water at the rates provided for. In case the city or its citizens were deprived of necessary water for 36 consecutive hours, through

the wilfulness or carelessness of the company, the city had the alternative of forfeiting the franchise or of forfeiting the company's claim for payment of hydrant rental for a period of one year. But the question as to whether there had been a substantial breach of the provisions of the ordinance, was to be determined by a judicial decree before the penalty of forfeiture was enforced.

The company was obligated to extend its mains along any street or avenue of the city when required by the city council to do so, on condition, however, that the city should furnish an average of at least one hydrant to every 1,000 feet of pipe in such extension, hydrant rentals to be paid by the city at the usual rates. The company was required to provide and to keep "in constant good condition for immediate use", suitable steam machinery to propel its pumps.

On six months' notice at any time, the city might purchase the company's plant and all its rights and privileges, but was not to pay any price for the franchise granted by the city. In case the city and the company could not agree as to the price of the plant, five disinterested non-residents were to be appointed as appraisers to value the plant. The price so ascertained might be accepted or rejected by the common council. It was also provided that the company should not sell its plant to any other person or company without first giving the city council the refusal of the opportunity to purchase at the same price. In no case, however, could the works be bought by the city council except subject to ratification by a majority of the voters. It was expressly provided that the contract should not be construed as an exclusive privilege, and the city specifically reserved the right to construct and operate water works for itself, or to charter another company for the purpose. The franchise was not to go into effect unless accepted by the company within 30 days from the time of its passage. In case the company to which the grant was made failed to accept it as required, any other water works company was authorized to accept the grant after the expiration of 60 days from February 3, 1870.

By an ordinance adopted in 1884, the city declared it unlawful for any person to change or alter any service connected with the company's water mains so as to increase or lessen the supply of water furnished, without first procuring

the company's written consent.[1] It was declared unlawful for the owner or occupant of any building where water was being supplied by the company, to permit any person not an occupant of the premises to use the water. It was also declared unlawful for any person to make any reconnection with the company's pipes where the supply of water had been discontinued, without first securing the company's consent.

The original franchise of 1870 is still in force except as modified by the contract between the city and the company. The last contract was entered into between the board of public works and the Indianapolis Water Company, successor of the original grantee, on November 4, 1908.[2] Under this agreement the company is required to furnish the city in its corporate capacity pure and wholesome water sufficient to supply 2,465 fire hydrants with the same pressure required under the terms of the original franchise. This pressure must be available within six minutes from the time an alarm of fire is sounded. The company also agrees to supply the city with water for 71 drinking fountains and for a display fountain in each of the city's parks. Water is also to be furnished for the following purposes, up to the quantities mentioned:

For each engine and reel house, each station house and city dispensary, 30,000 gallons a month.
For police headquarters, 400,000 gallons a month.
For flushing sewers and improved streets and filling public cisterns within reach of the mains, all water required.
For public latrines under streets, all water required.
For Tomlinson Hall and market house, 500,000 gallons a month.
For the city hospital, 600,000 gallons a month.
For public baths, 100,000 gallons a day.
For barns of the board of public works, 100,000 gallons a month.
For city buildings, 400,000 gallons a month.
For the city asphalt or repair plant, for boiler use, and for the city dog pound, as much as may be required.
For sprinkling lawns and roadways in parks, 5,000,000 gallons a month.
For a lily pond in Riverside Park, sufficient water for a 4-inch pipe.

The city agrees to pay $45 a year for each fire hydrant and each public drinking fountain for which water is supplied by the company. Water for all other public uses, to the extent just described, is to be free. Water for public uses in

[1] Laws and Ordinances, *op. cit.*, p. 1193.
[2] For the text of this contract, see Journal of Common Council, Indianapolis, Nov. 16, 1908, p. 507.

excess of the quantities mentioned, is to be paid for at the rate of 5 cents per thousand gallons, the meters to be furnished by the company. The section of the original franchise requiring the company to make extensions as ordered by the city, is modified by the contract so that the city may not require more than 40,000 feet of new mains to be laid in any one year, and the city agrees to locate one fire hydrant for each 500 feet of pipe extension made by the company. The company is authorized to employ, at its own expense, a competent man to attend fires and see that fire hydrants are properly opened and that no water is used from any fire hydrant for the purpose of filling cisterns or flushing or cleaning sewers or streets during the progress of the fire. This man is subject to the authority of the chief fire engineer or his assistant during times of fire and is required to report to the city authorities any violations of the provisions of the contract or of the orders of the city authorities relative to fire hydrants.

This contract took effect as of January 1, 1909, and is to continue for a period of ten years. At the expiration of that time, if the city is unable to agree with the company in regard to rates or prices for public water, this matter is to be submitted to arbitration under the terms of the company's original franchise. The company expressly agrees in this contract that "the water furnished by the water company to the city and citizens of Indianapolis shall be good, potable water". All questions in regard to the purity of the water are to be referred to two bacteriological chemists, one selected by the city and the other by the company. In case these two cannot agree, they are to appoint a third chemist as umpire. The result of any analysis agreed to by two of these chemists is to be accepted as conclusive evidence of the degree of purity of the water supplied by the company. The expense of such analysis is to be paid by the city and the company in equal portions.

The franchises and works of the Indianapolis Water Company were also investigated by the Special Commission of the National Civic Federation in 1907. Professor Gray, commenting upon the character of the water supply of Indianapolis, stated that the chief difficulty since 1905 had been, not with the company's charter or the city's legal

powers of control or the existing contract, but with the 25,000 polluted surface wells still in use in the city.[1] He stated that the board of health had officially condemned many of these wells during the preceding eight years, but that there was no evidence of the condemned wells having gone out of use. The city's legal authority to compel the discontinuance of the use of wells was in doubt. An investigating committee which reported on October 26, 1904, stated that there were only 8,833 customers of the water company using water for water closets, while the total number of families in the city was estimated at 40,000, and the number of private wells in use was placed at 25,000, as already stated.

The representatives of the Civic Federation who investigated the relations of water works to labor and politics, reported that the Indianapolis Water Company had not been prominent in political affairs. However, they state that "leading members of the council get free water unless they decline, and others less prominent get free service on request".[2] They also report that the company does not employ in its office, at its pumping station, or as a street foreman, any man who drinks intoxicating liquor. The company gives free water to all its officers and staff employes. At the end of each year the company sets aside a certain percentage of its net earnings for distribution among its regular salaried employes. The investigators state that "there has been no lawsuit for injuries in years; settlement out of court is the policy."

195. A city's franchise from the Federal government.—San Francisco.—The metropolis of the Pacific coast is the largest American city which still depends upon a private company for its water supply. The Spring Valley Water Company inherits from its predecessor, the Spring Valley Water Works, a state charter obtained about 50 years ago.[3]

A general act providing for the incorporation of water companies in California, passed as early as 1858, contained the following provision:[4]

"All corporations formed under the provisions of this act or claiming

[1] National Civic Federation Report, 1907, *op. cit.*, Part II, Vol. 1, pp. 10, 101.
[2] *Ibid.*, p. 155.
[3] Reports on the Water Supplies of San Francisco, 1900 to 1908, published by authority of the Board of Supervisors, p. 3.
[4] See article by A. S. Baldwin, "Shall San Francisco municipalize its water supply?" published in *Municipal Affairs* for June 1900, Vol. IV. No. 2, p. 317.

any of the privileges of the same, shall furnish pure, fresh water to the inhabitants of such city and county, or city or town for family uses, so long as the supply permits, at reasonable rates and without distinction of persons, upon proper demand therefor, and shall furnish water, to the extent of their means, to such city and county, or city or town, in case of fire or other great necessity, free of charge."

It was also provided by this act that the rates to be charged for water should be determined by a board of commissioners. Two commissioners were to be selected by the local authorities and two by the water company. In case these four could not agree on rates, they were to choose a fifth commissioner to act with them; and if they could not agree upon a selection, the fifth commissioner was to be appointed by the sheriff of the county. Under this act, also, the board of supervisors, or the proper city or town authorities, were authorized to prescribe other proper rules relating to the delivery of water, not inconsistent with the laws or constitution of the state. It should be noted that in San Francisco the city council is known as the board of supervisors. These provisions continued in effect until modified by the adoption of the new state constitution in 1879. In that instrument the following section appeared:[1]

"The use of all water now appropriated, or that may hereafter be appropriated, for sale, rental, or distribution, is hereby declared to be a public use, and subject to the regulation and control of the state in the manner to be prescribed by law; provided, that the rates or compensation to be collected by any person, company or corporation in this state for the use of water supplied to any city and county, or city or town, or the inhabitants thereof, shall be fixed, annually, by the board of supervisors, or city and county, or city or town council, or other governing body of such city and county, or city or town, by ordinance or otherwise, in the manner that other ordinances or legislative acts or resolutions are passed by such body and shall continue in force for one year and no longer. Such ordinances or resolutions shall be passed in the month of February of each year, and take effect on the first day of July thereafter. Any board or body failing to pass the necessary ordinances or resolutions fixing water rates, where necessary, within such time, shall be subject to peremptory process to compel action at the suit of any party interested, and shall be liable to such further processes and penalties as the legislature may prescribe. Any person, company or corporation collecting water rates in any city and county, or city or town in this state, otherwise than as so established, shall forfeit the franchises and water works of such person, company or corporation to the city and county, or city or town where the same are located, for the public use."

Another section of the constitution provided that "the right to collect rates or compensation for the use of waters supplied to any county, city and county, or town, or the inhabitants thereof, is a franchise and cannot

[1] Article XIV, section 1.

be exercised except by authority of and in the manner prescribed by law ".[1]

Still another section provided that in any city where there were no water works, "any individual or any company duly incorporated for such purpose under and by authority of the laws of this state, shall, under the direction of the superintendent of streets, or other officer in control thereof, and under such general regulations as the municipality may prescribe for damages and indemnity for damages, have the privilege of using the public streets and thoroughfares thereof, and of laying down pipes and conduits therein, and connections therewith, so far as may be necessary for introducing into and supplying such city and its inhabitants * * * with fresh water for domestic and all other purposes, upon the condition that the municipal government shall have the right to regulate the charges thereof ".[2]

The general laws in force in 1907, governing water and canal corporations, provide that no water company may supply a city unless previously authorized by municipal ordinance or contract.[3] No city may contract away its right to regulate rates, and no exclusive franchise may be granted. No contract or franchise may be for a term exceeding 50 years. All water companies must furnish "pure, fresh water".

Subject to the provisions of the general law relative to the regulation of rates, the Spring Valley Water Works obtained a monopoly for the supply of water to San Francisco in 1865.[4] This monopoly has been maintained to the present time, limited only by the city's supervisory and regulatory authority. The history of the relations between the city and the company has been the story of one long fight. In the new city charter adopted by the people, which went into effect January 8, 1900, it was declared " to be the purpose and intention of the people of the city and county that its public utilities shall be gradually acquired and ultimately owned by the city and county ".[5] The board of supervisors under the new charter was required to secure at least every two years, through the city engineer, plans and estimates of the actual cost of the original construction and completion of water works by the city. After such plans and estimates were procured, the board of supervisors was required to enter into negotiations for the permanent acquisition by the city of a water plant, " by original construction, condemnation

[1] Article XIV, section 2.
[2] Article XI, section 19.
[3] Corporation Laws of California, 1907, p. 124.
[4] Reports on the Water Supplies, etc., *op. cit.*, p. 8.
[5] Article XII, City Charter.

or purchase". It was provided, however, that before any proposition was submitted to the electors for their approval, the supervisors must solicit and consider offers for the sale to the city of the existing water works, in order that the electors should have the benefit of acquiring a plant at the lowest possible cost. These provisions of the charter have been amended so that it is only when the board of supervisors by ordinance determines that the public interest or necessity demands the acquisition of any public utility, or when 15 per cent of the electors petition for such acquisition, that plans and estimates must be secured.[1]

After many years of agitation and several special examinations of the possible sources of supply, the city selected, as the most available source, the waters of the Tuolumne River, which drains an area of about 1,500 square miles on the western slopes of the Sierra Nevada mountains. The advantages claimed for this source are the absolute purity of the water on account of the uninhabitable character of the watershed, the abundance of the supply, the existence of the largest and most numerous sites for storage, freedom from complicating water rights, and great possibilities for the development of power. To bring this water to the city, would require conduits aggregating 142 miles in length. Two reservoir sites have been selected by the city. One of these is Hetch Hetchy, where, by building a dam 150 feet high, a supply of 135,000,000 gallons a day could be developed. The other, Lake Eleanor, offers the possibility of developing 57,000,000 gallons a day for seven months of the year.

In order to secure the right to build these reservoirs, the sites being situated within the Yosemite reservation, the city was compelled to file applications with the Department of the Interior at Washington. These applications were at first denied, in 1903, on the ground that the Secretary of the Interior was not authorized to make such a grant under the Federal statutes. With much difficulty the city got the case reopened, and the legal question regarding the Secretary's authority was referred to the Attorney General. The Federal statute upon which the city relied, provides that "the Secretary of the Interior * * * is authorized * * * to permit the use of rights of way through * * * the

[1] As amended Dec. 4, 1902, approved by the Legislature, Feb. 5, 1903.

Yosemite, Sequoia and General Grant national parks, California, for * * * water conduits and for water plants, dams, and reservoirs used to promote * * * the supply of water for domestic, public, or other beneficial uses, * * * provided that such permits shall be allowed within or through any of said parks * * * only upon the approval of the chief officer of the department, under whose supervision such park or reservation falls, and upon a finding by him that the same is not incompatible with the public interest".[1] The Attorney General interpreted this statute to vest in the Secretary of the Interior a discretionary authority to grant or refuse applications of this kind. Thereafter Secretary Garfield took the matter under consideration and, after public hearings and thorough investigation, approved the city's applications. In the course of his decision he said:[2]

"I appreciate keenly the interest of the public in preserving the natural wonders of the park and am unwilling that the Hetch Hetchy Valley site should be developed until the needs of the city are greater than can be supplied from the Lake Eleanor site when developed to its full capacity. Domestic use, however, especially for a municipal supply, is the highest use to which water and available storage basins therefor can be put. Recognizing this, the city has expressed a willingness to regard the public interest in the Hetch Hetchy Valley and defer its use as long as possible.

"The next great use of water and water resources is irrigation. There are in the San Joaquin Valley two large irrigation districts, the Turlock and Modesto, which have already appropriated under state law 2,350 second feet of the normal flow of water through Lake Eleanor and Hetch Hetchy. The representatives of these districts protested strongly against the granting of the permit to San Francisco, being fearful that the future complete development of these irrigation communities would be materially hampered by the city's use of water. After repeated conferences, however, with the representatives of these irrigation districts I believe their rights can be fully safeguarded, provided certain definite stipulations to protect the irrigators are entered into by the city. Fortunately, the city can agree to this, and the interest of the two users will not conflict. On the contrary, the city in developing its water supply will to a considerable extent help the irrigation districts in their further development.

"The only other source of objection, except that from persons and corporations who have no *rights* to protect but merely the hope of financial gain if the application of the city is denied, come from those who have a special interest in our National Parks from the standpoint of scenic effects, natural wonders, and health and pleasure resorts. I appreciate fully the feeling of these protestants and have considered their protests and arguments with great interest and sympathy. The use of these sites for reservoir purposes would interfere with the present con-

[1] Reports on the Water Supplies of San Francisco, *op. cit.*, p. 218.
[2] *Ibid.*, p. 219.

dition of the park, and that consideration should be weighed carefully against the great use which the city can make of the permit. I am convinced, however, that 'the public interest' will be much better conserved by granting the permit. Hetch Hetchy Valley is great and beautiful in its natural and scenic effects. If it were also unique, sentiment for its preservation in an absolutely natural state would be far greater. In the mere vicinity, however, much more accessible to the public and more wonderful and beautiful, is the Yosemite Valley itself. Furthermore, the reservoir will not destroy Hetch Hetchy. It will scarcely affect the canyon walls. It will not reach the foot of the various falls which descend from the sides of the canyon. The prime change will be that, instead of a beautiful but somewhat unusable 'meadow' floor, the valley will be a lake of rare beauty.

"As against this partial loss to the scenic effect of the park, the advantages to the public from the change are many and great: The City of San Francisco and probably the other cities on San Francisco Bay would have one of the finest and purest water supplies in the world; the irrigable land in the Tuolumne and San Joaquin Valleys would be helped out by the use of the excess stored water and by using the electrical power not needed by the city for municipal purposes, to pump subterranean water for the irrigation of additional areas, the city would have a cheap and bountiful supply of electric energy for pumping its water supply and lighting the city and its municipal buildings; the public would have a highway at its disposal to reach this beautiful region of the park heretofore practically inaccessible; this road would be built and maintained by the city without expense to the government or the general public; the city has options on land held in private ownership within the Yosemite National Park, and would purchase this land and make it available to the public for camping purposes; the settlers and entrymen who acquired this land naturally chose the finest localities, and at present have power to exclude the public from the best camping places; and further the city in protecting its water supply would furnish to the public a patrol to save this part of the park from destructive and disfiguring forest fires.

"The floor of the Hetch Hetchy Valley, part of which is owned privately and used as a cattle ranch, would become a lake bordered by vertical granite walls or steep banks of broken granite. Therefore, when the water is drawn very low it will leave few muddy edges exposed. This lake, however, would be practically full during the greater part of the tourist season in each year, and there would be practically no difficulty in making trails and roads for the use of the tourists around the edges of the valley above high water mark."

The Secretary's approval of the city's application for these water rights was granted upon certain conditions contained in a stipulation filed by the city with the Department. This stipulation practically covers the franchise conditions imposed by the general government upon its grantee, the City of San Francisco. These conditions may be summarized as follows:[1]

(1) It is stated that the city owns practically all the

[1] Reports on Water Supplies of San Francisco, *op. cit.*, p. 220.

patented land in the floor of the Hetch Hetchy reservoir site and sufficient adjacent areas in the Yosemite Park and the Sierra National Forest to equal the remainder of the reservoir area. The city agrees to surrender to the United States equivalent areas outside of the reservoir sites and within the national park and adjacent to the reservoirs, in exchange for the remaining land in the reservoir sites. It is proposed to secure authority from Congress for this exchange if necessary.

(2) The city agrees that the regulations imposed for the government of the park shall be applicable to its holdings within the park, and that it will throw open to the public the use of its holdings under regulations fixed by the Department of the Interior, except to the extent that the necessary use of its holdings for the exclusive purpose of storing and protecting water would be interfered with.

(3) The city agrees to develop the Lake Eleanor site to its full capacity before beginning the development of the Hetch Hetchy site. The latter is to be undertaken only when the needs of San Francisco and the adjacent cities which may join with it in obtaining a common water supply, shall require such development.

(4) San Francisco and other cities joining it in obtaining a common water supply, will not interfere in the slightest particular with the right of the two irrigation districts situated in the San Joaquin Valley to use the natural flow of the Tuolumne River to the full extent of their claims. San Francisco will stipulate not to store or divert any of the natural flow of the river when desired by these irrigation districts for any beneficial purpose, unless such actual flow should be in excess of the capacities of the canals owned by the districts.

(5) The city agrees not to interfere in any way with the storage of flood waters by the irrigation districts at sites other than the two selected for city use, and also agrees to return to the river for the use of the districts all surplus or waste flow used for power.

(6) The city agrees to sell to the irrigation districts, upon request, for the use of land owners within their limits, any excess of electric power generated by the water works and not used for the municipal purposes of the city. The price to be charged is to be such as will reimburse the city for

developing and transmitting surplus energy. In case of dispute the price is to be fixed by the Secretary of the Interior.

(7) The city agrees that the Secretary may at his discretion or when called upon by the city or by the irrigation districts to do so, direct the apportionment and measurement of the water in accordance with the terms of this stipulation.

(8) The city agrees that when it begins the development of the Hetch Hetchy site, it will vigorously prosecute the completion of a dam to the height of at least 150 feet, with a foundation capable of supporting the dam when built to its greatest economic and safe height. It is also agreed that whenever in the opinion of the engineer in charge of the reservoirs the volume of water in storage is in excess of the seasonal requirements of the city and other municipalities interested, such excess shall be liberated under the directions and for the use of the irrigation districts at a price not to exceed the proportionate cost of storage plus a sinking fund chargeable to the volumes of water thus liberated. Under this provision also the price, in case of dispute, is to be fixed by the Secretary of the Interior.

(9) The city agrees, within two years after the Secretary's approval of its applications, to submit the question of adopting this source of water supply to a vote of the people of San Francisco, as required by the city charter, and within three years thereafter, if the vote is favorable, to commence the actual construction of the Lake Eleanor dam and carry it forward to completion with all reasonable diligence, so that it will be finished within five years after the time of commencing work, unless the period specified should be extended by the Secretary of the Interior for cause, or the construction work should be delayed by litigation.

The plan was submitted to the people of San Francisco, as required by this stipulation, and approved by them by an overwhelming vote. The city then caused to be introduced into Congress, at the session of 1908-09, resolutions authorizing the desired exchange of lands. These resolutions were considered by committees of the Senate and the House, but no final action was taken on them. Great opposition developed from the Spring Valley Water Company and also from certain important civic bodies, who opposed the plan on the ground that it involved an encroachment upon the nat-

ural beauty of the Yosemite. The great advantage of the plan, from the standpoint of San Francisco, is that the city would be able to secure reservoir sites and an abundant supply of water practically without cost. It is a well known fact that for several decades the available water rights in the vicinity of San Francisco have been systematically seized by the Spring Valley Water Company and other private interests, with the idea of forcing the city to pay heavily in case it undertakes municipal ownership of the water works. In any case, even if it secures this enormously valuable franchise as a free gift from the United States government, the city will have to invest many millions of dollars in the construction of reservoirs and conduits and the purchase or construction of a distributing system.

196. A project too vast for private enterprise — Los Angeles.—The City of Los Angeles, organized in 1850 under American law, inherits certain water rights from the old Spanish pueblo.[1] As a result of considerable litigation as to the extent of these rights, the Supreme Court of California imposed certain limits upon the city's claims.

"It is held," says the first report of the board of water commissioners, "that the city has the paramount right to so much of the water flowing in the river, at any point from its source or sources to the southern boundary of the city, as it may require for municipal uses and for the use of its inhabitants: that this right inheres not only in the surface stream but in the stream as it flows below the surface, and in all subterranean waters which supply the surface or underground stream; that this right is not limited to the territory covered by the original pueblo, but attaches to all additional territory from time to time brought within the city limits; nor is this right limited to the original uses of the pueblo and its inhabitants, which were practically confined to absolute necessities, but expands so as to take in all uses, individual and municipal, naturally arising from the growth of the city and from the demands of an ever advancing civilization."

In the early days the city's water rights were used principally for irrigation. The domestic supply was secured largely from the irrigating ditches. By 1868 a crude system had been developed, consisting of two miles of wooden and one mile of iron pipes, which had been laid by the city. In that year the city transferred its plant to certain individuals under a contract or lease which was in effect a water franchise.

[1] See Report of Board of Water Commissioners of Los Angeles for the year ending November 30, 1902.

By the terms of this grant the city was to receive an annual rental of $1,500 for the works and the grantees were to cancel all prior claims held by them against the city for repairs and damages amounting to about $8,000.[1] They agreed furthermore to lay twelve miles of iron pipes of sufficient capacity to supply the inhabitants of the city with water for domestic purposes and to erect one fire hydrant at the corner of each cross street along the lines of the water mains. They also agreed to erect an ornamental fountain in the public plaza at a maximum cost of $1000. They were to have the water works completed within one year so as to secure to the inhabitants of the city a constant supply.

In this lease reference is made to a prior lease dated Oct. 16, 1865, and all the rights and privileges included in the former lease were confirmed to the present grantees. These included the right to sell and distribute water for domestic purposes and to receive rents and profits from the operation of the water works. The grantees were given the specific right to lay pipes in any and all the streets of the city, and to dig and make all necessary excavations for that purpose, with the additional right to take water from the Los Angeles River. The amount of water to be taken from the river, however, was not to exceed "ten inches", unless with the previous consent of the mayor and common council. The city agreed that at the expiration of the period of thirty years it would pay the grantees or their successors "the value of the improvements made in, about, and upon the said water works, in pursuance of this contract; the same to be ascertained by arbitration, in case the parties cannot agree upon the value thereof". The city agreed "to make no other lease, sale, contract, grant or franchise to any person or persons, corporation or company, for the sale or delivery of water to the inhabitants of said city for domestic purposes during the continuance of this contract". The grantees, on the other hand, agreed that within one year from the date of the contract they would replace all the wooden pipes then belonging to the water works system and that they would extend the iron pipes "as fast as the citizens, desiring to be supplied with water for domestic purposes, will agree to take sufficient

[1] See "A contract for the Leasing of the Los Angeles City Water Works," typewritten copy furnished by William Mulholland, Superintendent for the Board of Water Commissioners.

water to pay ten per cent per annum interest upon the cost of extending such pipes through the streets now unsupplied with water". They also agreed to furnish water for the public schools, city hospitals and jails free of charge when these buildings were near the water mains. The city, however, was to furnish the necessary conduits for making the connections. The grantees also agreed to make improvements at their own expense and keep them in repair throughout the period of the grant, and to return the water works to the city at the expiration of the thirty-year period "in good order and condition, reasonable wear and the damage of the elements excepted" upon the city's paying for the improvements. A bond of $25,000 was to be executed by the grantees and they were to pay all state and county taxes assessed against the water works during the period of the grant. The mayor and common council, however, reserved the right to regulate water rates, but it was stipulated that they should "not so reduce such water rates, or so fix the price thereof, to be less than those now charged". The original lease of 1865 was to be surrendered and cancelled. It was expressly provided that the grant did not "embrace, to any extent, or have any reference to, the water works of said city used for the distribution of water for the purposes of irrigation, or affect in any manner any rights of irrigation, either existing at present, or which may exist hereafter, except as to the ten inches of water as hereinbefore provided". It was expressly stipulated that the grantees should not furnish water for irrigation purposes and should take from the river only such amount as was necessary for domestic uses.

Soon after this contract was entered into, the grantees organized the Los Angeles City Water Company, and in 1870 the legislature ratified the contract with the city.[1] In 1879, as already stated in the preceding section, California adopted a new constitution, which provided that municipalities should have the right to regulate the water rates charged by private companies. In attempting to exercise this constitutional right, the city overstepped the limitations of the original contract, which provided that the rates should not be reduced below those in force in 1868. This action of the city resulted in long-drawn-out litigation. In the mean time, when the

[1] See *Engineering Record*, June 9, 1900, Vol. 41, p. 588.

contract expired in 1898, the city and the company were unable to agree as to the value of the "improvements" which the company had made to the original plant. The length of mains had been increased from 3 to 325 miles. Appraisers were appointed, and they in turn secured the assistance of a board of four engineers. The latter in 1899 valued the company's physical property at $995,389.[1] In arriving at this figure, the engineers had deducted for depreciation 29.31 per cent from the estimated cost of reproduction; had then added 10 per cent for engineering, supervision and contingencies; had then added 6 per cent for contractors' profits, and had finally added 4 per cent to the total thus secured. The appraisers themselves, however, valued the company's works at $1,183,591. The price finally paid by the city in 1902 was an even $2,000,000.

Los Angeles has great expectations; its inhabitants firmly believe that it is to be one of the great cities of the country in the not far distant future. The population of the city in 1900 was 102,479. By 1903 it claimed a population of 200,000. The Bureau of the Census brings out a special report each year, giving statistics of cities. In estimating the increase of population from year to year, the Bureau's experts have worked out certain rules based upon growth of population shown by previous state and Federal censuses. In the population table the space after Los Angeles is left blank for each year succeeding the year of the last Federal census. In explaining this omission, the census report says:[2]

"In the case of Los Angeles, California, the available information indicates a rate of increase in population much greater than would be shown by the application of the rules above set forth, and in accordance with the request of the city officials no estimate is given."

In casting about for a water supply equal to the prospects of the city, the Los Angeles Board of Water Commissioners fixed upon the Owens River Valley, which is 230 miles distant in the mountains. In September, 1905, the people voted almost unanimously to authorize the issue of $1,500,000 of bonds to pay the preliminary expenses of the gigantic task of bringing water from this source.[3] In 1907, by a vote of

[1] See *Engineering News*, May 4, 1899, Vol. 41, p. 283.
[2] Bureau of the Census, Special Reports, "Statistics of Cities having a Population of over 30,000, 1905," p. 45.
[3] See "The Los Angeles Aqueduct," by Burt A. Heinly, published in The Earth, September, 1908.

ten to one, the people authorized a further issue of $23,000,000 of bonds to carry the enterprise to a successful conclusion. It is claimed that the Owens River project will provide a domestic water supply of 259,000,000 gallons a day, adequate for 2,000,000 people; that it will provide irrigation for 75,000 acres of now unproductive land adjoining the city, and that it will furnish the means of ultimately developing 75,000 horse-power of electrical energy.

This great enterprise is one of the most daring ever undertaken by a city. It involves the construction of an aqueduct for a distance of 130 miles across the desert, where prior to the commencement of operations there had been no transportation facilities other than the stage-coach. It involves also tunneling a distance of nearly 27,000 feet through the crest of the Coast Range. It is estimated that it will take 1,680 days, working from both ends, to complete this tunnel. Actual construction was commenced in October, 1907. In its preparation for the prosecution of its great work, the city found it necessary to secure the construction of a railroad 130 miles long, for the purpose of handling the thousands of men and the millions of tons of freight necessary in the construction of the aqueduct; to develop a temporary supply of water along the entire line of the aqueduct for domestic and building purposes and as a cheap source of power in tunneling and excavating; to provide a telephone system 196 miles in length for the purpose of convenience in communication and administrative control; to construct 155 miles of roads and trails, costing all the way from $16 a mile to $1 per lineal foot; to construct and equip hydro-electric power plants and provide for transmitting energy 35 miles in one direction and 90 miles in the other; to establish a cement plant at a cost of $400,000 and to provide buildings for housing thousands of men employed upon the work.

The present domestic consumption of water in Los Angeles ranges from 35,000,000 to 44,000,000 gallons daily. The area of the city is about forty square miles. It is said:[1]

"The aqueduct will be capable of giving an inexhaustible supply of water for the domestic use of Los Angeles. The city's present limits, prevented by the present supply from any further extensions, can be made to stretch from the mountains to the sea. Such towns and villages as may be determined by the vote of the whole people, can be included within the confines of a newer, greater city."

[1] Los Angeles Examiner, anniversary edition, 1908.

If the resumption of the water franchise by the municipality has within less than a decade resulted in such an expansion of civic hope and patriotism in Los Angeles, we may easily believe that the assumption of public control of utilities now held as private monopolies, gives promise of being a most important means for developing that civic pride and co-operative spirit which alone can insure good government in a great city.

197. A franchise forfeited for abuse of privileges—New Orleans.—The City of New Orleans presents us with one of the extremely rare cases in which a private company's franchise for furnishing a great public utility has been actually and absolutely forfeited by judicial determination long before the expiration of the period named in the franchise. The city has an exceptional location. Lying on both sides of the Mississippi River about 100 miles from the Gulf of Mexico, its site is from six to twenty feet below the high water level of the river and averages about even with the level of Lake Pontchartrain, which lies to the north. The original water works system was built by a private company which commenced operations about 1836 and had gradually extended its plant until in 1868 it had mains in 65 miles of streets. At that time the city purchased the plant. "Private ownership had been bad," says Mr. George G. Earl, general superintendent of the sewerage and water board, "but in this case public ownership proved worse".[1]

In 1877 a private company was organized to take over the water works and was given a fifty-year exclusive franchise. Another citizen of New Orleans explains the reason for giving up municipal ownership and the consequences of the change as follows:[2]

"The disastrous results of the Civil War and the tenfold more disastrous afflictions of the reconstruction period, so exhausted the city's ability to make needed repairs and improvements to its municipal utilities, that in order to have the system kept going, in 1877 the water system was transferred to a private corporation with a fifty-year monopoly right. The corporation took charge of a system of some 60 miles of pipes and from the very start adopted a system of 'get-all-you-can' out of its franchise, instead of a wide extension of facilities. When its charter was forfeited, after 30 years of profitable operation, its pipe

[1] See Proceedings of the 13th annual convention of the American Society of Municipal Improvements, 1906, pp. 109–123.

[2] Annals of the American Academy of Political and Social Science, November, 1907, Vol. 30, p. 152.

mileage had increased only 70 miles, and it was still supplying the raw, muddy water of the Mississippi River, without filtration or even settling. The supply was totally inadequate to the needs of the population. The charges to the consumers were grossly extortionate, and discriminative, some consumers paying one-half what others, less favored, had to pay for similar service. Water meters were not allowed unless to large consumers, and then the meter had to be installed at the consumer's cost; but the meter measurement was a farce, because, as was shown on the trial for the forfeiture of the company's charter, the meter registered in cubic feet, and to one consumer, the company would bill the supply at eight gallons per cubic foot, to another at ten gallons, and to some unfortunates at twelve gallons per foot. The city had no control whatever over the charges, or the accounts, of the company. True, a minority of the board of directors was composed of city officials, but in practice these city members were ignored, or else neglected their duties. In fact, the water supply for this great city, on the banks of a great river, with an inexhaustible supply of good water, was grossly inadequate."

The original franchise of the New Orleans Water Works Company was derived from a special act of the Legislature of Louisiana passed at an extra session in 1877.[1] By the terms of this franchise, or charter, the amount of the company's capital stock was fixed at $2,000,000, of which a little over $600,000 was to be assigned to the city as full paid and not subject to assessment. The Mayor, the Administrator of Water Works and Public Buildings and the Administrator of Finance were to be ex-officio directors of the company. There were to be four other directors originally chosen by all the stockholders, including the city. By an amending act of 1878, however, the city's power to vote as a stockholder in the election of the majority directors was taken away.[2] The company was authorized to issue bonds to the amount of $2,000,000. It was forbidden to declare or pay any dividends except in cash and then only out of the net semi-annual or annual receipts after payment of the expenses of operation and the interest on the bonded debt. This provision was changed by the amendment of 1878 so that dividends could not be paid except after provision had been made out of current receipts for "gradual extension" as well as operating expenses and interest. The city was permitted to use water from the company's pipes and fire-plugs free of charge for the extinguishment of fires, for the cleansing of the streets and for the use of all public buildings, public markets and charitable institutions. In consideration of the free water furnished to the

[1] Laws of the State of Louisiana, extra session of 1877, No. 33.
[2] Laws of the State of Louisiana, 1878, No. 43.

city, the franchises and property of the company were declared to be "exempt from taxation—State, municipal and parochial". By the amendment of 1878, however, the word "State" was stricken out of this clause. The company was authorized to lay pipes and construct hydrants in the streets and public places of the city and its suburbs on condition that it should restore the streets to their former state under the supervision of the City Surveyor. The company was given the right to expropriate land anywhere in the State of Louisiana for any necessary purpose in connection with the supply of water to the city of New Orleans. The company was required, immediately after its organization, to proceed "to the erection of new works and pipes sufficient in capacity to furnish a full and adequate supply of water, to be drawn from the Mississippi River, or elsewhere, as may be judged most expedient". The new works were to be commenced within twelve months and completed within five years. In case the company failed to do the work as prescribed it was to forfeit its exclusive privilege, and the city was to have the right to contract with anyone else for the supply of water and to expropriate the company's property. It was provided that "after the completion of the new works and pipes, the said company shall, from time to time, as the wants of the population may require, and when the estimated revenue on the cost of such extension shall equal ten per centum, extend their works throughout the entire limits of the city and suburbs, and any future extension of said city". Failure to comply with this provision was to work the forfeiture of the company's charter. The company was authorized to fix the water rates, on condition that its net profits should not exceed 10% per annum. Sworn annual statements of the company's business and condition were to be published, and the city council was to have authority to appoint a committee to examine the company's books and to "make such extracts from the same as they may deem necessary". In case the company's profits should be found to exceed 10%, the council could require a reduction in the price of water sufficient to bring the profits down to the 10% limit. It was provided that in no case should the rates charged ever exceed the rates being paid at the time this franchise was granted. Any person who should obstruct the company in conveying its

water or should interfere with any part of the company's work under this franchise or should change or pollute the company's water supply, was to be fined at the discretion of the Court, and imprisoned for a term not exceeding seven years. Fines paid under this provision were to be applied to the use of the company. It was provided that at the end of fifty years the city should have the right to buy the works, conduits, pipes, etc., of the company at a valuation to be fixed by five experts. In case the city refused to purchase, however, the company's charter was to be extended, *ipso facto,* for fifty years longer, but without any exclusive privilege.

After a few years the city was unwilling to continue the company's exemption from taxation. Accordingly, an arrangement was entered into by an ordinance approved Sept. 26, 1884, by which the city agreed to pay $60 a year for each fire-plug, fire hydrant and fire well connected with the company's mains.[1] The minimum number of such fixtures was to be 1139. The company agreed to maintain a pressure of not less than 50 feet head between seven o'clock in the morning and six at night. In time of drought, the city was to have the right to furnish water free of charge to persons living outside the lines of the company's pipes. After the date of this ordinance the company was to be subject to municipal as well as state taxation.

After securing the forfeiture of the company's franchise, the city undertook a magnificent scheme of water supply, sewerage and drainage, the total cost of which will aggregate $24,000,000. The water works alone, which have been practically completed, are being built at a cost of between $6,000,000 and $7,000,000. The municipal plant includes about 450 miles of mains, the necessary pumping machinery, and a water purification plant. The source of supply is the Mississippi River, and the rapid or mechanical system of filtration has been adopted. Pending the completion of the city water works, the receiver for the private company has been permitted to continue to operate the old plant, such as it was; but the majority of the people have depended for their domestic supply upon cisterns, of which Superintendent Earl said there were 65,000 in 1906.

In New Orleans the difficulties in which the municipal

[1] Ordinance No. 909, Council Series.

government found itself in its early history led to the granting of a franchise even for a sewerage system. This plan was so much of a failure that the works were not even put into operation. The usual annual death rate in New Orleans during the middle of the last century ranged from 40 to 60 per thousand of population. In more recent years the rate has been greatly reduced, and the people of the city expect, when the magnificent improvements now under construction have been completed, that the sanitary condition of the city will be equal to that of other cities of similar size and that under these conditions population and commerce will grow by leaps and bounds. In this case, as in the case of Los Angeles, the energy and common effort of the whole people proved to be necessary for the undertaking of the great public utility enterprises upon which the life and development of the community depended.

198. Cut-throat competition followed by monopoly—Denver.—The City of Denver owns a water distributing system in that portion of its territory formerly known as South Denver. This plant was constructed before the territory was annexed to the city. On December 15, 1894, after the city had come into possession, the plant was leased to the Denver Union Water Company for a period of about 15 years.[1] The company agreed to pay as rental six per cent on the appraised value of the pipes, mains, hydrants and pumping machinery transferred to it under the lease. The company agreed to extend the mains and add to the machinery whenever necessary for public convenience. All new construction, however, was to be approved by the city engineer before the commencement of work. At the termination of the lease the city was to take back the property with the improvements and pay the company the appraised value of the new construction, or, as an alternative, the company was to purchase the part of the plant belonging to the city at an appraised valuation. The company agreed to charge the same rates and furnish the same quality of water in South Denver as in the rest of the city. The value of the city's plant, as fixed by the appraisers, was $142,209.

The main water plant of Denver was originally constructed by private companies under franchise rights granted by the

[1] Franchises and Special Privileges, *op. cit.*, p. 671.

city. The private plant was first established about 1871 and was grossly inadequate for the needs of a growing city. The company charged the city $150 a year per hydrant, and the consumers were not permitted to use the water for irrigating lawns or trees.[1] About 1880 a new plant was constructed. This also was inadequate for a growing city. In 1889, just prior to the expiration of the old company's franchise, a competing company was organized and secured a grant from the city. The old company's franchise was also renewed a year or two later, and there resulted such fierce competition between the two companies that for some time citizens fortunate enough to live on streets in which both companies had mains were given free water. The result of the competition was the same as it has been everywhere under similar circumstances; control of the two companies was secured by a common interest, and competition ceased. It is needless to add that there was no more free water for the consumers.

Under the competing franchise granted in 1889, the Citizens' Water Company was given the right to lay its mains in about nine comprehensive pages of streets; but it was stipulated that the grant should not be exclusive. The city reserved the right to purchase "the plant, rights and properties" of the company, upon the "valuation of the value of such plant, lands, water rights and machinery at the time of such purchase by the city, less the deterioration in the same from use and wear". The appraisal was to be made by three disinterested parties, one chosen by the company, one by the city, and the third by the first two. It was also stipulated in this franchise that the company should not charge higher rates within the corporate limits of the city than the rates being charged at the time by the old company for like service. The company agreed to have 40 miles of mains in operation within three years and thereafter to lay at least three miles a year during the 20 years for which the franchise was granted. Unless the city elected to purchase the plant before May 9, 1891, the company was to receive a contract to furnish water for extinguishing fires, sprinkling streets, and flushing gutters and sewers, upon terms and conditions to be fixed by agreement between the city and the company,

[1] See "Economic Struggle in Colorado" by Hon. J. Warren Mills, in Arena for October, 1905, Vol. 34, pp. 379-99.

or, in case of disagreement, to be fixed by the president of the city board of supervisors, the president of the board of aldermen, two persons chosen by the company, and a fifth person chosen by the senior judge of the district court in the county of Arapahoe. Before exercising its franchise the company was required to execute a bond in the amount of $20,000 to guarantee that it would properly refill all excavations in the streets and would assume and pay all damages resulting from its negligence in the construction or maintenance of its mains. The city council was required to prescribe by ordinance reasonable rules and regulations for the protection of the company's mains and the fire hydrants, to prevent the undue waste of water or its use by persons who were not entitled to it. The grant was for 20 years "and no longer".

The old Denver Water Company, predecessor of the Denver Union Water Company, secured a renewal of its franchise in 1890.[1] Its rights extended to less than four pages of enumerated streets and alleys. The city bound itself, however, to give the company similar rights, so far as it might have authority to do so and when requested to do so, in any streets thereafter laid out or extended. The company was required to assume the usual liability for damages resulting from the exercise of its franchise. If in any case the company failed for twenty-four hours after notice to restore a street to good condition after it had been opened for laying a water main or setting a hydrant, the city reserved the right to do the work at the company's expense. The company was required to furnish water, upon application, "through connections to be made by parties desiring the same, to premises abutting upon streets in which it may have a pipe laid", under reasonable rules. The rates to private consumers were not to exceed a certain schedule attached to the franchise; but the company was authorized to compel any consumer to furnish a meter and pay for the water by meter measurement. It was provided, however, that after five years the city council might require the company "to fix schedule rates for private consumers equivalent to the average rate prevailing in the cities of Chicago, St. Louis and Cincinnati for the same service". The company was bound at all times to furnish the city and private consumers water "of a quality as good and fit for

[1] Franchises and Special Privileges, *op. cit.*, p. 692.

private consumption as that shown by the analysis made by order of the City of Denver by Professor Joseph A. Sewall in the month of August, 1889". Under the terms of the franchise the company was to take over 493 hydrants belonging to the City of Denver, for the sum of $25,000. These hydrants were to be replaced within a year with new hydrants "having two nozzles for hose and one for steamer connection and with not less than a six-inch barrel". The city council was required to designate the location for enough additional hydrants to bring the total number on the company's existing mains up to 1,000, all of which were to be placed within one year. The fire hydrants were to be supplied with a pressure equivalent to 115 pounds at the hydrant in front of the Union Depot. If, as a result of the extension and growth of the city, as many as 50 hydrants should be ordered placed at locations where, on account of difference of elevation, this pressure would be less than 45 pounds, the company was required to establish a separate high service and maintain in the hydrants connected with it a pressure of not less than 50 pounds. It was provided that "the act of God, unavoidable accident, interference of rioters or other unlawful disturbance", should excuse any default by the company in the performance of its obligation to furnish water. The city agreed to pay annually $35 a hydrant for the first ten years of the grant and $25 a hydrant thereafter.

At the expiration of 20 years the city was to have the right to purchase the property. If the price could not be arrived at by agreement, the fair cash value of the water works was to be determined by arbitration. There were to be five appraisers, none of them to be residents of Denver or interested persons. Two were to be selected by the city, two by the company, and the fifth by the first four. But if, after the city had named its representatives and had notified the company to appoint appraisers, the latter failed to do so for a period of 30 days, the city reserved the right to apply to any court having equity jurisdiction in the county, for the appointment of two persons to act for the company. It was provided that the decision of the majority of the appraisers should be binding upon both parties, and that upon payment or tender of payment by the city, the company should transfer "all of its property, real or personal, easements, rights and

privileges." In case the city did not care to purchase at the end of the first twenty-year period, it held the option of renewing the contract for a like period of twenty years, but at a hydrant rental 10 per cent less than that prevailing at the expiration of the original franchise. The city also had the right to successive renewal periods of twenty years each at the same price. The company agreed to extend its mains upon any street where no mains had been laid, whenever ordered to do so by a city ordinance, and to set fire hydrants, which were to be rented by the city at the rates already mentioned; but no extension could be required unless the city took a hydrant for every 400 feet of the extension. No mains were to be laid having a diameter of less than six inches. The company agreed to furnish free water for use in the city hall and fire department houses, and also for flushing sewers and gutters and for sprinkling purposes. The old hydrants purchased from the city could be used in connection with the sprinkling service. The city and the company agreed each to appoint, once every three years, a competent person to serve with a third person to be chosen by these two as a board or committee to whom all complaints by either party against the other for any violation of the terms of the ordinance could be referred, as well as any controversy as to the meaning of the ordinance or as to the framing or amendment of rules for the use of water for public purposes. It was expressly stipulated that the company should not, by the acceptance of the ordinance, lose any of its existing rights in regard to the occupation of the streets. All of the mains and other fixtures in possession of the company at the time the franchise was granted, together with any other fixtures laid in the streets, were to remain the company's "sole and absolute property", except in case of purchase by the city.

The clause of this franchise authorizing the city to require a readjustment of rates to correspond with the average rates charged in certain other cities where municipal ownership prevailed, was greeted at the time of the grant as a great concession to the city. However, when an attempt was made to enforce the requirement, the company calmly announced that it was wholly impossible to arrive at the average rates

charged by the three cities mentioned. Litigation resulted, and the city secured slight concessions.

On March 20, 1909, a board of appraisers appointed to value the property with a view to purchase by the city at the expiration of this franchise, reported the total fair cash value of the company's works and business as being $14,400,000, distributed as follows:[1]

(a) For physical plant, with deductions for depreciation and allowances for appreciation	$10,354,075.
(b) For water rights owned or used by the company	2,845,925.
(c) For business and going-concern value, "representing the added value of the plant because of its connections and business, and because the parts are united into one system and are tested and in successful use, and the value of the business during the remainder of the present franchise term"	1,200,000

199. Water franchises granted to mining companies.—Butte, Mont.—By an ordinance approved March 5, 1890, the City of Butte granted a perpetual right of way to the Silver Bow Hydraulic Mining Company, authorizing the company to use all the streets and alleys of the city for laying water pipes to supply water to the city and its inhabitants.[2] Under this grant the water works were to be completed within thirty months, and the amount of water to be conveyed was to be "not less than one hundred inches of water, measured in accordance with the provisions of the statutes of the State of Montana, and such water shall be pure and of good quality". The water was to be brought to such a point above the city that the pressure in the pipes on Copper street would be "equal to at least 150 feet perpendicular". It was provided that the company's mains should be "of wrought-iron, standard, lap-welded pipe, or its equivalent in strength". An elaborate schedule of flat rates was established in the ordinance. A monthly charge for a residence of from one to six rooms was fixed at $1.50. From this minimum, residence rates increased to $2.75 per month for a residence of fifteen or sixteen rooms. Sprinkling rates were established at $10 for the season for a lot not more than 35 feet wide, the water to be passed through a hose with a nozzle not greater than one-fourth of an inch; and $12 for a lot from 35 to 50 feet wide. The rate for each private

[1] Report of the Board of Appraisers and Arbitrators to the Mayor and City Council and the Denver Union Water Co., March 20, 1909.
[2] Franchise Ordinances of the City Butte, *op. cit.*, p. 445.

bath-tub was 50 cents a month. In any case where the company was unwilling to furnish water at schedule rates, it was authorized to dispose of it by meter at a rate ranging from 50 cents per 1000 gallons where the monthly use was less than that amount, to 20 cents per 1000 gallons where the monthly use exceeded twenty times that amount. The company was to file a $25,000 bond to indemnify the city against damage. The franchise was to be perpetual unless, on account of the company's failure to fulfill the conditions imposed upon it, the city should upon reasonable notice revoke the ordinance.

Other water franchises in Butte seem to have been granted primarily for mining purposes. By one of these grants, however, approved September 18, 1897, the Moulton Mining Company was authorized to construct and maintain lines of water pipes along certain specified streets, for the purpose of a public supply.[1] The franchise provided that the company should proceed in its construction work in such a manner as to cause the public the least inconvenience in the usual and ordinary use of the streets, and so as to leave a free and unobstructed passage along the street at least 30 feet wide at all points. Excavations in the streets were to be properly protected and the street surfaces were to be replaced in their former condition. The company was authorized to supply the inhabitants of the city with water "for general use". It was agreed, however, that the company did not obligate itself to do so. It was also provided that the furnishing of water to private consumers "shall at all times be the subject of private contract" between the company and its consumers. In case no contract was entered into, however, the rates were to be according to an elaborate schedule fixed in the ordinance. This schedule was substantially the same as the one fixed in the Silver Bow Mining Company's franchise above described. In this case also the franchise was to be perpetual, although the city reserved the right to declare it forfeited in case the company failed to comply with its conditions.

200. Exemption from taxation; rates; quality of water, etc.—Birmingham, Ala.—As early as September 21, 1872,

[1] City Ordinances, City of Butte, p. 462.
[2] Franchises, Contracts and Special Ordinances, City of Birmingham, 1907, p. 416.

the City of Birmingham entered into a contract with a private individual to secure the construction of water works.[1] The city agreed to exercise the right of eminent domain on behalf of the contractor wherever necessary in order to enable him to secure a proper source of supply. The city also agreed to put in 25 fire-plugs and pay the contractor a rental of $50 a year each for water to supply them. Additional plugs installed by the city were to bring a rental of $40 each. This contract was for a period of 25 years. The city agreed to exempt the water works from taxation for that period. The prices charged by the grantee were not to exceed those charged in the City of Chattanooga on June 18, 1870, and in case the meter system was adopted the rate was not to exceed ten cents per hundred gallons. It was stipulated that the grant was not exclusive and that the city might purchase the plant, "together with all the property, rights, privileges and easements connected therewith", at any time after twenty years, the price to be fixed by arbitration.

In 1888 a new water franchise was granted to the Birmingham Water Works Company, to enable the company to secure a better source of supply and construct a more adequate system.[2] This new franchise was without time limit. It provided that the water furnished by the company should be "clear, wholesome and suitable for all domestic and ordinary manufacturing purposes, and sufficient in quantity for the use of said city and its inhabitants and for all manufacturing purposes". In addition to the existing machinery with an aggregate capacity of 5,000,000 gallons daily, another pumping station with equal capacity was to be established. It was provided that the company's system of mains was to be such as to "cover, supply and keep supplied, all portions of streets of the city which it may be necessary to supply". The company was to place 200 fire hydrants on its mains, so located as to be not more than 500 feet apart on the average. The city agreed to pay an annual rental of $55 for each hydrant. Water used by the city for public purposes other than fire protection and the practice of firemen, was to be paid for at the rate of 15 cents per thousand gallons. The company agreed to extend its mains

[1] Franchises, Contracts and Special Ordinances, City of Birmingham, 1907, p. 416.
[2] *Ibid.*, p. 421.

within a reasonable time after the city had located one hydrant on each 1,000 feet of the proposed extension. The contract, so far as it related to hydrant rental, was to be in effect for a period of 30 years. At the expiration of that period and of each recurring period of ten years thereafter, the city would have the right to purchase the water works at an appraised valuation. The franchise contained a schedule of maximum domestic rates. The meter rates ranged from 30 cents per thousand gallons for consumers using less than 1,000 gallons per day, to 15 cents per thousand gallons for the first 5,000 gallons of daily use and a lower rate for additional use, so that all in excess of 40,000 gallons a day would be charged for at the rate of 8 cents per thousand. The company reserved the right to put in meters and charge an annual rental ranging from $3 for a half-inch meter to $50 for a four-inch meter. The flat rate for a dwelling of three rooms or less was fixed at $8 a year.

201. Regulation of rates—Knoxville.—The City of Knoxville is supplied with water by a private company. On January 4, 1909, the Supreme Court of the United States handed down a decision in the case of the Mayor and Aldermen of the City of Knoxville vs. The Knoxville Water Company, in which it decided that a public service corporation is not entitled to an injunction restraining the operation of a statute or municipal ordinance fixing maximum rates to be charged, unless the company can show that it is a clear case of confiscation of property.[1] In this particular case the litigation had been pending since December 7, 1901, when the company brought suit to restrain the city from enforcing a rate regulating ordinance enacted March 30, 1901. During these eight years the company had refused to put the rates fixed by the city into effect. In the lower court a master had been appointed to make a valuation of the company's plant and property used in its business at the time of the passage of the ordinance. According to the master's reckoning, the rates prescribed by the city ordinance would, if enforced, reduce the company's net income to a trifle less than six per cent on this valuation. The court refused to be bound by the findings of the master, stating that he did not make proper allowance for depreciation. The court also found

[1] Text of decision taken from New York Law Journal for Jan. 28, 1909, vol. xi., No. 99.

that there were wide differences in the testimony relative to the cost of reproduction. The opinion in this case was delivered by Mr. Justice Moody, who said:

"Where the case rests, as it does here, not upon observation of the actual operation under the ordinance, but upon speculations as to its effect, based upon the operations of a prior fiscal year, we will not guess whether the substantial return certain to be earned would lack something of the return which would save the effect of the ordinance from confiscation. It is enough that the whole case leaves us in grave doubt. The valuation of the property was an estimate and is greatly disputed. The expense account was not agreed upon. The ordinance had not actually been put into operation; the inferences were based upon the operations of the preceding year; and the conclusion of the court below rested upon that most unsatisfactory evidence, the testimony of expert witnesses employed by the parties. The city authorities acted in good faith, and they tried, without success, to obtain from the company a statement of its property, capitalization and earnings.

"The courts, in clear cases, ought not to hesitate to arrest the operation of a confiscatory law, but they ought to refrain from interfering in cases of any other kind. Regulation of public service corporations, which perform their duties under conditions of necessary monopoly will occur with greater and greater frequency as time goes on. It is a delicate and dangerous function, and ought to be exercised with a keen sense of justice on the part of the regulating body, met by a frank disclosure on the part of the company to be regulated. The courts ought not to bear the whole burden of saving property from confiscation, though they will not be found wanting where the proof is clear. The legislatures and subordinate bodies, to whom the legislative power has been delegated, ought to do their part. Our social system rests largely upon the sanctity of private property, and that state or community which seeks to invade it will soon discover the error in the disaster which follows. The slight gain to the consumer, which he would obtain from a reduction in the rates charged by public service corporations, is as nothing, compared with his share in the ruin which would be brought about by denying to private property its just reward, thus unsettling values and destroying confidence. On the other hand, the companies to be regulated will find it to their lasting interest to furnish freely the information upon which a just regulation can be based."

202. Hot water from natural springs—Salt Lake City; Boise.—By an ordinance in effect March 2, 1893, Salt Lake City gave a franchise to Harvey M. Bacon "for the purpose of erecting and maintaining a bathing resort, or sanitarium, or both, in said city, where the hot mineral waters of the springs in or near the north part of the city may be used".[1] Under this franchise the grantee was authorized to lay water pipes in certain streets, subject to the approval of the City Engineer. The grantee was also authorized to connect his sanitarium or bath with the public sewer by dicharge pipes

[1] Ordinances, Salt Lake City, p. 565.

for carrying off the waste mineral waters. It was provided, however, that if at any time the waters from the grantee's resort should have any deleterious effect upon the sewer pipes, he should be required to disconnect his discharge pipes, and in that case should be permitted to convey waste water by a separate pipe along the streets to the Jordan River. The franchise was granted for a period of twenty-five years, and the grantee was made responsible for any accident or damage resulting from its exercise. The bath resort or sanitarium was to be in operation within six months or the franchise would be forfeited. In fact, the grantee was required to furnish a $25,000 bond to guarantee that the sanitarium would be in operation within the time required.

The Boise Artesian Hot and Cold Water Company, Limited, under its water works franchise supplies hot water for heating and domestic use to consumers in the City of Boise.[1] The supply of hot water is brought through iron pipes from three artesian wells about two and one-half miles distant from the city. The temperature of the water at the wells is said to be 170 degrees. The water is brought by gravity and is sold at rates based upon the size of the waste attached to the lower end of each house system where it enters into the sewer. This waste is put in by the company and is always controlled by it. No one else is permitted to interfere with it in any way. Hot water rates were raised 25 per cent on October 1, 1906, and another increase of 20 per cent was announced to take effect October 1, 1909. The rates in effect May 12, 1909, ranged from $93.75 per annum for a one-eighth inch waste, to $1112.50 per annum for a three-fourths inch waste. Hot water for domestic use on premises not supplied for heating purposes is furnished during the summer months to houses along the hot water pipe lines at special rates. The capacity of the company's flowing wells is said to have been 800,000 gallons per 24 hours until it was increased in December, 1908, to 1,300,000 gallons a day by the installation of a system of air pumps.

[1] Information contained in a letter dated May 12, 1909, from the secretary of the company.

CHAPTER XIV.

SEWER FRANCHISES.

203. Sewers and drains seldom operated by private companies.—In the Municipal Year Book published in 1902, there is given a list of forty-seven cities and towns in the United States having sewerage systems operated by private companies under franchises.[1] These places ranged in population, according to the census of 1900, from 27,838 down to 3,015. There were 411 other places having more than 3,000 population without sewerage systems and 1,045 other places of like population having sewerage systems publicly owned and operated.[2] Indeed, five of the forty-seven places with private sewerage systems also had public sewers. Copies of sewer franchises are like rare books, hard to get. The business of providing sewerage and drainage for the people of the urban communities has become so generally regarded as a strictly municipal function that comparatively few people know of the existence of sewer franchises. There is practically no available literature on the subject. It is known that private sewers are frequently established with or without municipal authority to serve certain individuals or neighborhoods in advance of the establishment of a public sewer system. "The practice of allowing private sewers to be built in the public streets", says Mr. M. N. Baker,[3] "unless in conformity with a well-conceived plan for the whole city, is highly objectionable. It results in bad sanitation, poor economy and much possible litigation; for when the city comes to put in a thor-

[1] Page xxxiii.
[2] *Ibid*, page xxx.
[3] Municipal Engineering and Sanitation, page 130.

oughgoing sewerage system, it is liable to find these private sewers so poorly designed and built as to be almost useless, notwithstanding which the owners insist on having them bought by the city, or at least resist an assessment to meet the cost of suitable new sewers."

Sewerage is regarded under modern conditions as a service absolutely essential to the health and well-being of every important city. While it is true that the cities of New Orleans and Baltimore have until very recently gotten along without a system of sanitary sewers, how they have been able to do it has been the wonder of the country. The thought of a great city without sewers excites disgust in the mind of the average American citizen.

It is a little difficult to explain the overwhelming preponderance of municipal ownership and operation of sewer systems. It would seem that a utility which requires a system of underground pipes as extensive as the system needed for the distribution of water, and which is regarded as essential to the health and welfare of all the citizens, would offer an attractive field for private enterprise. Sewers are distinguished from other utilities in this respect, however, that once constructed they for the most part operate themselves. A sewerage system must be constructed on the gravity principle, and excepting in those cities whose topography is such that no natural outlet can be obtained, there is no pumping to be done. In 1905 of 154 cities whose statistics were collected by the Census Bureau, only nine reported that all their sewage was pumped, and nine others that a part of it was pumped. "The general rule observed by American cities of all sizes", says Mr. Baker in a supplemental report,[1] "is to discharge their sewage into the nearest available water until the nuisance becomes intolerable to themselves, and then to divert it from their own shores, resting content with inflicting their wastes on neighbors below, until public protests or lawsuits make necessary the adoption of remedial measures. This is not saying that all cities should build either diversion or purification works for the protection of themselves and their neighbors, for that is not necessary in the present state of public sanitation so long as the sewage can be inoffensively

[1] Bureau of the Census, Special Reports; "Statistics of Cities having a Population of over 30,000; 1905," appendix A, page 100.

disposed of in near-by waters." In fact, there were only sixteen cities with a population of more than 30,000 each that reported sewage disposal works in 1905. In the absence of pumping and a purification plant, there is required, in what might be called a normal type of sewerage system, a very small administrative force for operating purposes. This simplicity of administration naturally is conducive to public ownership, and conversely is unattractive to private enterprise. Furthermore, sewerage is regarded as strictly a sanitary measure which cannot be left to the caprice or convenience of private initiative. While a sanitary sewerage system is impossible without water works, and is in fact subsidiary to a water supply system, with which it must be connected for the purpose of carrying away the wastes of the city, it is regarded as even more fundamentally a health function than the water supply is. It is hard to believe, however, that the almost entire absence of private operation of sewerage systems is the result merely of sanitary considerations or of simplicity of administration. Additional cause must be found in the unwillingness of citizens generally to purchase a service of this nature of their own free will. Indeed, sewerage differs from other public services in that it is not a utility manufactured or brought to the people, but simply a process of getting rid of their wastes. Except in the rare instances where sewage farms have been developed, or the sludge from purification works is disposed of for fertilizer, there is nothing to be done with sewage but to get rid of it; and the rule "out of sight, out of mind" apparently affects the willingness of citizens to pay for the disposal of wastes. This same difficulty is universally experienced where the removal of garbage is left to private companies to be paid for by the individual householders.

204. Capitalization of sewerage and drainage undertakings.—There are no complete statistics of the cost of existing sewerage and drainage systems available. The nearest measure of the amount of capital invested in these enterprises is the outstanding municipal debt incurred for sewers, though the actual cost of the sewers is doubtless much greater than the amount of the bonds outstanding against them. According to the special Census report on the "Statistics of Cities" for the year 1906, there was in that year an aggre-

gate municipal sewer debt in cities of more than 30,000 population amounting to about $107,000,000.[1] According to the report for the preceding year, 1905, there were approximately 21,000 miles of sewers in operation in 154 cities.[2] In the four largest cities of the country there were altogether about 900,000 house connections with sewers.

There are two kinds of sewer systems. What is known as the separate system provides for the disposal of household and manufacturing wastes only. The combined system, on the other hand, provides also for the disposal of surface drainage. Sanitary sewers are much smaller and less expensive than combined sewers. They are also better adapted to the modern idea of sewage disposal. Formerly all that the sewer system attempted to do was to carry off the city's wastes and empty them into the sea or a flowing stream. Since the danger of the pollution of public water supplies has become acute through the great increase of population and the multiplication of cities, much more elaborate sewerage systems are being established. It is to be expected that with the increasing density of population and the greater enlightenment in regard to sanitation the cost of sewers and sewage disposal will be greatly increased. The policy of municipal ownership and operation is so well established however, that there is no likelihood of sewer franchises increasing in importance.[3]

205. A failure of private enterprise to render service—New Orleans.—Sewerage is particularly difficult in New Orleans inasmuch as the city lies below the level of the Mississippi River, so that it is necessary to pump all sewage, and difficult to get a proper fall to secure a flow of the sewage through the streets to a point where it can be pumped into the river. Two efforts to solve this problem by private enterprise failed. The first of these was made in 1881, when the city took advantage of general state legislation authorizing the granting of municipal sewerage franchises and entered into a contract with the New Orleans Drainage and Sewerage Company for the construction of a system which

[1] Page 261.
[2] Pages 342–346.
[3] For a brief description of the various methods of sewage disposal, such as screening, sedimentation, chemical precipitation, septic tanks, intermittent filtration, sewage farming, contact beds and percolating filters, see Mr. Baker's special report constituting Appendix A of the "Statistics of Cities" for 1905.

was to be operated on a commercial basis. The plan was an absolute failure, not even resulting in commencement of construction work.[1] Eleven years later, in 1882, a new sewerage franchise was granted which passed into the hands of the New Orleans Sewerage Company. This project got as far as the adoption of plans and the construction of 3,600 feet of the main sewer and several miles of laterals, when the company's finances gave out. Its works were finally purchased by the city and incorporated in the plans for the big sewerage and drainage system which is only now being completed as a public enterprise.

206. Exclusive franchise in a little town—Long Branch, N. J.—According to the last Federal Census, the city of Long Branch had a population of 8,872. By an ordinance approved April 14, 1906, this city granted to the Long Branch Sewer Company "for the period of twenty years yet to come, the exclusive right to establish, construct, maintain and operate, without competition, within the limits of the city of Long Branch, a comprehensive system of sewerage for the purpose of sewering and the removal of the sewerage from all the houses and buildings in said limits".[2] The company was expressly authorized to "open, excavate and dig up any and all public streets, avenues or alleys" within the city limits for the purpose of laying sewers, making connections with them and repairing them. The company agreed to extend its main line of sewer pipes to a certain point designated in the ordinance, within a period of two years. The company was required not to open any street or alley to a greater extent than 500 feet at any one time, and during the continuance of any excavation the company was required to keep the street open to public travel if its width made that possible, and to mark each opening at night "by sufficient lights as a warning of danger to the travelling public". The company also was bound to "save the city free and harmless from all damage that may result or happen to the travelling public and property owners" along the line of the streets and alleys opened by the company. All excavations were to be refilled and the street surface was to be left in as good condition as the company found it, and maintained by the

[1] See article on "The Sewerage of New Orleans," by W. T. Crotts, in *Journal of Association of Engineering Societies*, Nov. 1901, vol. 27, p. 190.

[2] The author secured a typewritten copy of this ordinance from the city clerk.

company for a period of three months after its restoration. During the months of June, July, August and September the company was forbidden to open any street for sewer work without special permission, except for the purpose of making necessary repairs and sewer connections. No excavation in a public place was to be left open "for any unreasonable length of time". The sewerage of the city buildings or of any building used for storage or fire apparatus for city purposes then existing or thereafter constructed, was to be carried away by the company free of cost to the city. It was expressly stipulated that the company "shall construct, maintain and operate sewers in all public streets and avenues designated by the city, provided always that the said sewer company shall not be required to sewer any part of any street or avenue where there shall be less than ten connections for each consecutive 1,000 feet of said street or avenue to be sewered" unless the abutting landowners would guarantee to the company this number of connections and "bind themselves in legal form that the required number of sewer connections on the basis herein set forth shall be immediately paid for". It was also provided that the company should not be required to sewer streets "except to continue said sewers in a continuous line from the main sewer". After the expiration of five years, the city was to have the right to purchase the sewer system "for a sum of money equal to the construction cost of said sewers and sewer works" in cash. But in case of desire to purchase the city had to give six months' written notice, to be served between September 15 and December 15 in any year. Sewer rates were to be graded according to the assessed valuation of the property. Any parcel of real estate rated by the City Assessor at not more than $5,000 and occupied by a private family was not to be charged more than $10 a year for the use of the company's sewers. On property assessed at a higher valuation the annual rate was limited to a maximum of two mills on the dollar, which would amount to the same rate as $10 on a valuation of $5,000. It was provided, however, that "in case of double houses, blocks of buildings, double stores, offices, or any building or apartment house or store used by separate and distinct families, tenants or occupants", the company should have the right to charge a separate rate for each part

of the building so occupied, and in all cases where the different tenants or occupants were fitted up with separate plumbing, the company was to make extra charges. It was expressly stipulated, however, that these rates should not apply "to public buildings, hotels, boarding houses, public laundries and factories". So far as these institutions were concerned, the company seems to have been left to establish rates by contract. A license fee of $500 a year was imposed upon the company in return for the rights and privileges granted, but it was stipulated that this payment should be credited on the amount of the franchise tax assessed in each year against the company. It was expressly provided that the company should not "deposit any offensive solid matters in the Atlantic Ocean" and that it should not "permit any refuse or liquid matters to be deposited or emptied in any of the water courses within the limits of the city of Long Branch". This franchise was to be of no effect unless the company filed its written acceptance within thirty days, together with a bond in the sum of $5,000 to guarantee its faithful compliance with the terms and conditions of the ordinance. This bond was to be renewed every two years.

207. Extensions to be based on reasonable revenue—Austin, Tex.—The population of Austin in 1900 was 22,258. It was next to the largest city that reported a private sewer franchise in 1902.[1] This franchise was granted by an ordinance approved June 29, 1892, to the Lewis Mercer Construction Company, a New Jersey corporation.[2] The grant carried the right "to construct, maintain and operate for the period of fifty years a system of sanitary sewers under the streets and alleys of the City of Austin", subject to the right of the city council to determine on which side of each street and alley the sewers should be laid. The franchise applied expressly to all the streets and alleys then existing or as they might thereafter exist by extension. The company was authorized to lay "pipes, conduits of brick, sewers, manholes, catch basins, etc.", so far as might be necessary to provide an adequate sanitary sewerage system, keep it in repair and make extensions. The company was required to "exercise due care and diligence in unnecessary obstruction to public

[1] "The Municipal Year Book," 1902, p. xxxiii.
[2] The author secured a typewritten copy of this ordinance from the mayor.

travel" on the streets, or as to "any injury or unnecessary interference with any pipes either of gas or water which may be lawfully located beneath the surface thereof when such sewers are laid". The company was also to take "every reasonable precaution against accident and danger to persons or property in the execution of the rights and privileges" granted, and was to "cause all excavations to be properly lighted and guarded at night", and was to restore the streets "to their former condition as near as may be without unnecessary delay". Furthermore, under the franchise the company agreed to protect the city from any liability resulting from violation of the company's obligations in connection with the opening of streets, or "by reason of any failure to maintain said sewers in proper repair".

The general plan of the sewerage system was described as follows:

"Sewers shall be of the best quality of salt-glazed terra-cotta pipe, truly cylindrical and laid upon a true gradient, with joints laid tight with first-class cement mortar, or they shall be made of first-class hard-burned brick laid in first-class cement mortar. Manholes shall be placed over the sewers about 500 feet apart and covered with approved cast iron covers strong enough to carry the greatest and heaviest traffic. Sewers are to be laid at such depth from the surface of the streets as to give a fall of not less than three inches in ten feet from adjacent buildings. No sewer shall be less than six inches in diameter, and all sewers shall be large enough to provide for the easy flow of all sewerage."

It was provided that no connection should be made with the sewer system without a permit from the company, and that all connections should be made by the company or under its supervision and "all charges for such service shall be equal and uniform". The company was required to file a plan "exhibiting the location of sewers, manholes, inspection holes, flush tanks and disinfecting tanks", which had been approved and accepted by the city a few days before this franchise was granted. It was provided that extensions to this system might be made either by the order of the city, or at the option of the company subject to approval by the council of the company's plans and specifications, so far as these were not included in the original scheme. It was stipulated, however, that the company should not "be required to extend the system to a part that is not at the time sufficiently built up to return reasonable revenue", and that the company should "have reasonable time within which to make all

reasonable extensions required by the city". The city council bound itself to pass ordinances with adequate penalties for the protection of the company's sewer connections, catch basins, manholes and other appurtenances. The company was authorized to assign its rights under the ordinance to a new sewer works corporation whose organization under the laws of Texas it might procure. The construction of the system was to be commenced within three months after the acceptance of plans and to be completed within one year after that, with the provision that "if the time as then specified be extended by floods, act of God or public enemy, or for legal proceedings for the maintenance or defense of their legal rights, or in the acquisition of property or rights of way, or by reason of any other causes whatever beyond their control, such time shall form no part of the time specified in this ordinance for the performance of any acts required by the terms hereof to be done by them".

During the construction of the sewers, the city engineer was to inspect from time to time the work done and the materials used, and if he found any departure from the accepted plans and specifications he was to call the matter to the attention of the company at once and cause the work to be corrected. In case the company failed to make the necessary corrections, the city would have the right "to stop the construction of such sewers until such specifications shall have been conformed with". When the sewer system was completed, the city engineer was to notify the council officially that the work had been done and the materials furnished in conformity with the accepted specifications, and thereupon the council was to pass an ordinance reciting this fact and accepting the system. When this had been done, the rights, privileges and obligations of the ordinance would thenceforth be in full force and effect.

A provision was inserted in the ordinance to the effect that all persons or property holders connecting their premises with the company's sewers should have the privilege of furnishing all service pipes, and material and labor required in putting them in position, "except actual contact with the main sewer or its branches". The exercise of this privilege was optional, however. The city reserved the right to connect any of its public buildings with the company's system "free of charge

for sewerage". The franchise was to take effect upon its acceptance by the company by a written instrument "signed by the president of said company and attested by the proper officer and sealed by its corporate seal, accompanied by a duly certified copy of a resolution of the board of directors of said corporation authorizing the acceptance of this ordinance". Unless this instrument was filed with the city clerk within sixty days after the mayor had approved the ordinance, the franchise would not go into effect.

208. **A detailed schedule of rates and discounts—Atlantic City, N. J.**—The largest town in the United States served by a private sewerage system is Atlantic City, whose population in 1906 was estimated by the Census Bureau at 39,544. The private system was established here at a time when the city's water supply was also in the hands of a private company. The water works have since been purchased by the city, but a new sewer franchise with advanced rates was granted to the Atlantic City Sewerage Company on December 30, 1905.[1] This ordinance recites that the company had succeeded to the rights and franchises of the "Improved Sewerage and Sewage Utilization Company" whose original franchise had been granted November 12, 1884. It is also recited that—

"Whereas the great growth and development of Atlantic City have made demands upon the original sewerage system which could not have been foreseen at the time of making plans for same; and

"Whereas, it has become necessary, in order that said company may meet the demands caused by this growth and development, to expend large sums of money to extend and improve its system and plant; and

"Whereas, the present and prospective income of the company, based upon the present rentals, does not justify the expenditure of the sum of money necessary to make the proper extensions and improvements; and

"Whereas, said company has signified its desire to extend and improve its system and plant, provided the rentals be slightly increased"—therefore, the company is granted this franchise. It was provided that any changes in the company's system or plant should be made in a "good, thorough and

[1] Ordinances, Atlantic City, p. 124.

workmanlike manner" and in accordance with certain plans which had already been submitted to the city Board of Health and approved by it on December 8, 1904, or in accordance with other plans which should be submitted and approved in like manner at some future time. The company was required to "lay the house sewer pipes from the mains to the property line whenever application for sewer service shall be made by owners or lessees". The company was also required at all times to "cause all sewage to be thoroughly and continuously removed through the pipes from the limits of said city as rapidly as shall be necessary in order to afford adequate sewer service to all parts of said city". In case any sewer pipes should prove too small to carry the sewerage to a well or pumping station "with proper rapidity to afford perfect sanitation", the company was required to substitute other pipes of greater and sufficient capacity. It was also stipulated that the company should maintain at its well or pumping station a smoke and stench stack of sufficient size and height to carry off all gases from the well, such stack to be located and constructed so as not to create a nuisance. The company was also required to comply with any regulations and pay any permit fees which might from time to time be prescribed by ordinance for the opening of streets. Adequate sewerage was to be furnished for all public buildings, fire houses and public school houses free of charge.

In case any patron of the company should at any time fall in arrears on lawful sewer rates for a period of thirty days, the company was authorized to "cut off all connections between its pipes and sewers and the pipes on the premises in respect to which said rates shall not be paid". For a reconnection the company was authorized to charge $8.50 on gravel streets and $10 on paved streets. The company was required to make all lateral connections with its main pipes and was entitled to receive from the owner or lessee of the premises connected, the sum of 75 cents per foot measured from the center of the street to the property line for making the connection. The owner or lessee of the premises was required to furnish and pay for all necessary permits for opening the streets for the new connection.

In consideration of the increased rates authorized by this ordinance, the company agreed to expend on improvements

and extensions other than renewals and current repairs at least $200,000 within five years from January 1, 1906. Of this amount, at least $40,000 was to be expended the first year and at least $25,000 each subsequent year during the five-year period, and thereafter the company was to continue to spend a minimum of $25,000 a year until it had spent $400,000 in all, or as much more as might be necessary to carry the approved plans to completion. On or before February 1, 1907, the company was to present to the city comptroller an itemized statement of its expenditures for improvements and extensions during the preceding calendar year. Thereupon the city comptroller was to proceed to audit and verify this statement by an examination of the company's books, vouchers, payrolls and records. Upon the completion of this audit the comptroller was to determine the amount that the company had actually expended in accordance with the terms of the ordinance; the amount of expenditures included in the company's statement which should not have been so included, and the discount percentage from the standard rates which the company should be required to make during the ensuing year. The schedule of discounts provided in the ordinance started off with 22 per cent, but the discount rate was to be gradually reduced 1 per cent for every $25,000 expended by the company on improvements until the sum of $200,000 had been spent, and thereafter the discount rate was to be reduced 1 per cent for every $50,000 so spent until it reached the minimum discount rate of 10 per cent. The comptroller was to submit his report to the city council prior to the first of April in each year. This report was to be published once a week for two weeks in at least two public newspapers. As submitted and published it would be conclusive and binding both on the city and on the company unless one of the parties should within ten days except to it in writing specifying the disputed items. In that case, these items were to be referred to three arbitrators, one chosen by each party and the third by the other two. The decision of a majority of the arbitrators would be "final, conclusive and binding" on both parties.

In further consideration for the increased rates authorized by the ordinance, the city was to have the right to purchase the company's sewerage system, "including its entire plant

and appurtenances thereunto belonging and all the real and personal property of said company, and its rights and franchises used in connection with said system, which entire plant and appurtenances shall be construed to include the plant and appurtenances of the said sewerage company as now existing, allowing for proper future changes in the nature of renewals and repairs, together with all improvements and extensions which shall in the future be made thereto, and also all other sewer plants in Atlantic City now operated by said company by virtue of ownership, lease or other authority." The plant and property of the Beach Sewerage and Improvement Company was specifically mentioned and was to be acquired by the grantee as a prior condition to the enjoyment of the privileges of this franchise. The price to be paid for this other sewerage system was not to be chargeable however to the account of improvements and extensions required by the ordinance and for which the city was bound to pay in case it exercised its option of purchase. The going into effect of the ordinance was also conditional upon the Beach Sewerage and Improvement Company's agreeing in writing that in case the city purchased the sewerage system, the Beach company's rights, privileges and franchises to carry on the sewerage business or to lay or maintain sewer pipes in the streets should be relinquished and become void.

The city's option of purchase was to be exercised by an ordinance enacted on or before December 31, 1920. It was provided, however, that in case the city failed to exercise this option within the time prescribed, such failure should not "in any way prejudice or preclude the right of the city to acquire said plant, property, rights and franchises by condemnation proceedings or other lawful process at any time before or after said date". If the city exercised its option, the purchase price was to be $75,000 plus the amounts expended by the company for improvements and extensions after the acceptance of this franchise. It was expressly understood, however, that the property should be taken subject to two outstanding mortgages of $250,000 each.

In making out the bills for sewerage service, the company was required to state the number of rooms and the number of fixtures for which charges were made, with the rate

charged for each. The maximum annual rates allowed under this franchise "without rebate for or on account of disconnection or non-use by owner or lessee of the property for a portion of the year", but subject to the discounts already described, were fixed in detail as follows:

"For each hotel or boarding house, connected with the sewer, seventy-five cents for each sleeping room, not exceeding thirty rooms, and fifty cents for each sleeping room in excess of thirty, and an additional charge of fifty cents for each fixture connected with the sewer, in such hotel or boarding house.

"All houses containing twenty sleeping rooms or more to be graded as hotels or boarding houses.

"For each apartment house, boat house, cottage, dwelling, tenement or office building, seventy-five cents for each room, not counting bath or toilet rooms, pantries, vestibules, closets, heater rooms, laundries or hallways, not exceeding ten, and fifty cents for each additional room, and an additional charge of fifty cents for each fixture connected with the sewer.

"For public saloons and bar rooms a charge of eight dollars and an additional charge of fifty cents for each fixture connected with the sewer.

"For stores, for each two thousand square feet of floor area or fraction thereof, four dollars, and an additional charge of fifty cents for each fixture connected with the sewer.

"The word 'fixture' in all cases herein mentioned, to mean bath-tub with or without shower attachment, basin, water-closet, sink, slop hopper, urinal, separate shower or other bath, or laundry tub; a two part laundry tub to be considered one fixture, and each additional part to be graded as a fixture.

"For buildings or plants not enumerated above, the company may charge and collect annually in advance for the sewer service to be performed by it, the following rates per year, without rebate for or on account of disconnection or non-use by owner or lessee of the property for a portion of the year.

"Private school houses, having twenty-five or more scholars, ten dollars in addition to rate for dwelling.

"Shooting galleries, with target apparatus operated by running water, five dollars in addition to rate for store.

"Steam plants, having blow-off tanks connected with the sewer (which tanks must be of adequate size to prevent injury to sewer from high temperature of waste water), ten cents for each horse power connected with such tank, the minimum charge to be ten dollars.

"Livery stable, two dollars for each stall and fifty cents for each fixture connected with sewer; carriage wash, fifteen dollars additional.

"Private stables, two dollars per stall, and fifty cents for each fixture connected with sewer; carriage wash, five dollars additional.

"Banking rooms, ten dollars.

"Public bath houses, one dollar for each ten bath rooms or fraction thereof.

"Bakeries, twelve dollars in addition to store rate for floor space of store, if any.

"Public restaurants and cafés, (same rates as public saloons).

"Steam laundries, forty dollars.

"Hand laundries, fifteen dollars in addition to store rate.

"Dairies, twelve dollars.

"Bottling houses, twenty-five dollars.

"Sausage factories, twenty dollars, the company to have the right to require adequate grease taps.

"Fish and Oyster Markets, fifteen dollars, the company to have the right to require adequate sediment chamber to guard against stoppage of pipes.

"Lumber mills, fifteen dollars with fifty cents for each fixture connected with the sewer.

"Churches, five dollars.

"Work shops, five dollars, with fifty cents for each fixture connected with the sewer.

"For each theatre, music hall, or merry-go-round, twenty-five dollars, with fifty cents for each fixture connected with the sewer.

"Ice cream factories, twenty dollars.

"Piers, sixty dollars, with fifty cents for each fixture connected with sewer.

"Halls and lodge rooms, five dollars, with fifty cents for each fixture connected with the sewer.

"Soda water stands and fountains, two dollars in addition to store rate.

"Meat markets, twenty-five dollars, the company to have the right to require adequate protection against stopping sewer with offal.

"For all other places and fixtures such rates as may be agreed upon between the company and the owners or lessees of such properties, but all special rates or special agreements, shall be at the opinion of said company. Provided, however, that Council reserves the right to hereafter fix the rates on any place or fixture not expressly enumerated in the foregoing provisions."

CHAPTER XV.

CENTRAL HEATING FRANCHISES.

209. Extent of the central heating business and its relation to other utilities.—In 1902 commercial heating stations were in existence in at least 130 cities and towns of the United States.[1] Of 122 plants described by the Municipal Year Book, 82 were being operated in combination with other public utilities, as follows:[2]

With electric lights	54
With electric lights and gas works	8
With electric lights and railways	7
With electric lights and water works	2
With gas works and electric railways	6
With electric railways	2
With gas works	2
With water works	1

It is of interest to note that heating plants were in operation in 1902 in only 11 of the 38 cities having a population of more than 100,000, while a total of 52 cities and towns,

[1] The Municipal Year Book, 1902, *op. cit.* p. xxiii.

[2] *Ibid.*, p. xxvi.

with a population of less than 10,000 each were supplied with this service.

It is said that central steam heating has been in continuous and successful operation since about 1877, but the public generally knows comparatively little about this utility. "Among the many advantages to the consumer", says one author,[1] "is the convenience of having heat available in any quantity at any time of day or night without the care and dirt which is the accompaniment of the usual furnace, perfect service with greater economy, reduced fire risk, and a gain in storage space formerly required for coal and ashes."

Discussing the possibility of the development of the central heating industry, especially through combination with other utilities, the Municipal Year Book said:[2]

"This combination of electric service, whether lighting or railway, or both, with central hot water or steam heating, is of comparatively recent date, and bids fair to be one of the features of municipal life in the near future. Its ultimate success or failure, at least as a private venture, will, of course, depend upon whether or not it can be made profitable, and this time alone can prove. The most uncertain elements seem to be depreciation and maintenance charges, as opposed to operating expenses, and the popularity of the service. The latter, of course, will depend largely upon its cheapness, as compared with other methods of heating, but in communities made up of well-to do residents, convenience, absence of coal dust, ashes and soot might be almost as important factors as cheapness. This will be particularly true where soft coal is used, and in such localities central heating may become an important question of municipal policy. In the matter of smoke prevention, alone, central heating plants might prove to be of inestimable advantage to many cities."

While there are no complete statistics available showing the status of the central heating industry at the present time, there is reason to believe that its expansion since 1902 has been far less rapid than the expansion in such other public utilities as telephones and electric light and power.

210. Description of a plant in operation—Johnstown, Pa.—An interesting description of a central heating plant at work is given by Mr. James A. White in "Central Station."[3] The plant described is that of the Citizens' Light, Heat & Power Company of Johnstown, Pa. It is operated in connection with the electric light and power business. "Insulation, expansion, anchorage and durability have each to be

[1] James A. White, on "Some Results of Steam Heating from a Central Station," published in Central Station for May, 1908, Vol. 7, p. 880.
[2] p. xxvi.
[3] May, 1908, Vol. VII., p. 880, *op. cit.*

thoroughly cared for", says Mr. White. "Durability in the pipe is secured by strictly wrought iron line pipe of full weight. The pipe is carefully wrapped with asbestos paper held in place by spirally wound copper wire. Between the iron pipe and the wooden insulating casing there is a one-inch annular air space, the pipe being centered and supported by roller and ball-bearing chains which allow free expansion and contraction with changes in temperature. The chief insulation is secured by the use of wood casing four inches in thickness. This casing is made up of kiln-dried, tongued and grooved white pine staves, carefully selected so as to be free from all imperfections which might affect its durability. The inside of the casing is lined with bright tin and the outside tightly wound with heavy galvanized wire which is bound on under a pressure sufficient to deeply embed the wire into the wood. To prevent decay the whole log is covered with a heavy coating of asphaltum and sawdust. Great care is exercised when the mains are installed to drain all seepage and other water away from contact with the steam mains. For this purpose three-ply tar paper is laid on the top of the casing to a point below the center line, and a thorough system of under-drainage is secured by placing porous drain tile below the mains and piping same to the sewers at convenient points. The efficiency of the drainage system is greatly increased by placing the tile in sub-trenches filled with broken stone or other porous material. This careful construction results in an insulation against loss of heat so near perfection that condensation in the street mains has been reduced to an average not exceeding five per cent of the total season's output, a showing worthy of comparison with gas and electric transmission losses.

"A very ingenious device, known as a 'Variator', is used for taking care of the expansion and contraction of the piping. This is a case or frame securely anchored in a brick box which holds the outer edge of a large annular corrugated copper disc, the inner edge of which is connected to the free end of the pipe. As these expansion devices require no packing or other attention after installation, the street is left free from man-holes except at the intersection of streets where valves are placed. The expansion devices are placed about 100 feet apart with anchorage fittings for holding the station-

ary end of the pipe placed midway between. Where slight changes in grade are met with, an adjustable double annular wedge is placed between the anchorage fitting and the fixed end of the pipe. All brick boxes enclosing anchorage and expansion devices are filled with white pine or other soft wood shavings to prevent radiation of the heat."

The company whose plant Mr. White described had 13,340 feet of mains in operation and was supplying 294 business blocks, residences and public buildings with heat. It was stated that the cost of fuel, water and boiler house labor for the company's combined plant during the period of twenty-six months from November 1, 1905, to December 31, 1907, was $52,138.77, while the income from steam heating during the same period was $62,962.64. During the 18 heating months included in this period, the income from heating gave a surplus of nearly $20,000 over the expenses mentioned. There was produced at the same time from the same fuel, water and boiler house labor a total of 5,252,347 kilowatts of electricity.

For the purpose of measuring the amount of steam used by each of the company's customers a meter is installed which collects and weighs the water resulting from condensation on the customer's premises.

211. Regulation of rates by the common council—Detroit.— In 1903 two central heating franchises were granted by the City of Detroit. At the present time both of these grants are held by one company. By an ordinance approved August 15, 1903, the city granted to the Central Heating Company, its successors and assigns the right to construct, extend, replace and operate one or more lines of pipes and all the necessary service pipes, appliances, man-holes and connections in any of the streets, alleys and public places of the city for distributing and supplying steam for heating purposes.[1] It was provided, however, that the alleys should be used whenever deemed practicable by the Commissioner of Public Works. The grant was for a period of thirty years. All of the company's pipes were to be constructed in a substantial manner and provided with standard improvements and appliances. All construction work, including repairs and improvements, was to be subject to the inspection and approval

[1] Compiled Ordinances, City of Detroit, 1904, p. 414.

of the Commissioner of Public Works. The company was to occupy only such portions of the streets and alleys as were designated in writing by the commissioner. Upon notice from the city the company was to change or remove, at its own expense, any of its pipes which might interfere with the construction of any viaduct, sewer, public building or other public structure. The company was forbidden unnecessarily to disturb or interfere with any water pipe, sewer pipe, gas pipe, conduit, shade trees or foliage owned by the city or by any authorized person or company. It was provided that the company should not open or encumber more of any street or alley at one time than should be necessary for the advantageous prosecution of its work, and a maximum limit of 500 feet was fixed. The company was required to give a bond to the city in the sum of $25,000, and the right was reserved to the City Comptroller to require additional sureties or a new bond at any time during the life of the franchise when he deemed such action necessary for the protection of the city's interests.

The company was required to deposit with the city a repair fund of $1,000 "to serve as a continuing guarantee that it will restore the streets, alleys, avenues and public places to a condition equally as good as before being disturbed, within a reasonable time". If the company failed to make the necessary restoration after notice, then the city could proceed to do the work and collect the amount of its expense from this fund. It was provided that whenever the company opened a paved street, the refilling should be done under the inspection of the Commissioner of Public Works, and the replacing of the pavement should be done directly by the Commissioner, and the expense paid out of the fund just described.

It was expressly provided that the grant should not be considered an exclusive one, and that unless the company should begin construction within four months, and within a year thereafter have substantially completed a plant with capacity sufficient to heat 150 buildings, this franchise might be repealed at the option of the Common Council. The usual allowance was to be made, however, for delays resulting from litigation, strikes and other causes outside of the company's control.

The right was reserved to the Common Council to fix the

company's rates annually at the beginning of the heating season, that is to say, not later than September 1. The franchise itself fixed for the first year a maximum rate of 65 cents "per one thousand pounds of steam or condensation". As a limitation upon the city's right to regulate rates, it was provided that a rate should not be deemed reasonable "which prevents the company earning an annual net profit of 10 per cent on the capital actually invested". The accounts of the company, so far as necessary for the determination of the cost of service and the capital invested, were to be open to the personal inspection of the City Comptroller or his representative, and a committee of the Council, when requested by that body. But no such request could be made and no rate could be fixed by the Common Council unless a petition, signed by at least 20 per cent of the users of the company's service, was first filed with the City Clerk asking that the rates be fixed. It was also provided that the accounts inspected by the city authorities should not be published and that "any report of the City Comptroller shall contain only such a general statement as will show the net return on actual investment for the then current year, together with an explanation of the basis of computation and the exact manner in which such result has been obtained". The company was required within forty-eight hours after demand of the Mayor or Common Council to furnish a complete list, with names and addresses, of all the users of its service.

It was provided that the company should extend its heating system to all parts of the city on the following conditions:

"As often as citizens desiring to receive the service of said company shall present to it written contracts by which they agree to take and receive from said company heat furnished by it at regular rates of said company to heat 700 cubic feet of space for each foot of underground street or alley mains necessary to be constructed by such company, to supply such consumers, such contracts to be for the period of three years and responsible persons, said company shall extend its mains and furnish heat to such consumers as soon as it can be done with reasonable diligence and provided that said company shall extend its service pipes to lot line free of charge to the consumers."

The company was given the right to tap or connect with the sewers in the streets occupied by its pipes for the purpose of draining its steam pipes, casings and appliances, and the trenches in which they were laid.

The company was given the right to establish rules and

regulations "as to the mode, manner and extent to which the buildings of its consumers shall be fitted with proper piping, radiation and apparatus" for the distribution of heat. It was provided, however, that no consumer should be required to install more feet of radiation than necessary to maintain 72 degrees temperature in his building, "with steam at two pounds pressure in zero weather". The company was authorized at all reasonable times to make tests of steam pressure supplied by it at any point on the intake lines of its consumers. The company's meters might be removed by the Commissioner of Public Works for testing, and the company was required to replace them immediately, for the time required for such testing. Any consumer, on paying the Commissioner of Public Works a fee of one dollar, might have his meter inspected, but the company was to be notified and might be represented by its agent at the test. If it was found upon testing that a meter registered inaccurately to an extent exceeding two per cent, the consumer was to be reimbursed by the company for the inspection fee of one dollar. In any such case the inspector was required to mark the meter "fast" and the company could not use it again until the defect was remedied and the meter again inspected and certified to be correct. Every meter registering within two per cent of the actual weight of water was to be considered correct, and sealed. In case the meter was correct, the inspection fee paid by the consumer was to be equally divided between the city and the company. All the company's meters, if required by the Commissioner of Public Works, were to be inspected and sealed by him before they were put into use.

The company was required to deposit with the city treasurer $10,000 to be held by the city as stipulated damages and to become the property of the city in case the company failed to commence construction and prosecute it according to the terms of the franchise; but whenever the Commissioner of Public Works should certify that the company had done construction work requiring the expenditure of $10,000, the money would be returned to the company. The Common Council reserved the right "to make any reasonable alteration or amendment to this franchise, affecting the question of rates as well as otherwise; and such further rules, orders or regulations as may from time to time be deemed necessary

to protect the interest, safety, welfare or accommodation of the public in relation to the conduct of the business."

The other heating franchise was granted about six weeks later, September 29, 1903, to Simon J. Murphy.[1] The terms of this franchise were practically the same as of the one just described, except in two or three particulars. The grant was limited to the central business district of the city, and the required capacity of the plant was fixed at 50 instead of 150 buildings. There was also an additional section providing that the grantee should "in the laying and connecting of his service pipes and afterward in the performance of any work connected with additions to or maintenance of any part of the supply house or any part of his heating system, employ for the performance of this work, none but men who are members of recognized union labor organizations, whenever such men are available and competent".

212. Rates depending on price of coal—Kalamazoo.—An omnibus franchise, recently granted by the City of Kalamazoo, gave to Frank W. Armstrong, his associates, successors and assigns, the right to use the streets of the city for the operation of mains, pipes, conduits, etc., for conducting producer gas, electricity and steam for a period of thirty years.[2] It was provided that the grantee should restore to good condition any street which had been disturbed by him and that the City Council should be "the sole judge of all matters pertaining to the final condition" of any such street. A cash deposit of $1,000, to be used in paying for the restoration of streets in case the grantee should fail to make the necessary repairs, was required. An indemnity bond of $15,000 to protect the city from damages resulting from the exercise of the franchise was also required. It was provided that in any suit against the city the grantee should be given an opportunity to appeal or defend in the litigation. The grantee was expressly forbidden to do injury to water or gas pipes and sewers or drains, or to endanger any shade tree in the streets. The maximum rate for steam heat was fixed at 75 cents per one thousand pounds of steam or condensed steam, as measured by a meter to be furnished and maintained by the

[1] Compiled Ordinances, *op. cit.*, p. 419.
[2] A copy of this franchise was furnished July 18, 1908, by the City Attorney of Kalamazoo, but without the date of its enactment, which however appears to have been in 1907, or 1908.

grantee. It was declared that this rate was based upon the then price of coal, namely, $2.25 per ton delivered at Kalamazoo for Ohio slack coal. "Should there be any material advance in the price of Ohio slack coal", said the ordinance, "and no other fuel is then obtainable that is of equal value for the purpose of steam generation at practically the same purchase unit cost, said grantee may, upon application to the City Council, have a proportionately higher rate fixed; and should there be any subsequent decrease in the price of Ohio slack coal or other obtainable fuel of equal heat value, as Ohio slack coal, the City Council may, at its discretion, make a corresponding reduction in the price of steam". Whenever an application by the grantee was received for fixing a new rate, the council was to appoint a committee of three, including two of its own members, to hold public hearings on the matter and investigate the cost of fuel. A new rate could be fixed only in case this committee found that the cost of fuel had advanced, and such new rate could be higher than 75 cents only in proportion to the increase of fuel cost.

The City Council reserved the right to require the extension of the grantee's pipes and conduits "on such streets, or in such section of the City of Kalamazoo as the said City Council shall, from time to time, deem necessary on giving reasonable notice" to the grantee. The grantee was required to pay the city 2 per cent of his gross receipts from 1913 to 1927, and 3 per cent from 1928 to the expiration of the franchise period.

213. Free heating for city buildings—Columbus, O.— By an ordinance, approved April 8, 1901, the City of Columbus granted to the Indianola Land & Power Company the right to maintain pipes, conduits and other appurtenances in the streets "for carrying steam and hot water, or either, for supplying heat and power, or either, for public and private use, or either, in the buildings and otherwise in said city"; and for this purpose the company was "empowered to dig trenches and lay pipes, conduits and drains therein; to construct man-holes, connections and other distributing appurtenances and apparatus underground, from time to time, and to do all other things necessary" to enable the company successfully to construct, maintain and operate its plant.[1] The

[1] Ordinance No. 18,105.

company was required to use the alleys wherever practicable, and otherwise to lay its pipes under the sidewalks. The length of trench which the company could have uncovered at one time was limited to 1,000 feet, and the company was required not to injure or interfere with the existing arrangement of water or gas pipes, drains, sewers, ditches or other public or private works that were lawfully in the streets at the time the company's trenches were dug, without the consent of the Board of Public Works. In any case the company was required to compensate the owners of such subsurface structures for any injury done. Before making any excavation for its pipes, the company was required to submit to the Director of Public Improvements plats and plans, of a uniform size designated by him, showing "the full width of the public ways on the route of the proposed excavations, upon which shall be indicated all present known or ascertainable surface and underground construction, and the location desired" by the company. These plans might be approved or amended by the director. After construction the company was required to file with the City Civil Engineer "plans and profiles on linen at a suitable scale as may be designated by the said City Civil Engineer, giving an accurate record of the plan and grade of construction of the pipes and conduits of said company, showing the location of all variators, crosses, valves and man-holes of its lines, and of street and alley intersectionns, together with a record of any underground construction which may be uncovered or located" during the company's construction work. These records were to be furnished to the city within ninety days after the completion of the work in any street or alley. The usual provision was made for restoring street surfaces, but it was also expressly provided that if within a year after the replacing of any pavement disturbed by the company, such pavement should have sunk below the level of the surrounding surface, it should be taken up and relaid by the company. An important section of the franchise relating to the company's fixtures in the streets was as follows:

"All pipes, mains, covers to man-holes, conduits and apparatus of every kind used by said company shall be of the most approved material, design and quality. The upper surface of the covers of all man-holes shall be roughly corrugated. The conduits and pipes of said company shall be laid at a depth of not less than six feet below the

established grade of the street; provided, however, that whenever it is necessary or expedient, said company may, with the consent of the Board of Public Works, lay pipes at such less depth as may be fixed by the Board of Public Works. The service pipes laid by said company shall not be less than one and one-half inches nor more than six inches in diameter; the mains shall not be less than four inches nor more than eighteen inches in diameter; provided, however, that larger or smaller pipes may be used with the consent of the Board of Public Works."

The company was required to pay into the street repair fund the sum of three cents per lineal foot of street way in which its mains were laid until such payments should aggregate $50,000. This was not an annual payment, but was to be made only once as the company's mains were put down. The company was also required to furnish the city free of charge sufficient steam or hot water for heating all city buildings along its pipe lines, except school and school library buildings. The city was to pay, however, the cost of service pipes and connections.

The company was limited to a maximum charge for steam of $1.50 "per thousand kal", a kal being defined as "one pound of water evaporated into steam". In no case, however, was the charge for steam or hot water to exceed an annual rate of $3.50 per thousand cubic feet of space heated to a temperature of 70 degrees, nor was the charge for any one month to be more than 20 per cent of the yearly charge. It was provided, however, that if it should be necessary "to carry steam or hot water through service pipes exceeding fifty feet in length, an additional charge may be made proportionate to the length and size of said service pipe to cover loss by condensation of steam in and radiation of heat from, said pipe". It was also stipulated that after twelve and a half years the rates established in the franchise might be changed by ordinance, but if not changed at that time, they were to remain fixed to the end of the franchise period, that is to say, for the full term of twenty-five years from the date of the grant.

The company was forbidden to shut off steam or hot water from any consumer unless he had "made default for ten days in the payment of bills".

At any time after the expiration of fifteen years, and at the expiration of each succeeding period of five years, the city was to have the right to acquire the assets and property of

the company located within the city limits at a price to be agreed upon, or if the parties could not agree, to be fixed by arbitration. The city was required, however, in any case, to give the company one year's written notice of its intention to purchase, and in case of purchase the property was to be taken subject to all then existing contracts of the company made in the usual and ordinary course of its business. It was expressly stipulated that nothing in the ordinance should prevent the city from acquiring the company's property by the exercise of the right of eminent domain. The ordinance contained a provision requiring the company to keep constantly on deposit with the city treasurer the sum of $250 from which should be taken the actual expense of street work done by the city on account of the company's default. It was further provided that whenever the length of street ways occupied by the company's pipes should exceed five miles, this deposit should be increased at the rate of $50 for each additional mile. The franchise was declared not to be exclusive. The usual bond was required and provision was made for forfeiture in case the company did not have its plant constructed, ready for operation, within two and one-half years.

214. Hot water and steam heating at different rates.—Salt Lake City.—As long ago as January 11, 1881, a franchise was granted by the City Council of Salt Lake City to the Salt Lake Power, Light & Heating Company for "conveying steam by means of pipes to be used for heating and propelling machinery and for other purposes, to the inhabitants, property owners and users" in the city for a term of twenty-five years.[1] This franchise also included a grant for conveying electricity. The right to lay steam pipes extended only to certain specified streets. The pipes were not required to be laid more than three feet underground, and they were not to be laid less than four feet from any gas or water main or service pipe except where the pipes might cross each other.

On December 22, 1892, another franchise, authorizing the distribution of steam for heating, power and other purposes, was granted by Salt Lake City.[2] This grant was also for a period of twenty-five years and included gas and electric lighting. It contained no important additional provisions

[1] Ordinances, Salt Lake City, *op. cit.*, p. 347. [2] *Ibid.*, p. 468.

relative to steam heating except that the pipes were not required to be placed farther than two feet away from water mains and sewers instead of four feet, as in the franchise of 1881.

Still another franchise was granted by ordinance, approved September 21, 1905, conveying to the Citizens' Heating & Power Company the right to use the public streets for a period of fifty years "for the distribution of steam, hot water, or both, for heating or power purposes."[1] This was an independent franchise and did not include the right to furnish any other public utility. Rates were fixed on the basis of a maximum charge of 25 cents per season for each square foot of radiation furnished by the company and heated by hot water, or 40 cents per foot of radiation heated by steam. But the company was "privileged to furnish such steam heat to its consumers by meter measurement, in which event the rate charged by it for steam" was to be as follows:

> For the first 4,000 pounds of condensation, $1.50 per thousand.
> For each additional thousand pounds, 50 cents per thousand.

But wherever the rates were on a meter basis, a minimum charge of $5 was to be allowed.

It was also provided that if any practicable method of measuring heat furnished by hot water should be discovered, then the company could use the meter system for hot water also. Its rates, however, were not to exceed the equivalent of 25 cents per square foot of radiation per season. It was set forth in the ordinance that the company then had a capitalization of $2,500, but its capital stock was to be increased to $500,000 within three months. The company was required to lay at least four miles of steam mains within a year and at least eight miles of hot water mains within three years. The compensation to be paid the city for the franchise was fixed at one per cent of gross receipts for the first five years, at one and one-half per cent for the second five years, and at two per cent thereafter. The usual provisions were made requiring the company to protect the city against damages and to carry on its work in the streets subject to city supervision.

215. Steam for both heat and power—Seattle.—By an ordinance, approved February 19, 1890, the City of Seattle conferred upon the Seattle Steam Heat & Power Company

[1] Bill No. 93, printed as a separate leaflet.

the right to operate pipes "for the purpose of conducting steam for the heating of buildings and for conducting water to be used for extinguishing fires and as motive power for the operation of elevators and other machinery, and for no other purpose or purposes" in the streets within a certain described district.[1] The grant was for a period of twenty-five years and was not exclusive, and the company was authorized "to charge and collect reasonable compensation from all persons and corporations to whom it shall furnish steam or water for any of the purposes authorized by this ordinance".

Another franchise was granted September 25, 1894, to the Diamond Ice & Storage Company.[2] This was also for a period of twenty-five years and included not only steam and hot water, but also gas and electricity for heating and lighting purposes and for motive power.

On March 14, 1902, another franchise similar to the one granted in 1890 was given to the Seattle Electric Company.[3] This grant was to expire at midnight on the 31st day of December, 1934, and to have no force or effect thereafter. The company was required to furnish service at reasonable rates. It was also required to supply steam for heating municipal buildings abutting on any street or alley through which its mains might run "at one-half of the lowest yearly contract rate" charged "to any private consumer for similar service". In case the franchise was assigned or mortgaged, it was provided that no assignment or mortgage should be valid until a copy of the document had been filed in the office of the city clerk. It was also provided that the franchise might be repealed, changed or modified by the City Council in case the company did not operate in accordance with its provisions.

Two or three other franchises giving the right to lay steam pipes in limited sections of the City of Seattle have since been granted. There are no provisions of special interest in these later grants except one in the franchise of the Seattle-Tacoma Power Company, passed over the mayor's veto October 8, 1906.[4] This franchise requires that whenever the city shall order any street or alley within the district covered by the grant to be permanently paved, the company "shall, concurrently with the paving thereof, if it has not so done

[1] Charter and Ordinances, *op. cit.*, p. 423. [2] *Ibid.*, p. 446. [3] *Ibid.*, p. 517.
[4] *Ibid.*, p. 615.

theretofore, lay such service pipes within the district to be paved as it shall at any time require".

216. Rebates for poor service—South Bend, Ind.—On February 23, 1903, the City Council of South Bend ratified a franchise contract previously entered into by the Board of Public Works of the city with the South Bend Heat & Power Company.[1] Under this contract the company was given the right to use the streets of the city "as bounded at any time during the life of this grant, for the purpose of heating water and generating steam, and distributing and supplying hot water and steam, or either thereof, for heat or power, or either thereof, by means of pipes, conduits and appurtenances underground" for a period of forty years. The company was required to submit plans, maps and specifications of any proposed construction for approval by the Board of Public Works prior to the issuance of any permit to dig into the streets. It was stipulated that in case of dispute between any property owner and the company as to the location of any appliances in the street or as to any necessary change of location, the decision of the Board of Public Works was to be final. It was stipulated that the tops of the company's subsurface structures should not be less than two feet below the street surface. The company was authorized to connect with the city's sewers for drainage purposes, and was required to equip its stations with "proper and efficient appliances for the consumption and suppression of smoke from its furnaces or heating apparatus". It was required to have its plant ready for operation within two years, on pain of forfeiture of its franchise. It was agreed that the annual rate to be charged to consumers of steam heat should not exceed 35 cents per square foot of radiating surface and that the charge for hot water heating should not exceed 25 cents per square foot. The radiating surface was to be ascertained "by measuring the surface of the radiators and pipes used by the customers for heating".

An interesting provision was made for rebates in case of inadequate service.

"It is agreed", runs this contract, "that any customers whose radiation is sufficient under the regulations of the said company, and to whom insufficient heat is applied to maintain uniformly a maximum temperature within the rooms where such radiation is supplied of 70

[1] Revised Ordinances, *op. cit.*, p. 145.

degrees Fahrenheit. there should be allowed by said company from the charges against such customer a discount justly proportioned to the loss of temperature below said maximum, provided, however, that there shall be no charge against such customer for such time during the months of October, November, December, January, February, March and April, when such temperature shall fall below 55 degrees Fahrenheit; and, provided also, that such discount shall not be required where the company has not been notified in writing of such insufficiency of heat, and given an opportunity to discover the cause; and if due to the company's service, to remedy the same; nor shall it be required where the cause is due to a defective radiation or the violation of the said company's rules for receiving and distributing the heat, or to defective construction of the building, or to any fault of the consumer."

Under this franchise the company was required to pay two and one-half per cent of its gross receipts for ten years after January 1, 1908, and after the expiration of the ten years, 5 per cent of such receipts. It was provided that if any doubt should arise as to the accuracy of the statement of gross receipts furnished by the company, the City Comptroller should have access to the company's books at the proper business hours in order to verify such statement.

217. A franchise good for any kind of heat—Kansas City, Mo.—By an ordinance, approved August 9, 1905, Kansas City granted a 30-year franchise to three individuals, authorizing them "to build, construct, purchase and maintain heat works for the purpose of furnishing, transmitting and selling heat and power for public and private use, and for all other purposes for which heat of any character may be used, to such persons as may desire to purchase the same and to take and receive compensation therefor; and for said purpose to lay down pipes and conduits * * * for the conveyance of said heat, as well as conduits for the protection and insulation of said pipes and other appliances and such manholes therein for the purpose of reaching said pipes and appliances and replacing and repairing the same", and also authorized them to lay down, protect and insulate lateral and service pipes extending from their main pipes to buildings to be supplied with heat and power.[1] This grant was assigned, October 5, 1905, to the Kansas City Heating Company.

This franchise was to be co-terminous with "the corporate limits of this city as now or hereafter established". The use of the word "heat" was defined as meaning that "the grantees may use any method for warming buildings now known

[1] Ordinance No. 29,719: Franchise Ordinances, etc., *op. cit.*, p. 133.

or that may hereafter be discovered, whatever the same may be, whether steam, electricity or any other means of heating now known, or that may hereafter be discovered".

The rate to be charged by the grantees was limited to $6 per month "for 100 feet of radiating surface supplied with steam for warming building interiors".

The grantees were required to do their street work under the supervision of the Board of Public Works, and their pipes, conduits, regulators and appliances were to be located as designated by this board. Alleys were to be used as far as practicable and the Board of Public Works was authorized, in its discretion, to limit the number of pipes to be laid in any street or alley. The grantees were required to file a plat once a year showing all the pipes, mains and appliances built by them during the twelve months immediately preceding.

As compensation for the franchise the grantees were required to pay five per cent of their gross receipts into the City Treasury and to submit their books to examination by the city authorities at all reasonable times, so far as might be necessary to determine the correctness of the grantees' statements of their earnings. The grantees agreed to spend at last $100,000, within twelve months from the passage of the ordinance, in laying down pipes for the distribution of heat. This amount was to be exclusive of their plant construction outside of the street limits. They further agreed thereafter to make such extensions of their pipe lines "as a reasonable demand" of their business might require. They agreed that the type of construction used should be "the best known in the business", and that their pipes should be "thoroughly insulated in the latest approved method so as to prevent the radiation of heat from them to the detriment or injury of any structure or construction in their immediate vicinity". This grant also contained the usual provisions for damages, an indemnity bond, permits for opening streets, etc.

Another heating franchise had been granted by Kansas City a few days earlier to an individual.[1] This grant was for a limited area. The maximum rate allowed was $7.50 per month "per hundred feet of radiation supplied with

[1] Ordinance No. 29, 720: Franchises Ordinances, etc., *op. cit.*, p. 141.

steam at pressure not to exceed ten pounds per square inch above atmosphere for the purpose of warming building interiors". The city expressly reserved to itself the right to own and operate a plant, or plants, for supplying the city or its inhabitants "with any sort of heat". A provision was inserted forbidding the grantee to sell or lease his property or franchise except with the consent of the city, evidenced by ordinance, to any other person or company engaged in the distribution and sale of heat, or to enter into any agreement with such person or company concerning the rate or price to be charged for heat. It was also provided that "no officers, employees or managers of the plant and works, to be constructed and acquired under and in pursuance of this ordinance, shall at the same time be in charge of, or be the officers, employees or managers of any other works authorized by ordinance to manufacture or sell heat in said city". The grantee was authorized, however, to organize a corporation and transfer his franchise to it. It was also provided that the grantee or the corporation organized by him should have complete and unqualified right to assign and transfer the franchise and property by way of a mortgage or deed of trust for the purpose of securing *bona fide* indebtedness and for the purpose of acquiring property and raising funds for the construction, equipment and operation of the proposed plant. By the acceptance of the ordinance the grantee further bound himself not to enter into any pooling arrangement or any contract or merger or consolidation, "either by way of a holding company or otherwise", with any other company authorized to manufacture or sell heat in Kansas City.

218. Franchise to be construed as an entirety—Toledo.—A franchise for the distribution of hot water and steam for heat and power purposes by means of pipes laid under a particular street, was granted to the Central Heating & Lighting Company by the City of Toledo, September 9, 1907, for a period of twenty-five years "and no longer".[1] The city reserved the right to regulate the rates for heat or power at intervals of not less than five years.

By another ordinance passed September 30, 1907, Toledo granted a general steam and hot water franchise to the People's Heat & Power Company.[2] This was also a twenty-

[1] Special Ordinances, *op. cit.*, p. 1.

[2] *Ibid*, p. 3.

five-year grant. The company was forbidden to sell or convey its franchise to any firm or corporation or unite with any other company except the Yaryan Light & Power Company. Consolidation with this company was expressly permitted. The grantee or the consolidated company was authorized, however, to execute a mortgage to get money for construction or maintenance purposes, but in case of foreclosure the purchaser under any such mortgage was forbidden to consolidate with any other company. The grantee or the consolidated company was required annually, on February 6, to file with the city "a full, complete and accurate report showing the names and addresses of each and every person who was a holder on the first day of the preceding month of any of the capital stock of the company filing such report, together with the number and amount of shares held by each of such stockholders".

Among the provisions of this franchise was one requiring the expenditure of $100,000 upon a plant or plants in the part of the city east of the Maumee River, and $200,000 in the part west of the river, within two years. Permits for opening streets for construction work were to be granted by the Board of Public Service only upon application by the company and presentation of a petition signed by the owners of 75 per cent of the abutting property. Furthermore, if the proposed excavations were to be made between the curb line and the lot line, the petition was to be signed by the owners of 60 per cent of the property abutting upon the side of the street where the pipes were to be laid. Street surfaces, after being broken into, were to be replaced by the company and kept in repair to the satisfaction of the Board of Public Service for the period of one year. The city reserved the right to fix the company's rates at five-year intervals. By the terms of the franchise the company was required "to furnish either steam or hot water, or both, to any and all persons, firms or corporations within the limits of the city of Toledo who shall apply for the same to said company, providing that the company's pipes, conduits or laterals are erected or placed in the same block or portion of street upon which the property or premises owned or leased by said applicant abuts; and, provided further, that said company shall, at its own expense, and without cost to the consumer, construct its supply

pipes from its mains to a point inside the curb line of the street".

The company was obligated to furnish steam or hot water, or both, to the City of Toledo and the local school authorities for public purposes "at a cost not to exceed 50 per centum of the lowest price charged any consumer within the City of Toledo", but the right to require service was limited to buildings within a distance of 1,200 feet from the company's pipes or laterals.

It was provided that the ordinance "shall be at all times construed as an entirety, and if at any time, at the instance of the company, or any one for it, or in its behalf, or on the part of any trustee, mortgagee, or lien-holder of the company, any provision of this ordinance shall be declared invalid or inoperative, by any court, for any reason whatever, the entire ordinance and all of its provisions, at the exclusive option of the City of Toledo, shall be deemed invalid, and all the rights hereby granted shall cease and determine; but the invalility or illegality of either or any of the provisions of this ordinance shall not release or discharge the company from any obligations to said city arising under or growing out of the rights and privileges hereby granted".

219. City may purchase plant or license a purchaser—Indianapolis.—A twenty-year franchise was granted, December 22, 1902, by the city of Indianapolis to John E. Christian, authorizing him to furnish steam heat within a limited area.[1] Mr. Christian was required to pay one dollar a year for this franchise and to charge not to exceed 35 cents per square foot of radiating surface for steam heat supplied to private consumers.

Another franchise was granted October 5, 1900, by the city of Indianapolis to the Home Heating and Lighting Company.[2] This grant included hot water, steam and electricity. The franchise was to "follow the flag", that is to say, it was to extend automatically with the growth of the corporate limits of the city. It was provided, however, that the Board of Public Works should select and appoint a territory for the company's first plant, such territory not to exceed one mile square and to contain at least 800 residence buildings. Within ninety days after this territory had been laid out the

[1] Laws and Ordinances, *op. cit.*, p. 500. [2] *I bid.*, p. 505.

company was to commence the construction of its plant and have it ready for operation by September 1, 1901. It was agreed that the company should be required "to establish additional heating plants, or extend any thereof, only upon the petition of the owners of property requiring 50,000 square feet of radiation or more within a territory of not more than one-half of one mile square, and who with such petition shall submit contract to become consumers of such heat from said company to the extent of such radiation". The maximum charge for hot water heat was fixed at 17 cents per square foot of radiating surface. In case of insufficient service the consumers were entitled to rebates on the same conditions as those contained in the South Bend franchise already described.[1]

The company was required to pay the city five per cent of its gross receipts, and the franchise was granted for a period of twenty-five years.

On March 4, 1902, the City of Indianapolis granted a franchise to the Marion County Hot Water Heating Company, which, like the one just described, included hot water, steam and electricity.[2] The terms of this grant were in most respects similar to the terms of the Home Heating and Lighting Company's franchise. The provision in regard to extensions, however, was simply to the effect that after the company had put into operation its first plant within the territory one mile square designated by the Board of Public Works, "additional territory may thereafter be occupied, * * *, or the first plant extended to additional territory, subject to the terms and conditions of this contract". The principal new provision in this franchise related to the purchase of the plant at the expiration of the twenty-five year grant. "To the end that at the expiration of the said period for which said grant is made, there may no doubts exist as to the respective rights of the parties hereto, it is agreed", etc., runs the contract. The substance of this agreement is that if at any time not less than three months nor more than six months before the expiration of the grant a new franchise shall not have been given to the company, or its successors, then the city shall have the option to purchase the tangible property

[1] See section 218, *ante*.
[2] Laws and Ordinances, *op. cit.*, p. 513.

of the company "at the fair cash value of such tangible property as constituting an operating plant and system". In case of disagreement, the valuation is to be fixed by three arbitrators, one to be chosen by the mayor, one by the company, and the third by the first two. The third member of the arbitration committee is to be "a disinterested and reputable expert electrical and mechanical engineer, not residing in the state of Indiana, and not, at the time of his selection, in the employment of either of the parties to said contract".

If within three months of the expiration of the original grant the franchise has not been renewed and the city has not exercised its option to purchase the company's tangible property, the city may grant a franchise to another company for a period commencing on the date of the expiration of this original grant. In such case the company securing the new franchise shall have the right to purchase the old company's tangible property upon the same terms upon which the city might have purchased it.

If at the final expiration of the original grant the city has not purchased the system, the old franchise has not been renewed and the tangible property has not been sold and delivered to another company having a franchise, then the city must proceed to offer by public advertisement a new franchise for the operation of the plant for a term of years. This franchise must be "awarded to the bidder who, being solvent and responsible, offers the most favorable terms for the city, and its citizens, and who will bind himself, themselves or itself, as the case may be, to take the tangible property constituting said plant and system and pay to the corporation then owning the same the fair cash value thereof, as an operating plant".

It is expressly provided that in any case the grantee, at the expiration of this franchise, "shall not have the right to tear up any street or alley occupied by it for the purpose of taking up any of the underground property" belonging to it.

On July 29, 1902, still another franchise was granted by the City of Indianapolis to the Merchants' Heat and Light Company.[1] The terms of this grant were similar to the terms of the franchise just described, except that a maximum annual rate of 30 cents per square foot of radiating surface

[1] Laws and Ordinances, *op. cit.*, p. 522.

for steam heat was fixed in addition to the rate of 17 cents for hot water heat.

220. City's option to purchase at frequent intervals.—Duluth.—A franchise, without time limit, was granted by the City of Duluth May 14, 1890, to the Duluth Electric Light and Power Company authorizing the laying of pipes in certain specified streets for the purpose of supplying heat to the buildings fronting on such streets.[1] One of the provisions of this franchise was that connections should be laid "to the curb of all lots or parts of lots where heat is to be supplied" at the time when the main pipes were laid. The franchise also provided that the city might purchase the company's heat works at any time after the expiration of fifteen years. The price to be paid was to be determined by arbitration. Nothing was said about payment for the franchise. It was provided, however, that if the city should decide, after the arbitrators had made their award, not to purchase, it could not make another proposition for purchase until the expiration of a further period of ten years.

Another heating franchise for certain streets was granted by the city of Duluth by ordinance passed October 20, 1902.[2] This grant was to the Killorin Construction Company and was expressly limited in duration to twenty-five years. The city reserved the right to purchase at the expiration of ten years. If, after an appraisal by arbitrators, the city declined to purchase at the sum fixed, it still would have the right to make another proposition for purchase at the expiration of a period of two years thereafter. This right to abandon a scheme for purchase, after arbitration, and renew it at the end of two years was to continue throughout the life of the grant. The company's maximum annual rate for supplying heat was fixed at five dollars "per thousand cubic feet of enclosed room heated". The company was authorized, however, at its option, to insert meters or other convenient devices into the service pipes for determining the supply of heat furnished. The company was also authorized to shut off the supply of heat temporarily for making repairs or extensions to its works, after giving due notice to its consumers of its intention to do so. The company was not authorized

[1] Franchises, city of Duluth, *op. cit.*, p. 262.
[2] *Ibid.*, p. 375.

to remove its pipes from the street without a permit from the Board of Public Works.

221. City to be on a par with most favored customers—New York.—On September 7, 1880, the Common Council of the City of New York granted a franchise to the Prall New York Heating Company to lay pipes in the streets for conveying hot water or steam for heat or power.[1] One of the interesting conditions of this franchise was that the work of restoring the streets after excavations, of replacing pavements and of carting away surplus earth was to be done directly by the Department of Public Works, but at the expense of the grantee. Before receiving a permit to open any street the company was required to deposit with the city a sum of money sufficient, in the opinion of the Commissioner of Public Works, to cover the cost of restoring the street and keeping it in repair for one year. The Commissioner's certificate of such estimated cost was to be final and conclusive. Main and service pipes were to be laid subject to regulations and restrictions established from time to time by the Commissioner and were to be placed under such part of the roadway or sidewalks as he might prescribe. Existing sub-surface structures were not to be interfered with without the Commissioner's consent, and the company was required to pay the cost of any such interference and be liable for damages in case of injury to these structures. If the prescribed conditions should not be complied with, the Commissioner was authorized to revoke any permit "in so far as any work authorized by it may not have been completed". The Commissioner was also authorized to refuse to grant new permits until all requirements under preceding permits had been complied with. All changes in the company's pipes made necesary by the construction of sewers or water pipes were to be made at the company's expense, and the pipes were to be maintained so as to prevent the escape of water or steam from them. In case the construction of the company's steam pipes would interfere with or pass through vaults or other private property, the consent of the owners was required. Whenever a permit was granted for laying its mains, the company was required to pay the city 20 cents per lineal foot of trench.

[1] Compilation of Laws and Ordinances relating to railroad and other corporations in the city of New York, 1860 to 1887, p. 362.

For service pipes and repair work the charge was to be five cents per lineal foot. The city was to receive three per cent of the company's gross receipts. Hot water and steam were to be furnished to the city and to buildings used for city or state purposes along the lines of the company's mains for actual cost plus ten per cent. It was provided, however, that the rate to the city should be "in no case more than is charged to the most favored customer". The company was to be relieved, however, from the gross receipts tax on its earnings from heat supplied to the city and to public buildings. The city reserved the right to use any patented device which the company permitted anybody to use. The city was not to be liable for any heat supplied to public buildings unless it had been furnished on the written order of a duly authorized officer or board. The company was required to pay the city for damages, resulting from the exercise of the franchise, where the city was held liable, but the city was not to be liable in any case for damages to the company's fixtures. A bond of $50,000 was to be executed by the company before its operations were commenced, and the comptroller was authorized to require other sureties or further bonds at any time when in his judgment such requirement should be necessary to secure payment by the company of damages and claims. The company's operations were to be restricted, to begin with, to a territory one mile square, and the Commissioner of Public Works was not to grant permits for extensions beyond this area until he had satisfied himself of "the public utility and benefit" of the company's system. The grant was to terminate at the end of six years, unless the company had mains and a plant ready to supply steam to buildings on twenty-five miles of streets.

On December 14, 1880, a franchise was granted to the New York Steam Company to lay mains and pipes, with necessary and proper lateral and service pipes, in all streets, avenues, alleys, squares and public places "for the purpose of supplying to the city and its inhabitants, for motive power, heating, cooking, or other useful applications, steam, water, air, and other fluids, at both high and low pressure, with necessary return pipes".[1] The company also was authorized to enter the streets for the purpose of repairing and main-

[1] Compilation, etc., *op. cit.*, p. 369.

taining its pipes and for constructing man-holes where necessary. The conditions of this franchise were in several respects different from those of the franchise granted to the Prall New York Heating Company. The company was required to pay three cents per lineal foot of street way in which its mains were laid up to a total of $100,000. As a matter of fact, the company had prior to 1906 laid about 65,000 feet of mains and paid into the City Treasury about $2,000 under this franchise.[1]

This company was also required to furnish heat and power "for public buildings, hydrants and other ordinary and permanent public purposes within the district supplied by its pipes at reasonable prices, not exceeding those paid by its most favored customer". Before opening any street the company was required to file with the Department of Public Works a map showing "the station or stations where it is proposed to generate or manufacture the fluids to be conveyed in the pipes to be laid therein, as well as approximately the number and size, including coverings, of mains and laterals it is proposed at that time to lay in the streets or places or portions thereof, aforesaid specified, with the location and sizes of the principal man-holes and vaults". Upon the filing of such map it was made the duty of the Commissioner of Public Works promptly to locate the proposed mains "in such manner as to be least expensive to the company, and where such mains will be accessible, and out of the way of floods, if possible, and where the foundations will not be liable to disturbance". It was also provided that "when the sewers, water mains, or other street pipes or obstructions controlled by the city, or in respect to which the city has the power of alteration or removal, obstruct the laying of the mains of this company * * * so as to prevent the laying of its mains and pipes at reasonable expense, or seriously to impair their efficiency, it is hereby made the duty of said Commissioner to rearrange such sewers, pipes or other obstructions at the request and expense of this company * * * where the same can be done without serious detriment to the public interest".

The company was required to file tables from time to time showing the location of its fixtures in the streets. Its street

[1] See Report of the Bureau of Franchises, Board of Estimate and Apportionment, New York City, on application of Seaboard Refrigeration Co., Feb. 26, 1906, p. 6.

work was to be done under reasonable regulations of the Commissioner of Public Works, as to the safety of the public and as to the times during which public travel might be interrupted in particular locations.

There had also been granted, on March 16, 1880, a franchise for distributing hot water and steam for heat and power, for domestic and other purposes, to the United States Heating and Power Company.[1] This company was to furnish heat and power for streets and public buildings at prices to be fixed by the Board of Estimate and Apportionment. It was also to make an annual report to the city, after receiving which the Board, if it deemed just, might impose a tax upon the company of three cents per lineal foot of its mains and two per cent of the company's net profits for the year covered by the report. A year later this grant was amended so as to make these charges a definite obligation rather than depending upon the action of the Board of Estimate and Apportionment.[2] Under the company's franchise its rights were to be forfeited unless within three years it had ready and open for public use two miles of mains.

One or two other franchises have been granted at different times by the City of New York. It appears, however, that the New York Steam Company has survived its early rivals, possibly through the extraordinary liberality of the terms of its franchise. This company now supplies a comparatively small section in the business district of Manhattan Island. Under the special franchise tax law its franchises and pipes in the streets were assessed, for the year 1908, at $509,000.

222. Steam heating and conduits combined—Nashville.—By an ordinance approved April 2, 1902, the City of Nashville granted a fifty-year license to the Nashville Street Steam Heating Company to construct and operate a plant for producing, conveying and utilizing "steam, hot air or other heating substances, appliances or methods;" to "manufacture, sell, rent and supply heat for heating purposes;" and to "purchase, use, lay and keep up pipes and conduits with necessary casings or protection therefor, and mains with all the necessary and proper attachments, connections and appurtenances, both above and below the surface of the streets,

[1] Compilation, etc., *op. cit.*, p. 358.
[2] *Ibid.*, p. 374.

sidewalks, alleys, squares and other public grounds and on all bridges and viaducts in said city of Nashville as the boundaries thereof are now and as they may hereafter be extended."[1] The company was authorized to shut off heat from any consumer in arrears for a period of ten days for heat furnished. At any time after twenty-five years from the time when heat or steam was first turned into the company's mains, the city, upon giving twelve months' notice, could purchase the company's plant, appliances and property at their actual value as determined by arbitration, exclusive of the value of the franchise. It was stipulated, however, that the price to be put upon the property should not be less than the bonded indebtedness of the company "made by it in the course of installation and construction of its plant," but it was provided that the company should not have the right to bond its property "beyond the actual cost of the construction and installation of its plant" on penalty of the forfeiture of its franchise. The company was required to employ none but union labor in the construction of its shops and plant used by it in its business. Failure to meet this requirement would also result in the forfeiture of the franchise. It was stipulated in another section that no convict labor should be used by the company or by any person or company working for it "in any part of their work."

On June 12, 1903, another ordinance of the city of Nashville was approved, authorizing this company for a period of twenty-five years "to sell, lease or rent any vacant or unused space or spaces in its mains or conduits" to any other person or corporation desiring to use such mains or conduits "as a receptacle for the placing or laying of cables, wires, pipes or for any other lawful purpose."[2] The city reserved the right at any time after ten years from the commencement of the company's operations under this supplementary ordinance, to purchase the company's property and appliances "connected with the right and license herein granted, and built or constructed in pursuance thereof." It was stipulated that the company's mains and conduits should be constructed "sufficiently large and commodious to accommodate any and all cables and wire systems (street railway systems ex-

[1] Laws of Nashville, *op. cit.*, p. 1132.
[2] *Ibid.*, p. 1135.

cepted) doing business in the city of Nashville," and furthermore that any company operating wires or cables in the conduct of its business should be permitted to place them in this company's mains or conduits "for a reasonable charge or compensation." The company agreed to pay the city 5% of its gross income from the rental of its conduits.

223. City to receive for franchise 2½% of total investment in plant—Newark.—By an ordinance approved June 13, 1888, the city of Newark authorized the New Jersey Superheated Water Company to lay pipes and conduits "for the purposes only of furnishing heat and power by means of superheated water" in the streets of a certain portion of the city.[1] Pavements were to be restored, after any streets had been opened for laying the company's pipes, to their previous condition and so maintained for a period of three years. The company's pipes and conduits were to be laid not less than three feet distant from the outside of any water or gas pipes already laid, except where pipes crossed, when they were to be separated a distance of at least twelve inches. The city reserved the right to appoint inspectors to supervise the company's street work, and these inspectors were to be paid by the company at a rate to be established by the city. Before making any use of the streets the company was required to deliver to the City Auditor of Accounts a written contract agreeing to pay to the city "a sum equal to two and one-half per cent on the capital actually used or employed in the business of said company within said city, and a like sum upon all additions thereto, and further contracting and agreeing to abide by and perform such rules, regulations and ordinances in relation to the use of the public streets as the common council may hereafter adopt." The company was also required to give a bond in the sum of $30,000 for the faithful performance on its part of the terms of the franchise. It was expressly provided that nothing in the section requiring the 2½% payment should be construed as authorizing "the exemption from municipal taxation of any property whatsoever of the said company." The franchise was not transferable to any other company except with the permission of the city and upon such terms as the city might prescribe. The company was to be liable to the city for any

[1] Laws and Charters, Newark, N. J. *op. cit.*, p. 768.

damage to the streets caused by explosions or leakage of its pipes.

224. A 100-year blanket franchise for heating, refrigerating, gas, electric light and power—Lockport, N. Y.—A franchise was granted by the city council of Lockport to the Economy Light, Fuel and Power Company upon condition that the company should acquire the underground heating system then in operation in the city and continue to operate it "under the grants of this franchise for its term."[1] This franchise was to continue in force for a period of one hundred years, if the company accepted it within thirty days after its adoption. It gave the company the right to enter upon the streets for the purpose of constructing and operating "electric light, power, gas, steam heating and refrigerating plants" and for the construction of all fixtures necessary "for the business of supplying light, power, heat and refrigeration by means of electricity, gas, steam, hot water, brine, anhydrous ammonia or other commodities." Before proceeding to install any underground work, the company was required to file with the City Engineer a map showing the location of the work, and unless the common council or the City Engineer within fifteen days thereafter directed the company to occupy some other location, the company would be authorized to go ahead with its work according to its plans as filed. Unless the company commenced to operate its electric and heating plant within one year from the acceptance of the ordinance, that portion of the franchise relating to electricity or heating would "cease to be operative." If the company failed to operate its gas or refrigerating plants within five years, the portion of the ordinance relating to gas and refrigeration would cease to be operative. It was provided that mains or pipes to supply gas and refrigeration should be laid in the same trench. The company was obligated to furnish light, heat, power and refrigeration to public buildings owned by the city and used by it as offices, police stations, fire department houses, water works plant and city hospital at rates 10% less than the company's lowest rates charged to other customers. This provision applied, however, only to buildings within 200 feet of the company's lines of steam supply and refrigeration, and within 600 feet of its

[1] Copy of this franchise without date was furnished by the American District Steam Co. of Lockport, May 10, 1909.

electric supply lines. The mayor of the city was authorized to appoint an inspector at the rate of $2.50 per day to supervise "refilling and repairing" in all underground construction work in the public highways, and the company was required to pay the inspector's compensation upon presentation of the bill approved by the City Engineer.

225. Steam heating and electric power combined—A city of 15,000 near Buffalo.[1]—On July 16, 1901, a franchise was granted by a small city in western New York authorizing the construction, maintenance and operation in the streets of the city of a system and equipment for the purpose of furnishing steam and electric heat to customers within the city. The franchise included a provision "for returning the water from such steam" and also for the construction and maintenance of pole lines and conduits for the purpose of furnishing electric power. The term of the franchise was thirty years. The grantee was not authorized to disturb the pavements in the paved streets without first getting special consent from the City Council, but in unpaved streets, construction work could be carried on subject only to the supervision and approval of the Street Commissioner. The grantee was required "at all times so far as possible" to "make use of the narrow streets or alleys in preference to the broader streets or avenues." The work of installing the systems for the supply of electric power and underground steam heating was to be commenced within one year after the acceptance of the franchise, and these systems were to be "constructed and installed in any streets, lanes or alleys which are hereafter about to be paved" upon notice given by the city authorities and in such manner as not to interfere with the pavement.

[1] A copy of the franchise described in this section was furnished to the writer by the company operating under it on condition that neither the name of the grantee nor the name of the city should appear in print, and that the copy of the franchise should be returned. When the author, in the process of collecting data for the preparation of this book, first requested this company for a copy of its franchise, he was asked to "advise us if you are an exponent of Municipal Ownership, and is your work to be a treatise on the claimed good features of Municipal Ownership?" Upon being assured that the author was an advocate of municipal ownership of water works and sewers, the company supplied the franchise on the conditions already mentioned. Far be it from the writer to violate these conditions, although this franchise is presumably a public document. Following the best precedents of general legislation established by the Ohio Legislature, I may suggest, however, that this franchise was granted by a city in the State of New York which at the last Federal census had a population of not less than 11,600 and not more than 11,625, and which at the last State census had a population of not less than 15,249 and not more than 15,251. Following the same general method of description, I may add that the name of the original grantee of this franchise was neither Bummings nor Dummings.

226. Heating, ventilating and regulating system in connection with an electric light plant—La Crosse, Wisc.—By an ordinance published May 31, 1899, the city of La Crosse granted to the Edison Light and Power Company, in addition to the franchises which the company had previously acquired, the right to lay and maintain pipes in the streets of the city "for the purpose of conveying, carrying, and passing, by any method which said company may choose to adopt, steam, hot water, liquid air, compressed air, or air in any form, or any other heating compound, or substance for heating and ventilating and regulating purposes, or for any other purpose or purposes whatsoever connected with heating and ventilating and regulating."[1] This grant was for a period of thirty years.

By an ordinance published Nov. 29, 1901, the company secured an extension of its electric light privileges for a period of twenty-five years.[2] It was ordained as a part of this grant that the price charged to private consumers for heat should not, during the life of the renewal electric light franchise, exceed the amount charged by the company at the time when the franchise was passed. It was also ordained that the price for heat should at all times be a "reasonable charge for such service." It was expressly provided in this ordinance that wherever the term "reasonable charge for such service" occurred, "it shall be left with the courts, in case of complaint by customers, to determine whether or not the rates charged are reasonable," and "the courts shall have power to fix the rates if they are determined to be unreasonable or unjust."

[1] Ordinances of the City of La Crosse, Wisc., 1903, p. 4.
[2] *Ibid.*, p. 63.

CHAPTER XVI.

REFRIGERATION FRANCHISES.

227. Pipe line refrigeration.—The distribution of cold by means of pipes in the streets for cold storage plants, chambers in hotels and apartment houses, restaurants and the shops of a few small dealers, is in practical operation in several American cities.[1] It is claimed that the production of refrigeration in smaller units than about 500 pounds per day is not efficient from an economic standpoint. Five hundred pounds of refrigeration is equivalent to the cold produced by the melting of 500 pounds of ice. Refrigerating systems varying in length from one mile to seventeen miles are in use in Boston, New York, St. Louis, Atlantic City, Baltimore, Norfolk, Los Angeles, and Kansas City, Mo. A refrigeration plant once established in Denver has been discontinued.

There are two principal methods of pipe line refrigeration in use. One is by the circulation of brine or cold salt water. This system is used in Boston, New York and Philadelphia. The other system produces refrigeration by forcing ammonia at high pressure through the pipes and permitting it to expand in the service boxes.[2] The ammonia system is in use in Boston and New York and in all the other cities mentioned excepting Philadelphia. The Boston plant cools about 600 boxes with 1,500,000 cubic feet of space. In Norwich, Conn., there is said to be a compressed air plant that supplies refrigeration to the whole town through a system of mains.

[1] See article on "Pipe Line Refrigeration," by Jos. H. Hart, published in Engineering Magazine for June, 1908, Vol. 35, p. 412.

[2] See address on "Pipe Line Refrigeration," by J. E. Starr, published in Engineering News, vol. 54, p. 640. This address was delivered December 4, 1905, before the American Society of Refrigerating Engineers at New York City.

228. Franchises for restricted areas—New York City.—Refrigerating plants in New York City have been established in several places. In 1890 applications were made by five companies and one individual for the privilege of furnishing refrigeration to the West Washington Market in the present Borough of Manhattan.[1] Four of these applicants proposed to circulate cold salt water through pipes to the refrigerating boxes of the standholders at the market. The other applicants proposed to use the ammonia system. The right applied for was sold at auction to the New York Refrigerating Construction Company and a contract was entered into for a term of ten years under which the company agreed to pay the city $5,500 annually and 5% of its gross receipts, and stipulated that its monthly charge to standholders at the market should not exceed three cents per cubic foot of the space supplied with refrigeration. This company made a financial failure and its contract with the city was cancelled in 1893.

By resolution of the Board of Aldermen approved April 8, 1890, the privilege was granted to the Greenwich Refrigeration Company to lay two pipes not more than six inches in diameter under the surface of certain streets in lower Manhattan, in the vicinity of the Gansevoort market.[2] The company was authorized to conduct salt water for refrigerating purposes through its pipes on condition that it should enter into a stipulation with the Commissioner of Public Works to save the city harmless from damages to sewer, gas or water pipes and from any other damages resulting from the exercise of the franchise. This company's rights were later transferred to the Manhattan Refrigerating Company which has in operation the principal refrigerating plant now in existence in New York City. The assessed value of this company's franchise and fixtures in the streets for the year 1908 was $40,000.

In 1908 the City of New York granted a franchise to the Seaboard Refrigeration Company for the purpose of maintaining and operating a plant at Coney Island. This franchise was granted under the terms of the revised charter of Greater New York and according to the standard form of

[1] Report of the Bureau of Franchises on the application of the Seaboard Refrigeration Co., Feb. 26, 1906, *op. cit.*, p. 5.
[2] Report of Bureau of Franchises upon the application of the Manhattan Refrigerating Co., April 16, 1906, p. 4.

contract now in use by the Board of Estimate and Apportionment. This franchise provided that the company's conduits should not exceed eighteen inches in diameter and should be used for the sole purpose of supplying refrigeration. The franchise was granted for a term of fifteen years with the privilege of renewal by the company for a further period of ten years upon a fair readjustment of the value of the grant, to be made either by agreement or by appraisal. It was provided that upon the final termination of the franchise for any cause, the company's conduit lines and their appurtenances constructed pursuant to the company's contract with the city should revert to the city without compensation. Engineer Nichols, in reporting on this franchise, stated that the company expected to start with gross earnings of $17,000 a year. The compensation to be paid by the company for the franchise was fixed at a lump sum of $5,000 to be paid at the start, and from four to six per cent of its gross receipts with minimum annual sums during the original period covered by the grant. The company was also required to pay annually ten cents for each linear foot of conduit line laid during the year, and $2 for each man-hole constructed. It was expressly provided that the terms and conditions of this franchise should be binding throughout the period of the grant, no matter to whom the franchise might be transferred. It was also provided that the franchise could not be assigned in any manner without the consent of the city. A provision was made to the effect that the company should forfeit its franchise "without judicial or other proceedings" unless it had at least fifty per cent of its conduit line constructed and in operation by May 1, 1911. The company was required to keep the pavements, damaged by it, in repair for one year after they had been replaced, and to pay the city the cost of the inspection of the work. It was stipulated that before the company's pipes should be used for the conveyance of gas or fluid under pressure for refrigerating purposes they should be submitted to a pressure of 450 pounds per square inch to test their strength. It was also stipulated that the company should not charge its consumers more than $3.50 for the same amount of refrigeration which is produced by one ton of ice. The city reserved the right by the Board of Estimate and Apportionment to regulate from time to

time the maximum and minimum rates to be charged by the company "provided that such rates shall be reasonable and fair." The company agreed to furnish the city free of cost all refrigeration needed for public purposes along the company's routes. The company also agreed to furnish refrigeration to any applicant whose premises were located along the company's routes. Any dispute between the company and a consumer as to the fairness and reasonableness of the company's regulations contained in its contracts was to be subject to a decision of the Board of Estimate on the application of either party. The company was required to furnish maps showing the exact location of its conduit lines and manholes. The franchise was declared not to be exclusive. The company was required to assume all liabilities for damages on account of the exercise of its franchise. The company also agreed that its conduit lines should be used only by itself and for no other purpose than supplying refrigeration by the ammonia process or such other process as the Board of Estimate might consent to. The issue of additional stock or bonds by the company was to be dependent upon a certificate of authority granted by the Board of Estimate. For the purpose of determining the amount of stock and bonds to be issued, the Board was authorized to take testimony, to examine the company's books and to require verified statements from the company's officers pertaining to the value of its property and franchises. The board was required, however, to make its determination in regard to the issue of stocks or bonds within sixty days after the final submission of papers or the final hearing on the company's application. Provision was made that the company should make an annual report to the Board including a statement of its financial operations and assets. The city required the company to deposit a fund of $5,000 as security for the fulfilment of the terms of the franchise. The penalties for inefficient service, for failure to make its annual report and for neglect of street repairs and other delinquencies, were to be collected out of this fund and the company was required immediately thereafter to restore the fund to the full amount of $5,000, or in default of doing so to be liable to the forfeiture of its franchise at the discretion of the city comptroller. Apparently, the Seaboard Refrigeration Company found difficulty in carrying out

its plans under this franchise, for it afterwards secured an extension of time on two different occasions, and in 1908 it did not appear on the special franchise assessment roll as the owner of franchises or fixtures of value in the streets.

A similar franchise was granted by the city of New York at about the same time to the Kings County Refrigerating Company for the purpose of supplying refrigeration to the Wallabout Market in Brooklyn.[1] This company anticipated gross receipts of $15,000 a year. It was charged for its franchise $500 in cash; and from five to seven per cent of its gross receipts for the term of its grant; 25 cents per foot of conduit laid in the streets and $2 for each manhole constructed. This company proposed to charge for refrigeration not by the ton but by the cubical contents of the refrigerating boxes. It proposed a rate of 10 cents per foot for rooms having less than 1000 cubic feet; 7 cents per foot for rooms having from 1,000 to 10,000 cubic feet and 5 cents per cubic foot for rooms of more than 10,000 cubic feet. Its rates were not definitely fixed in its franchise, but the right was reserved to the city to regulate them at any time.

229. Plant may be purchased at expiration of grant—Baltimore.—On December 12, 1901, an ordinance was passed by the city of Baltimore granting to two individuals the right to construct and operate "subways and pipe lines, including the necessary and convenient boxing, pipes, manholes and other appurtenances" under the streets of the city within a certain designated district or under such other streets contiguous to this district as might be designated at a later time by the Board of Estimates.[2] The pipes were to be used "for the purpose of transmitting refrigeration or heat, or both refrigeration and heat." The Board of Estimates was authorized to extend the territorial privileges of the grantees from time to time as the Board might deem to be proper and expedient. All streets disturbed by the grantees were to be restored to their former condition and the paving kept in repair for a period of two years. If at any time the pipes were not used for a period of six months the grantees might be required to remove them at their own expense upon sixty days' notice from the mayor and city engineer. It was ex-

[1] See Report of the Bureau of Franchises, March 21, 1906.
[2] *Public Service Corporations of Baltimore*, compiled by Charles Pielert, 1908, p. 705.

pressly provided that the grantees should be at all times subject to "such licenses, taxes, assessments and charges, as may be duly and lawfully imposed upon them, and all others, if any, who shall or may be engaged in the business of supplying refrigeration and heat, or either, and for that purpose be using the streets, lanes and alleys of the city." It was provided that the subways and pipe lines should be laid at least two feet below the surface of the streets and that the conduits containing the refrigerating and heating pipes should not be of a greater diameter than 24 inches. The grant was declared not to be exclusive; plans were to be filed with the city engineer before the commencement of work; the streets were not to be excavated or encumbered for an unreasonable time or to an unreasonable extent and the work was to be done under the direction of the city authorities. The grantees were required to begin operation and supply refrigeration and heat, or either, to their customers within eighteen months after the passage of the ordinance. They were required upon notification by the proper city official to remove any of their subways or pipe lines so as not to interfere with the repair or construction of sewers, water pipes or other municipal improvements in the streets. They were required to furnish two bonds of $10,000 each, one to indemnify the city against damages, and the other to guarantee the faithful performance of the conditions of the franchise. An annual tax of $250 per lineal mile of pipe or subway, exclusive of house connections, was imposed as compensation for the franchise. The period of the grant was fixed at twenty-five years. It was provided that the grantees should be entitled "to charge all persons and corporations to whom they shall furnish refrigeration or heat under this ordinance such sum or sums as they shall agree upon and see fit, not exceeding the average amount demanded and received by the owners of similar plants and franchises in other cities of the United States containing no less than 40,000 inhabitants." It was provided that within one year before the expiration of the franchise the grantees should have the privilege of applying for a twenty-five year renewal, and they should be entitled to this renewal upon terms fixed by the mayor and the city council. In case of the grantees' failure to apply for a renewal, or in case of failure to agree with the city upon the terms of the renewal,

it was provided that there should be a fair valuation of the plant and property which should be transferred to the city, at its election, upon payment of an arbitrated valuation, "such valuation not to include the value of the franchise or right." It was provided that of the three arbitrators one should be appointed by the mayor, one by the grantees and the third selected by the other two; but in case of their failure to select the third, the mayor was to appoint him. In case of the failure of the grantees to appoint an arbitrator to represent them the mayor was to be entitled to appoint three arbitrators and the award of the majority of them was to be decisive. As a part of the consideration for this grant, it was agreed that the "easement" to lay pipes or conduits under the streets of the city should be "an easement in land and a form of real estate subject to the payment annually of an amount to the mayor and city council of Baltimore equal in the amount to what said easement, as real estate, would be assessed and taxed if the same was taxable."

230. Rates to be regulated by the municipality—Kansas City, Mo.—An ordinance approved August 14, 1902, in the city of Kansas City, Mo., authorized James E. Brady, his successors and assigns to construct, acquire, maintain and operate a refrigerating and cold storage plant in the city; to manufacture, sell and supply refrigeration within a certain designated district and to lay and maintain pipes and mains below the surface of the streets, sidewalks and public places for this purpose. It was stipulated that the pipes, mains and connections should be laid under the supervision of the Board of Public Works and should occupy such portions of the streets as might be designated by that board. The grantee and his successors were required to construct and maintain a refrigerating plant of capacity sufficient to furnish any and all persons or corporations desiring refrigeration within a specified district. Furthermore, the grantee was obligated, at his own expense, to make, within a reasonable time upon request, the necessary connections between his pipes and the curb line of the property owners. It was provided that the connections with "the buildings or improvements to be refrigerated" should be made by the property owners at their own expense under the supervision of the grantee. A tax of two per cent of the gross receipts from the sale of all re-

frigeration supplied from the central plant was agreed upon as compensation for the franchise. There was the usual provision that street work should be done under city supervision and that the grantee's pipes should not interfere with municipal improvements. It was expressly stipulated that after the expiration of ninety days from the approval of the ordinance, the franchise could not be assigned except with the consent of the city, expressed by formal ordinance, declaring the conditions of such assignment. The grantee was required to file with the Board of Public Works once a year a verified statement of all pipes, mains and connections of every kind constructed by him during the preceding year and showing the location of such structures. The franchise was to be accepted in writing and the plant put into operation within two years thereafter, on penalty of the forfeiture of the grant. A penalty fund of $500 was to be deposited to insure the faithful performance of the conditions of the ordinance. The city expressly reserved the right at all times to regulate by ordinance the prices that might be charged for refrigeration, and from time to time to "fix such prices therefor as may be reasonable." In case of dispute as to reasonableness, the point was to be determined on application of the city by the Circuit Court of Jackson County. It was provided that the failure of the grantee to comply with the provisions of the franchise or of any lawful ordinance of the city should result in the forfeiture of the grant. The franchise was to run for a period of thirty years.

231. Extensions to earn eight per cent—Wichita, Ks.—A refrigeration franchise was granted in Wichita, November 20, 1906, to individuals.[1] The franchise was originally limited to a specified portion of the city, but was to be extended to any other portion of the city where the mayor and council should direct refrigeration to be furnished. It was agreed, however, that the mayor and council should not require the grantees to extend their plant unless such extensions would be "at least an eight per cent investment." The work of the grantees was to be done under the supervision of the proper city authorities, and the streets were to be restored within fifteen days after being disturbed. The grantees were required to construct and maintain a refrigerating plant of

[1] Laws and Ordinances affecting the City of Wichita, 1908, *op. cit.*, p. 689.

sufficient capacity to furnish all demands within a prescribed district. A tax of three per cent of the grantees' gross receipts from the sale of refrigeration from their central plant was provided for. The franchise was declared not to be assignable after six months without the city's consent, and unless the refrigerating plant contemplated by the ordinance was constructed within four months after the acceptance of the ordinance, the grant was to be forfeited. The city reserved the right to regulate the grantees' charges, and other provisions of the ordinance were similar to the Kansas City ordinance described in the preceding section.

232. Regulation of street work—Seattle.—An early refrigerating franchise granted by the city of Seattle, June 14, 1890, to the Pacific Freezing and Cooling Company and later transferred to the Diamond Ice and Storage Company and still later to the Seattle-Tacoma Power Company, contained no important provisions other than those relating to the supervision of street work.[1] The scope of this ordinance is interesting in that it provides for the construction and operation of refrigerating works together with the right to use the streets and public places for the operation of pipe lines and the necessary feeders and service pipes "for the conveyance, distribution and regulation of liquid anhydrous ammonia, or otherwise composed liquified gas or gases for refrigerating purposes and for the conveyance of the expanded ammonia or other gas or gases used in the process of refrigeration." The grantee was not authorized to open or encumber more of any street or alley at any one time than should be necessary to enable it to proceed with advantage in the laying of its pipes, and wherever practicable it was to "work only on alternate blocks and not on continuous blocks." It was expressly required to put up the necessary barriers and lights at street excavations to prevent injury to persons and property. All work under the franchise was to be done subject to the supervision of the street commissioner.

[1] Charter and Ordinances of Seattle, 1908, p. 429.

CHAPTER XVII.

PNEUMATIC TUBES AND THE FRANCHISES UNDER WHICH THEY ARE OPERATED.

233. History of the use of pneumatic tubes for the distribution of United States mail.—The first American city in which mail was transmitted from one point to another by means of pneumatic tubes was Philadelphia, where a service of about one-half mile was in operation as an experiment from 1893 to 1898.[1] In the latter year, pneumatic service was installed to a limited extent in Boston and New York, and since that time Chicago and St. Louis have been added to the list of cities in which mail is transmitted by the tube system. There was on November 10, 1908, a total of 42.6 miles of tubes being operated under contract for the Government. In all cases these tubes were operated by private companies, and the annual rental paid by the Government was $17,000 per mile, or a total of about $724,000. A special committee of experts, appointed in 1900 to give consideration to all matters pertaining to the use of pneumatic tubes for the transmission of mail and to advise the Postmaster-General in regard to the cost of construction and operation and the utility of the various systems of pneumatic tubes, rendered a report on December 20 of that year, recommending that the existing service which consisted of a little over

[1] See "*Investigations as to Pneumatic-Tube Service for the Mails*," published by the Government, 1909. pp. 15 *et. seq.*

eight miles of tubes in operation in Boston, New York and Philadelphia, should be continued and that the service should be extended in these cities and undertaken in Chicago and St. Louis also.[1] The total length of new lines recommended by this committee was 36.83 miles. The committee carefully considered the claims of Brooklyn, Cincinnati and San Francisco in addition to the five cities already mentioned. It found, however, the cost of the tube service to be so great that the system could not be used with profit except in a comparatively few cities, and then only for the transmission of mails between the principal local centers of distribution. A table prepared by this committee showed that the cost of the service, based upon the offers made by the various tube companies, would amount to 60 per cent of the net revenue from first class local mail in Boston; to 18.7 per cent of such revenue in New York; to 145 per cent in Brooklyn; to 24 per cent in Philadelphia; to 46 per cent in Cincinnati; to 25.4 per cent in Chicago; to 61 per cent in St. Louis, and to 111 per cent in San Francisco.[2] The committee had already, after careful investigation, eliminated three other cities, Washington, New Orleans and Denver, from further consideration. The table of costs, as compared with annual revenues for the eight cities held for final consideration, convinced the committee that the tube service would be altogether unprofitable in Cincinnati and San Francisco and that it could be maintained in Brooklyn only to the extent of the line of tubes connecting the general post office with the general post office in New York. The extensions that had been proposed in several of the other cities were cut down by the committee.

By the post office appropriation bill for the year ending June 30, 1903, the Postmaster-General was given $500,000 for pneumatic tube service, and was authorized to enter into contracts for such service for a period of not more than four years. It was also provided that before the contracts were let, proposals should be received after advertisements, and that before any such advertisements were issued, a careful investigation should be made as to the needs and practicability of the pneumatic tube service and a favorable report

[1] See Report of the Postmaster-General to Congress on "*Pneumatic-Tube Service*," Jan. 4, 1901.
[2] See Report of Jan. 4, 1901, *op. cit.*, pp. 29, 30.

be submitted in writing to the Postmaster-General by a commission of not less than three expert postal officials. It was further provided that no contract should involve an expenditure for tube service of more than four per cent of the gross postal revenues of the city in which the service was to be furnished. It was also provided that in any city where the contract called for more than three miles of double lines of tube, the rental should not exceed $17,000 a mile. The Postmaster-General was prohibited from entering into contracts prior to June 30, 1904, involving an aggregate annual expenditure for tube service of more than $800,000. Under this act, contracts were let for about fifty miles of tubes.

A special commission of experts, appointed to investigate the advisability of extending the tube service, rendered a report in 1905 recommending a total of seventy-five miles including the twenty-six miles then in operation. Under this committee's recommendations, the service was to be extended to Baltimore, Cincinnati, Kansas City, Pittsburgh and San Francisco. Under the post office appropriation bill for the fiscal year ending June 30, 1907, the Postmaster-General was authorized to enter into contracts for a period not exceeding ten years involving an aggregate annual expenditure of not more than $1,250,000. Under this act, contracts were made which will expire on June 30, 1916. On November 10, 1908, there was yet to be built under these contracts, a total of 21.97 miles of tubes in New York, Philadelphia, Chicago and St. Louis. The Post Office Department received no proposals in response to its advertisements for the construction of tubes in Baltimore, Cincinnati, Kansas City, Pittsburgh or San Francisco. The length of tubes in actual operation in the various cities on November 10, 1908, was as follows: Boston, 6.652 miles; New York, 19.306 miles; Brooklyn, 1.35 miles; Philadelphia, 6.02 miles; Chicago, 7.41 miles; and St. Louis, 1.85 miles.[1]

Another special committee reporting to the Postmaster-General, December 10, 1908, stated that the six post offices where the pneumatic tubes were in operation, furnished about 27 per cent of the entire postal revenues of the department and about the same percentage of first-class mail

[1] *Investigations*, etc., *op. cit.*, p. 21.

originating in the United States. It was stated that in these cities about 46 per cent of all first-class matter dispatched and about 43½ per cent of all first-class mail received, went through the pneumatic tubes. About 11 per cent of all first-class mail matter handled in these post offices was said to have been advanced in time by the use of the tube service.

There are several advantages of the pneumatic tube service for handling letters in the congested postal centers. One of these is the speed with which the mail can be transmitted from the general post office to and from the principal railroad stations and postal dispatching centers. The tubes are operated at a contract speed of 30 miles per hour, which is greatly in excess of the speed that can be attained by wagon service, street car service or automobile service. It it also to be noted that one tube carrier may be dispatched every 13 or 15 seconds so that during 20 hours of continuous operation, 4,800 dispatches of mail may be effected in each direction. It is found, however, that the tubes are clogged by the sudden accumulation of heavy mails, for the reason that the capacity of a tube carrier is only about 450 letters or 9 pounds in weight, whereas a regular mail wagon has a capacity of from 1,200 to 5,000 pounds. The tubes, however, have an advantage in regularity over the wagon service, on account of congestion of traffic due either to narrow streets, or to heavy volume, or to storms. The tubes are especially important in connection with the distribution of special delivery letters. It is to be noted, however, that on account of the irregularity in the accumulation of mail, the tubes cannot be used to anywhere near their full capacity. The maximum use on the busiest section in New York is 66.6 per cent of capacity, while the smallest use on one section in Boston falls to 2.2 per cent of capacity. Of a total of 36 miles of tubes upon which the committee had reports, the daily use exceeded 10 per cent of the tube capacity on not quite 20 miles, while it was less than 10 per cent on the more than 16 miles remaining.[1]

234. Construction, equipment and operation of pneumatic tubes.—The standard type of pneumatic tube in use for the mail service is 8 inches in diameter, inside measurement.[2]

[1] *Investigations*, etc., *op. cit.*, p. 31.
[2] See article by Edward D. Sabine in *Compressed Air* for May, 1905, p. 3470.

The tubes are laid in pairs, one running in each direction, so as to provide for continuous service either way. Cast iron pipes are used with bell and spigot ends, sometimes bored smooth, and always carefully laid. A deflection of only one and one-half inches in 12 feet is allowed. On this account in cities that are not level the tubes sometimes have to be laid deep. In any case, the trenches in which the tubes are laid, must be open for a long distance at a time in order to show obstructions and permit the pipes to be carried past them without exceeding the maximum deflection allowed. The tubes are usually operated either by blowers or by compressed air engines. In either case provision is made for a continuous current of air in one direction. In any case the pipes must be carried below the frost line, and at bends a proper curvature is required to permit the passage of the carriers.[1] At the station terminals, the sending and receiving apparatus are known as transmitter and receiver. This apparatus is of somewhat varying type and is designed to permit the carriers to be placed in the tube without interruption and to be brought to a stop at the terminal station so as to obviate danger and so as to facilitate handling. In the case of a long line reaching from the central post office to several sub-stations, the carriers for the farthest station have to be received and dispatched at each of the intermediate stations. The carrier used is a cylindrical steel shell about two feet in length. The surface of the carrier is galvanized to prevent rust. At one end the carrier has a permanent bottom and at the other end a hinged cover which may be opened for the purpose of putting the letters in. While the eight-inch tube is the standard size, there is a ten-inch line in use in Boston and a six-inch line in Philadelphia.

235. Capitalization, costs and inter-company relations in the pneumatic tube business.—The American Pneumatic Service Company, incorporated in Delaware on July 1, 1889, claims to control practically all of the important patents relating to pneumatic tube systems for use in stores, buildings, factories, hotels and for forwarding mail.[2] This company controls, through stock ownership, about fifteen other companies with a total issued stock and bonds of a par value

[1] *Investigations*, etc., *op. cit.*, p. 40.
[2] See *Moody's Manual*, 1908 Edition, p. 2058.

of nearly $8,000,000. The outstanding capital stock of the parent company is about $16,000,000 and its bonds $1,000,000. This company controls the New York Pneumatic Service Company, the Boston Pneumatic Transit Company, the Chicago Postal Pneumatic Tube Company and the St. Louis Pneumatic Tube Company, which make up the entire list of companies having contracts with the Government, with the single exception of the Pneumatic Transit Company of Philadelphia.[1] While the American Pneumatic Service Company claims to have a practical monopoly, the special committee of 1908 reported that certain competing companies in Boston, New York and Chicago had represented to the committee that they were in a position to enter into contract with the Government for installing pneumatic tube service. Commenting upon this feature of the situation, the committee said:[2]

"Pneumatic tubes have been in use for a great many years both in foreign countries and in the United States, and it is believed by this committee that the process of propelling an object through a tube by air pressure or suction is common property and that no patent prevents the free use of the basic principle. The patents scheduled by the American Pneumatic Service Company appear to relate to particular patterns of bent pipes, to particular patterns of receivers and transmitters, and to particular patterns of tube carriers; and it is our opinion that many of these patents cover merely minor variations of method, and are held not so much for use as for protection against conflicting patents. In view of all the circumstances recited above, one is not warranted in accepting without question, the claim of the American Pneumatic Service Company that they control an absolute and complete monopoly of the patents necessary for the purpose of a pneumatic-tube mail service."

In response to the Government's inquiry as to the price at which the various pneumatic tube systems in use for the transmission of mails could be purchased, the American Pneumatic Service Company stated that the total cost of its system, including in part the stock and bonds at par, was $7,093, 557, while the actual cost of construction as shown by its books was $5,526,822. The Pneumatic Transit Company of Philadelphia, fixed $1,390,000 as the purchase price for its system on the basis of 8.21 miles of tubes. The original cost of construction was stated as being $601,730 with cost of alterations and losses in operation amounting to $108,254 additional. The committee estimated that the en-

[1] *Investigations*, etc., *op. cit.*, p. 39.
[2] *Ibid.*, p. 47.

tire cost of reproducing the 45 miles of pipe in operation (including 1.915 miles just opened in Philadelphia), would be approximately $3,000,000.[1] It may be noted that in 1900 the Tubular Dispatch Company of New York, whose property and franchises were later sold at foreclosure for a comparatively small sum, stated to the committee of experts that the cost of its property, franchises and patents, including construction, stood upon its books in June, 1900 at $2,153,000.[2] This company then had a capital stock of $1,500,000 and bonded indebtedness of $600,000. This company's assets were purchased in 1906 by the New York Pneumatic Service Company, payment being made with the latter company's entire capital stock of $300,000. In discussing the relations between the various tube companies, reference should be made to the Batcheller Pneumatic Tube Company of Philadelphia, which owns a considerable number of patents.[3] By an agreement, however, between this company and the American Pneumatic Service Company, the latter controls the right to use the former company's patents for the entire United States excepting the state of West Virginia, the state of Pennsylvania excluding Pittsburgh and the city of Camden, N. J. It is understood also that the Batcheller Pneumatic Tube Company has given the Pneumatic Transit Company of Philadephia the right to use its patents in Philadelphia and Camden.

236. Government ownership and franchise relations with cities.—The appropriation made by Congress on June 2, 1900, for the investigation of pneumatic tubes, required that the Postmaster-General should collect evidence to enable Congress to determine whether the service should be "owned, leased, extended or discontinued by the Government." In regard to government ownership, the committee said:[4]

"In view of the importance of the pneumatic-tube service to business men and of its popular character, city governments should be expected to give all needful co-operation should the General Government elect to undertake the construction and ownership of lines needed for its exclusive use. As to whether the General Government should own and operate these lines involves many questions of public policy about which this committee does not feel called upon to express an opinion further than to say:—

[1] *Investigations*, etc., *op. cit.*, p. 50.
[2] Report of Jan. 4, 1901, *op. cit.*, p. 52.
[3] *Investigations*, etc., *op. cit.*, p. 39.
[4] Report of 1901, *op. cit.*, p. 37.

"The facilities to be provided are special and exclusive.

"Operation and maintenance through the agency of the Government appears to be entirely feasible.

"The annual cost would be very materially reduced.

"An important and necessary public service would not be subject to the possibility of unreasonable exactions.

"On the other hand, it must be pointed out that pneumatic-tube service, while it has passed beyond the mere experimental stage, still is subject to material development."

The committee, further, opposed a system of rental based on a fixed percentage of cost on the ground that such a system guaranteed no limit of annual cost to the government and opened the door for abuses.

"As a matter of principle," continued this report, "the committee would assume it to be indubitable that the Government should, whenever practicable, own its apparatus, of whatever kind, and especially whenever the service would be otherwise liable to interruption or impairment. On this principle it would seem unquestionably important that so vital a matter as the private ownership of all systems of postal transmission and, even more undeniably, systems of special and essential character such as those here studied, should be brought into accordance with this view at the earliest possible moment. While it may often be advisable that, in the experimental stages, such promising improvement may, and often must, be left in the hands of inventors and promoters, it should be held to be an admitted and indisputable principle that, at the earliest possible stage in its development, once its permanent introduction seems assured by its successful operation, the Government should construct the apparatus from its own specifications and by fair competitive bidding, under the advice and supervision of its own experts, and in entire independence of the commercial interests involved."

The committee recommended that if the contracts with private companies were renewed, there should be inserted in each lease, an option for purchase by the Government of all the property and patent rights applicable to the contract at a valuation fixed by experts or at a figure stated in the lease.

At this time the service was costing the Government about $27,000 a mile each year. The committee expressed the opinion that the cost could be largely reduced. This expectation was realized under the contracts later entered into and the annual rental per mile is now $17,000. The special committee reporting December 10, 1908, recommended that inasmuch as the existing contracts would not expire until June 30, 1916, there would be ample opportunity before that time for the companies to perfect their systems and for the

Post Office Department to observe the effect of the tubes upon the postal service.[1] The committee also suggested that during this period other methods of transportation might be developed or improved so as to change the outlook entirely. It concluded further that it was not feasible or desirable at the present time, for the Government to purchase, to install or to operate the pneumatic tubes, but suggested that five or six years later it would be advisable to renew consideration of the question of government ownership.

In a letter dated September 28, 1908, addressed to the mayors of the several cities in which pneumatic tubes were in operation, the pneumatic tube committee inquired as to the probable attitude of the municipal governments towards the United States Government in case the latter desired to open the streets of the cities for the construction and operation of tubes. The position taken by the Post Office Department with respect to the general rights of the United States in the conduct of the mail service was set forth in the following propositions:[2]

"That the Constitution of the United States confers upon Congress the power to establish post-offices and post-roads.

"That this power granted to Congress carries with it all powers necessary to make it effective.

"That all the streets of a city like St. Louis (for example) over which letter-carrier routes are established are post-roads under the law.

"That the conduct of the postal business by the Post Office Department is a governmental function.

"That any statute or ordinance which imposes any restriction on the free exercise of this function other than to make the agents of the Government subject to the local police regulations or the police power of the State, will have no effect as against the United States."

Commenting upon these claims of the postal department, the city counselor of St. Louis said:[3]

"The United States Government, through its officers, agents, licensees, and contractors has the same right to use highways located within the city of St. Louis that other members of the public have, but no more right. This right, as before stated, is the right to travel and the incidents thereto.

"The United States Government, in my judgment, has no right to enter upon any highway in the city of St. Louis and excavate the same or locate therein any permanent structure without the consent of the City of St. Louis.

[1] *Investigations*, etc., *op. cit.*, p. 12. [2] *Ibid.*, p. 98. [3] *Ibid.*, p. 100.

"I have been able to find no authority of any court which tends in any way to declare that the United States Government has any other right than above indicated in the use of the highways in any state or city.

"The acts of Congress which declare all highways located within all the states post-roads do not and, in my judgment, could not lawfully appropriate for the exclusive use of the United States Government, without compensation or authority from the proper state or city, any portion of any highway without the consent of the local authorities, state or city, as the case may be."

In general, however, the municipal authorities expressed their willingness to coöperate with the Government and to recognize its reasonable claims in case it desired to operate pneumatic-tube franchises.

237. General commercial franchises—New York City.— Two franchises for the use of the streets in New York City for pneumatic tubes have been granted directly by the State legislature. The first was given by an act passed May 9, 1874, according to the terms of which certain persons were authorized to organize a corporation under the general law for the organization of manufacturing companies.[1]

By this act, the grantees were authorized "to lay down, construct and maintain tubes of iron, wood or other material, underground and beneath the bed of navigable waters in and between the city of New York, and the villages, towns and cities in the neighborhood thereof, at such depth below the bed of such waters as not to interfere with the channels, anchorage or navigation thereof," and for the purpose of such construction underground, they were given "the right to open any street or avenue in any incorporated town or city, by and with the consent of the corporate authorities of such town or city, excepting in the city of New York, where such consent shall be obtained from the Commissioner of Public Works, and to convey letters, parcels, packages, mails, messages, merchandise and property in and through said tubes, for compensation, by means of the pneumatic method of propulsion." It was enacted that any one wilfully injuring the tubes, or articles deposited in them, should be guilty of a misdemeanor and subject to a fine of from $100 to $500, or imprisonment for a period of from three to six months, and forfeit to the owners of the tubes three times the amount of the damages inflicted. The legislature specifically reserved

[1] Laws of New York, 1874, chap. 400.

the right to alter, amend or repeal this act. The Tubular Dispatch Company was organized by the persons upon whom the legislature conferred this power.

More than twenty years later, another act was passed granting to this company the right to use electricity or other mechanical method as a motive power in addition to compressed air.[1] On Feb. 9, 1897, the company received a general permit from the Commissioner of Public Works to lay and maintain tubes from the general post office to various sub-stations.[2] On Oct. 28, 1897, the company received permission from the Board of Electrical Control, to install an electrical cable "for operation of switches and locking devices."[3]

This company was the original contractor with the United States Government for pneumatic-tube service in New York City. Another company, however, the New York Mail & Newspaper Transportation Company, had been chartered by the legislature in 1893 for the purpose of operating "pneumatic tubes and other devices for the speedy transmission and delivery of the mails, newspapers and parcels within and between the cities" of the state, and had been authorized to make such charges for pneumatic service as it should agree upon by public or private contract.[4] It was given the power of eminent domain for the purpose of taking any real estate necessary for its purposes and it was expressly empowered "without other or further authority of law or ordinance" to do any or all of the following:—

"To locate, to construct, to maintain and to operate tubes not to exceed three feet in diameter between the central post offices and the branch post offices and newspaper offices and postal stations in said cities of this state by such route or routes as shall be determined by said corporation and to transmit and to supply power along any or all of its route or routes and to make connections with and between said post offices and buildings in which newspapers are published and other buildings, railways, ferries, and postal stations within and between the cities of this state, and to convey and transport and to deliver the United States mails, newspapers, and parcels."

The company was required to pay annually into the treasuries of New York City and Brooklyn, "in equal parts, share and share alike, a sum equal to three per cent of its

[1] Laws of New York, 1895, chap. 977.
[2] *Investigations*, etc., *op. cit.*, p. 78.
[3] Minutes of the Board of Electrical Control, *op. cit.*, vol. 2, p. 1615.
[4] Laws of New York, 1893, chap. 164.

gross earnings in said city for the preceding calendar year, or a sum equal to $1 for every 100 yards of tubes constructed and operated by it in said city." It was provided, however, that the company could not be authorized to open the streets of the city of New York for the purpose of laying its tubes without the consent of the mayor or the commissioner of public works, except that such consent was not to be required "for repairs or for connections not to exceed in the length of any connection a distance greater than the length of four city blocks of maximum size." This company was for several years after 1898 the Government contractor for the tube service between the general post offices of New York and Brooklyn. In 1901 the plant, property and franchises of the Tubular Dispatch Company were leased to the New York Mail & Newspaper Transportation Company. The Tubular Dispatch Company was sold out, however, under mortgage foreclosure in June, 1906, and was succeeded by the New York Pneumatic Service Company, which secured the Government contract for both New York and Brooklyn covering a period of ten years ending June 30, 1916. The corporation counsel of New York City advised the comptroller that the New York Mail & Newspaper Transportation Company, under its franchise, was entitled to the option of paying three per cent of its gross earnings or a sum equal to $1 for every one hundred yards of tubes constructed by it. The company chose to make its payments on the latter basis which is said to yield to the city a small sum compared to three per cent of the company's gross receipts. Both the New York Pneumatic Service Company and the New York Mail & Newspaper Transportation Company are controlled, through stock ownership, by the American Pneumatic Service Company.[1]

238. Revocable permits — Boston. —The special committee of 1900 reported that the American Pneumatic Service Company's system of tubes had been laid for commercial purposes in the city of Boston on a double line of about 5¼ miles in length.[2] Under the general laws of Massachusetts, pneumatic tube companies are authorized, with the written consent of the mayor and aldermen of the city, to "dig up and open the ground in any of the streets, lanes and highways thereof, so

[1] For a general statement in regard to the tube companies of New York City, see *Investigations*, etc., *op. cit.*, pp. 78 to 80.
[2] Report of 1901, *op. cit.*, p. 23.

far as is necessary to accomplish the objects of the corporation."[1] It is provided, however, that the consent of the local authorities shall not affect the right to recover for all damages or injuries caused to persons or property. It is also provided that streets opened for the laying of pneumatic tubes shall be put "into as good repair as they were in when opened." If any person sustaining injuries caused by an obstruction of the highway or the laying down or repairing of the tubes recovers damages from the city, it is the duty of the company if it has had a reasonable notice, to repay to the city the amount of the damages so recovered with the taxable costs of both parties in such action. The mayor and aldermen are authorized to regulate, restrict and control the company's "acts and doings which may, in any manner, affect the health, safety, convenience or property" of the citizens.

Under the general city ordinance of Boston providing the terms and conditions upon which permits for opening streets shall be issued, it is required that the official issuing such a permit shall insert a condition to the effect that the person accepting the permit shall conform to the statutes and ordinances and the specifications in the permit itself. Any such permit may be revoked at any time by the authority issuing it, and it is provided that the violation of any of its specifications shall effect its immediate revocation. It is required that any person taking out such a permit shall indemnify the city against damages on account of the doing of the work permitted, or by reason of any negligence on the part of the person receiving the permit or his employees. Every permit must require that any portion of the street surface disturbed shall be kept in repair for the period of one year after being restored. Every permit must also specify the time, place, size, and use of the opening to be made in the street. It is provided that any person receiving a permit shall maintain "from the beginning of twilight through the whole of every night, over or near the place so occupied, opened, obstructed, or used, and over or near any dirt, gravel, or other material placed in or near such place, a light or lights sufficient to protect travelers from injury." A safe and convenient way for the use of foot travelers past the obstruction and for

[1] *Investigations*, etc., *op. cit.*, p. 68.

vehicles around or over the place must also be provided. Trees must be protected in a manner specified by the superintendent of public grounds. The person doing work in the street must "provide suitable sanitary accommodations for his employees." Every permit is to be delivered to the police officer on or before the expiration of the time fixed for the completion of the work and the police officer is required to return the permit to the street department.[1]

239. Franchise for mails only—St. Louis.—The rights of the St. Louis Pneumatic Tube Company in the city of St. Louis are set forth in a franchise ordinance approved June 10, 1903.[2] In this ordinance certain specified streets are named in which the company is authorized "to lay and maintain pneumatic tubes with the necessary man-holes and switches, to be used for the purpose of transmitting the United States mail under contract made with the United States." It is expressly stated that the tubes shall be used exclusively for the transmission of mail matter. It is provided that the discontinuance or abandonment of the use of the tubes for this purpose for the period of one year shall cause the forfeiture of the franchise. The city reserves the right to inspect and control the construction of the tubes and to order any changes to be made from time to time either in the construction, material or manner of maintaining them or in their location in the streets. All such changes required are to be made by the company without expense to the city. The company is required to execute a bond in the amount of $50,000 conditioned upon the faithful observance of the terms of the grant and the saving of the city from damages as a result of the construction or operation of the tubes. Failure on the part of the company to furnish or renew this bond, when required, is to work a forfeiture of the franchise. The life of the franchise is fixed at twenty-five years and the company is required to make an annual statement of its gross earnings and to pay into the city treasury five per cent of such earnings. The right to inspect the company's books, so far as they relate to gross receipts, is reserved to the city comptroller.

240. Tubes revert to city after twenty years—Chicago.—Apparently the most elaborate pneumatic-tube franchise

[1] See *Investigations*, etc., *op. cit.*, pp. 68–71.
[2] *Ibid*, pp. 101, 102.

granted in any city is that contained in an ordinance passed by the Chicago city council, July 13, 1903, in favor of the Chicago Postal Pneumatic Tube Company.[1] Under this franchise, the company was authorized to construct and operate tubes "with all suitable switches, turn-outs, and connections with such electrical or other connections as are absolutely necessary in, through, upon and under the streets, avenues, alleys, public ways, tunnels, bridges, viaducts and under the Chicago River." There were not to be more than two tubes on each route, the maximum size of each to be eight inches, inside diameter, and the cross section of the route including switches, turn-outs and connections to be approximately 275 square inches. Only such streets and places were to be used, however, as were necessary to connect the post office buildings with the branch post offices, sub-postal stations and steam railway stations. The tubes were to be constructed of cast iron, steel or brass capable of withstanding a pressure of 100 pounds per square inch, although working pressure was limited to twenty pounds per square inch. The company was required to file a map and plans before constructing its tubes. The tubes were to be used for the transmission of United States mail only, by compressed air or such other power as might thereafter be authorized. It was expressly provided that the franchise should become null and void if the tubes were ever used for any other purpose.

The company was required to keep on file, at all times, with the commissioner of public works, plans showing the location of each pneumatic tube, switch, turn-out and connection and as soon as it had laid any pneumatic tubes, to file a plan showing their location and the location of man-holes and other openings by which access to them could be obtained. It was expressly required that each cover over any opening should have the name of the company placed upon it. It was also provided that the commissioner of public works should designate the location to be occupied by the company's tubes and that the tubes should be laid without doing any permanent injury to the streets and without unnecessarily disturbing any authorized sub-surface structure already in existence. The company was required to commence work within six months and have at least eight miles of tubes completed within a

[1] See *Investigations*, etc., *op. cit.*, pp. 86 to 91.

year from the date of the ordinance, barring delays caused by injunction or by the action of the city. The right to intervene in any injunction suit was reserved to the city.

It was provided that before any permit should be granted to the company to open the surface of any street or public place, an estimate of the cost of repairing the street or place, with a fair additional sum as margin, should be made by the commissioner of public works and the amount so estimated should be deposited by the company with the city comptroller to remain in his possession for the period of one year. At the end of that time, the company was authorized to recover this deposit upon presentation of a certificate from the commissioner to the effect that the restored pavement was in satisfactory condition. The company was required, on notice from the commissioner, to "remove or change any of its pipes or tubes which may be in the way of, or interfere with the construction or location of any viaduct, public building, or other public structure, or any public or private undertaking, or shall interfere with the lowering of the tunnels under the Chicago River." It was provided that whenever any company, acting under a franchise from the city by which the city retained the right to fix the rentals and conditions for the use of a subway, should construct a general subway in any street in which the company's tubes were located, then on due notice the company should remove its tubes at its own expense and place them in the subway, and comply with all the ordinances passed concerning rentals for space in such subway.

The franchise was granted for a term of twenty years, and it was provided that at any time after the expiration of ten years, the city should have the right to purchase "the entire plant or plants of said company and all its property and effects of every kind or nature within said city of Chicago, either by mutual agreement or at an appraised value." It was provided that the city and the company should each appoint one appraiser and a third should be appointed by the first two; but in case they were unable to agree upon a third, then he should be selected by the chief justice of the circuit court of Cook County on petition of either party. The three appraisers so appointed were to have full access to the company's books and were required to make their report within six

months after their appointment. It was stipulated that "the value of this license or grant is not to be taken into account or considered of any value as against the city of Chicago." The city was given the option to purchase the plant at any time within one year after the report of the appraisers had been made. It was provided that if the company should fail to receive the contract for carrying the United States mails at the expiration of any existing contract, then the city should have the right to require the company to sell its plant to any other person, firm or corporation receiving the Government contract on the same terms as were provided in case of purchase by the city. At the expiration of the franchise, the company's tubes then in the streets were to become the absolute property of the city, and the company agreed to convey the tubes, free of all liens or encumbrances, to the city of Chicago or to any person, firm or corporation that might be selected by the city. Upon the acceptance of the ordinance, the company was required to deposit the sum of $50,000 in cash or negotiable securities to guarantee the completion of the first eight miles of its tubes within the time required by the ordinance. The company was also compelled to file a bond in the penal sum of $50,000 to guarantee its compliance with the terms and conditions of the franchise and to indemnify the city against all liability for damages on account of the exercise of the company's privileges.

An annual three per cent tax on the company's gross revenues for the first four years of the life of the ordinance and a five per cent tax for the remaining sixteen years, was imposed. In addition to this payment, the company was required at the same time it constructed its pipe line between Harrison Street and the sub-postal station at the stock yards, to place in the same trench with its pneumatic tubes two vitrified clay conduits, three inches in diameter, such conduits to be installed without expense to the city and to be the property of the city for its sole use. This ordinance was to be accepted within ninety days. The company waited until October 12, 1903, the full period of ninety days, before filing its acceptance.

241. Compressed air franchise—Dallas, Texas.—On May 28, 1908, a franchise was granted by the board of commissioners of the city of Dallas to J. Ford House, his associates

and assigns, to construct, acquire, maintain and operate a plant for the manufacture of compressed air, and to construct and maintain pipes and mains with all necessary connections along and across the streets of the city below the surface for a period of twenty years.[1] This franchise contained a clause to the effect that the grantees "upon the request of any citizen of the city of Dallas whose premises are located along the route of any main or supply pipe of the said grantees, shall construct a service pipe of proper size and capacity, to furnish such person with connection with the mains and supply pipes of the said grantees." The service pipe was to extend from the supply pipe to the curb line. It was provided, however, that the grantees should not be compelled to furnish service or extend a service pipe to any premises more than three hundred feet distant from the nearest main, unless it should seem to the board of commissioners, upon proper proof, that such extension might be required, "without inflicting upon the said grantees any unreasonable expense or cost," in which case the service was to be furnished as directed by the commissioners. In all cases, however, the grantees were to have a full opportunity to be heard upon the question whether such service should be furnished or not.

The grantees were authorized to charge consumers such rates as should be agreed upon by contract, "provided equal and uniform service shall be extended to the citizens of the city of Dallas, and such citizens shall be served at equal and uniform rates, quality and pressure considered." It was further provided that the board of commissioners should, at all times, have the right as provided in the city charter to regulate and lower the rates. It was stipulated that a discount of ten per cent should be allowed for payment on or before the tenth day of any month for the service rendered during the preceding month. As compensation for the franchise, the grantees were required to pay to the city four per cent of their gross receipts from the business of furnishing compressed air through pipes and mains situated in the streets and public places. But this gross-receipts payment was not to be required until after the expiration of the first three years of the franchise period.

The grantees were forbidden at any time during the period

[1] *Franchise Ordinances of Dallas*, 1908, p. 296.

of their franchise to "consolidate or combine either directly or indirectly with any other person, firm, or corporation within the city of Dallas, or elsewhere, engaged in the business of furnishing or trying to furnish compressed air or other power or means used for the purpose of manufacturing fuel or illuminating gas within the city of Dallas." The grantees were also forbidden to purchase the property, rights, or franchises of any one else engaged in such business. It was provided that any arrangement establishing a community of interest either directly or indirectly tending to regulate the rates to be charged by the company for compressed air or other power or means used for the purpose of manufacturing fuel or illuminating gas within the city of Dallas should be construed to be a combination within the meaning of the section.

The pipes laid under the franchise were to be from one to ten inches in diameter. The system used was to consist of a single pipe line of standard galvanized iron or standard wrought iron or steel pipe. A power plant was to be completed and a distributing system installed along at least fifteen blocks in the city within a period of eighteen months. The grantees were required to make a cash deposit of $1,000 to be held by the city until the terms of the franchise relating to the construction of the power plant and distributing system had been complied with. The grantees were authorized to transfer the franchise at any time within sixty days after its acceptance to a corporation to be organized under the laws of the state of Texas and to have its place of business in the city of Dallas.

242. Waste water power utilized to operate a compressed air plant—Richmond, Va.—On May 16, 1898, a franchise was granted by the council of Richmond to a number of individuals authorizing them, so far as the city had the right to make the grant, to use the waste water flowing from the fore-bay of the city's new pump works, so far as this water was not needed for the city's water supply or for operating its present machinery at its maximum capacity.[1] The waste water was to be used "for the purposes of power, cooling, refrigerating and ventilation." The grant was made on the express condition that after the expiration of five years the

[1] *Franchises*, etc., Richmond, *op. cit.*, p. 236.

city council might at any time revoke the franchise so far as it related to the use of surplus water. It was also provided that if at any time during the five years the superintendent of water works should be of the opinion that the city had need of any of the surplus, the grantees would be required to furnish the city free of charge sufficient power to operate the steam pump at the water works "to such capacity as the said superintendent may determine, and as long as he may deem it necessary." In case they failed for a period of 48 hours to furnish sufficient power, the superintendent was immediately to prevent any further use by them of the surplus water or such part of it as the committee on water should deem necessary for the city's needs.

It was provided that the grantees should organize a corporation within twelve months from the approval of the franchise. They were given the right to transfer all their privileges under or by virtue of this ordinance to the corporation so organized. The grantees were expressly authorized to "construct and lay pipes for the distribution of air power and for cooling, refrigerating and ventilating purposes" along certain streets. The location, materials and manner of construction of the pipes and fixtures of the grantees were to be according to the decision of the city engineer, subject to the approval of the committee on streets. The city was to be indemnified against any damages resulting from the operation of the franchise.

The franchise for the use of the surplus water was to continue for 20 years, unless sooner revoked. The franchise for maintaining pipes in the streets was for a period of 30 years. The grantees were authorized to make and use all proper connections found by them necessary along their various routes. It was stipulated that work upon the construction of the plant to be established by the grantees should be begun within six months after the approval of the ordinance, and, including the laying of the pipes from the plant to the corporate limits, the work was to be so far completed as to enable the grantees to furnish at least 400 horse-power within one year after the approval of the franchise, such energy to be distributed within the city limits. All compressed air generated from the use of the surplus water obtained from the city was to be distributed and used within the city. It was provided

that if the grantees were hindered or delayed in doing or completing the work within the periods above specified "by reason of any extraneous or impersonal cause" they were to be given a corresponding additional allowance of time.

The grantees were required to pay the city $5000 a year for the use of the surplus water granted to them. The amount of this surplus was estimated at the time as being 400 cubic feet of water per second. In lieu of all other franchise taxes and taxes upon their fixtures, the grantees agreed to pay for the franchise, quarterly into the city treasury, until January 1, 1909, a sum equal to 3% of their gross earnings from furnishing compressed air for power. The council reserved the right to increase this payment up to a maximum of 5% at any time after January 1, 1909. These money obligations of the company to the city were to be a first lien upon all the company's works, machinery, pipes and fixtures. For failure to make any of the payments within ten days after they became due, they were to be subject to a fine of from $10 to $100 for each day's failure. In case the grantees continued for thirty days in default on any such payment, the city council could at any time order them to cease using water or pipes or both until payment has been made. If the company, having received such notice, should after the expiration of 48 hours from that time continue to use the water or to disregard the notice, it would be liable to a fine of not less than $10 or more than $500 per day.

Before commencing work, and within ninety days from the approval of the ordinance, the grantees were to deposit with the city treasurer $5,000 worth of city or United States bonds. This deposit was to be used as a penalty fund. Whenever, under the terms of the ordinance, the grantees should be required to stop using the surplus water of the city, it was stipulated that they should remove from the city's land and from the land of the railroad company used by the city, all parts of their plant, including houses, or should fill all wells dug for the compression of air. In case the grantees should cease to furnish compressed air to consumers for a period of sixty days, then the franchise was to come to an end and the grantees were to remove from the streets all their pipes and fixtures. Any failure to comply with the requirements of the ordinance, or with any other requirements thereafter legally

imposed by the city for the carrying out of the terms and conditions of the ordinance, excepting those particular failures for which a specific fine had been agreed upon, would be subject to a fine of not less than $10 and not more than $500.

CHAPTER XVIII.

OIL PIPE LINE FRANCHISES.

243. Pipe lines for local distribution—Cleveland.—While the construction and operation of pipe lines for the transportation of oil from the wells to the refineries and from the oil fields to the seaboard is an enterprise of national importance, which in all respects partakes of the nature of a public utility, the operation of such lines for local distribution is extremely limited. A number of franchises, however, have been granted by the city of Cleveland to the Standard Oil Company requiring the distribution of oil as a local public utility. These franchises were granted in 1891 and 1892, and provided for the laying of pipe lines through certain specified streets.[1] In three cases, the size of the pipe is limited to a diameter of four inches, while in the fourth franchise the size is limited to six inches. The depth at which the pipes were to be laid was made subject to the will of the Director of Public Works and it was expressly stipulated that the pipes should be so laid as not to interfere with sewers, water mains or gas pipes. In one grant it was provided that the pipe lines should be used for conveying crude oil from the company's works to the manufacturing establishments situated along the route of the Lake Shore and Michigan Southern Railroad. In another case it was specified that the crude oil carried in the pipe lines was to be used for fuel purposes. In the other two franchises the company was to furnish fuel oil conveyed through its pipes to all manufacturers applying for it, whose establishments were located "upon or in the vicinity of any of the streets through or across which" the pipes were laid. It was also provided that the oil should be furnished "without

[1] Special Ordinances, City of Cleveland, 1907, pp. 28–34.

discrimination in rates." In one franchise it was stipulated that the company should "make such change in location, grade or construction of said pipe line at its own expense as shall be ordered from time to time by the Board of Control, and the use of said pipe line shall be discontinued, and the same, or any portion thereof, removed from the street by said Standard Oil Company, at thirty days' notice so to do by the Board of Control and the City Council, and the condition of the streets restored by said Standard Oil Company at its own expense, to the satisfaction of the Board of Control and the Director of Public Works." Substantially similar provisions were contained in all the other grants. The company was not authorized to undertake any repairs on its pipe lines without the permission of the Director of Public Works, and the company agreed to pay all damages that might be done to abutting property owners in connection with its work and to indemnify the city for any liabilities resulting from the laying of the company's pipes. A bond of $5,000 or $10,000 was required in each case. In one of the franchises it was stipulated that in crossing certain streets underneath the paving, the pipes should be laid by forcing them through without removing the pavement or in such other manner as should be designated by the Director of Public Works.

244. Pipe lines for through distribution—Toledo and Jersey City.—On October 13, 1890, an ordinance was passed by the city of Toledo, granting to the Paragon Refining Company the right to construct, maintain and operate "a system of tubing and pipes for the purpose of conducting, piping and transporting crude petroleum or mineral oil, together with the necessary feeders, shut-offs, stop-cocks and other necessary devices for the successful operation" of its pipe line in certain streets of the city.[1] It was expressly provided that the right and privilege derived from this ordinance should be subject to any general statutes of the state then in force or thereafter enacted and to any general ordinances of the city that might be thereafter passed regulating the mode of laying, relaying or repairing pipes and other devices in use by the company and the conducting of oils through the streets in so far as such statutes and ordinances were

[1] Special Ordinances, *op. cit.*, p. 57.

not inconsistent with the provisions of this ordinance. It was provided that the company should get a written permit from the City Civil Engineer before proceeding to take up, relay or repair any portion of its pipe line. However, in case of emergency arising from accident and requiring immediate action, the company was not required to get a permit in advance, but was required to make a report of the work done to the City Civil Engineer. It was stipulated that if the company should fail or refuse to comply with the conditions of the franchise or with any general statute or ordinance relative to the construction of pipe lines and the piping of oil, so far as the provisions of such law or ordinance should be applicable to, and not inconsistent with the franchise, the company's rights and privileges should be forfeited and the city should have the right to re-enter and take possession of them to the exclusion of the company. Another franchise similar to this one had been granted to the same company for other streets only two weeks earlier.

Another instance of a grant for an oil pipe line franchise for passing through a city without rendering local service is found in the case of an ordinance passed Nov. 22, 1881, by the common council of Jersey City over the mayor's veto.[1] By this grant permission was given to the Standard Oil Company to lay, maintain, operate and repair pipe lines beneath the surface of certain specified streets for the purpose of conveying "crude petroleum oil." The company was required not to disturb or injure in any manner any water or gas pipes or public or private sewers already laid or thereafter to be laid in the streets of the city. The company was required to fill in and repair all excavations made by it. The company was also to execute a bond in the sum of $10,000 to guarantee its compliance with the conditions of the ordinance. The city was to be indemnified against damages resulting from operation under the franchise. The company's pipes were to be kept at all times buried at least two feet below the established grade of the streets in which they were laid.

245. A fuel oil franchise—Dallas.—On March 24, 1902, the city of Dallas granted to C. L. Wakefield and his associates the right to construct and operate a pipe line "for the conduct

[1] Griffiths' Revised Ordinances of Jersey City, *op. cit.*, p. 236.

of oil for fuel purposes" under all the streets of the city, with one exception.[1] Pipes laid under this franchise were to be placed at a depth of not less than 22 inches below the surface of the earth. Before the construction and laying of any pipe, the grantees were required to deposit with the City Engineer an amount fixed by that official to insure the restoration of the surface of the street to its former condition. In case the grantee failed to do the work, the City Engineer was authorized to do it and deduct the expense from the deposit which had been provided for. It was stipulated that "it shall be the duty of the owners of the franchise to furnish service to all parties demanding the same whose premises may be situated along the line that the said pipe shall run, and connections shall be made within not more than thirty days from the time the request is made for the same," provided that the person demanding service shall deposit with the owner of the franchise an amount to cover the expense of making the connection, and it shall be the duty of the owner of the franchise to give a rebate to the person demanding such service to the amount of the expense and cost out of the first service rendered." The owners of the franchise were required to "immediately indemnify" the city against damages resulting from the construction or maintenance of the pipe lines. The grantees were required to pay to the city in advance $50 for each 2,000 feet of main line or fractional part of that amount constructed. The franchise was to be accepted in writing within fifteen days after its passage and was to remain in effect for a period of ten years, subject to the provisions of the city charter and ordinances.

[1] Franchise Ordinances of Dallas, 1908, p. 294.

CHAPTER XIX.

ARTIFICIAL AND NATURAL GAS AS PUBLIC UTILITIES.

246. History of artificial gas as a public utility.—Aside from the supply of water, gas is the oldest of the important public utilities. It is said that it was first used for lighting about 1804 or 1805 in Manchester, England, and in 1813 was used for lighting London Bridge.[1] In this country a man living at Newport, R. I., lighted his premises with coal gas as early as 1806. A gas company was organized for public lighting in Baltimore in 1816. Companies were organized for Boston and New York in 1822 and 1823 and for Brooklyn and Bristol, R. I., in 1825. New Orleans followed with a gas company in 1835. "A glance at the early history of these pioneer companies, as far as it is available, indicates a series of failures," writes Arthur L. Hunt in the census report for 1900.[2] "Not only was it a difficult matter to secure the necessary capital to erect and operate a plant, but for some time the introduction of gas was strongly opposed on the ground that the erection of gas works and the distribution of the product endangered the health and lives of the inhabitants of the surrounding community." This opposition, however, was overcome and the companies secured the necessary franchises. Referring to the lighting of the first public gas lamp in Boston on January 1, 1829, Mr. J. L. Richards says: "The inauguaration of the use of gas as a medium for lighting was the occasion of a great demonstration at which the mayor of Boston and the aldermen made speeches of congratulation to the gentlemen in charge of the

[1] J. L. Richards, in Annals of the American Academy of Political and Social Science, May, 1908, vol. 31, p. 59.
[2] Twelfth Census, vol. x., *Manufactures*, Pt. 4., p. 713.

gas company, and promised them every assistance to increase the growth of their enterprise."[1] The enterprise developed slowly in Boston, however, for nearly ten years later the city had only twenty gas lamps. The number was increased, however, early in 1839 to 180, and steadily grew till on July 1, 1907, the number of public gas lamps in Boston was 10,182. The price of gas when the supply was first undertaken in Boston was $5 per 1000 cubic feet, and was gradually reduced till on April 1, 1879, it was $2, and on July 1, 1907, 80 cents.[2] In Norfolk, Va., where gas was first introduced in 1865, the gross price was $6 and the net price $5 per 1000 cubic feet. On April 1, 1906, the gross and net prices were just one-fifth of these amounts.[3] In Atlanta, Ga., the maximum price of gas was fixed by contract in 1855 at 50 cents per 100 cubic feet. The price was reduced from time to time until 1891, when it reached $1.10 per 1000 cubic feet with a discount of 10 cents for prompt payment.[4]

According to the Federal census for 1850, there were at that time thirty plants for the manufacture of gas with a total capital of $6,674,000 and an output for the year worth $1,921,746.[5] Fifty years later the number of plants had increased to 877; the investment to $567,000,000, and the annual value of products to more than $75,000,000. Artificial gas has been compelled to meet competition in various forms for lighting and heating. The development of the petroleum industry in the middle of the nineteenth century brought kerosene oil into general use and greatly retarded the increase in the use of gas. Later electricity was introduced and became an active and powerful competitor in the lighting business. Still later, natural gas was piped to many cities, and in some cases has entirely driven out the artificial product. In 1900 out of 1653 cities and towns of more than 2500 population, 827 had gas manufacturing plants and 826 did not. The entire number of artificial gas plants reported was 877, of which 269, or 30.7%, were being operated in connection with electric light plants. The total value of manufactured gas sold in 1900 was $69,432,582.[6] The value of by-products sold, including tar, coke and ammonia, was $4,283,000, and the

[1] "The Boston Consolidated Gas Co.," *Annals, op. cit.*, p. 61.
[2] *Ibid.*, p. 61.
[3] National Civic Federation Report, Pt. 2, Vol. I., p. 470.
[4] *Ibid.*, p. 480.
[5] Twelfth Census, Vol. X., p. 705.
[6] *Ibid.*, p. 712.

income from renting stoves and the sale of appliances was approximately $2,000,000. The total amount of gas sold for lighting and heating was more than 67 billions of cubic feet, and the average price realized for the whole country was $1.035 per 1000 cubic feet. Variations in the average price in different sections of the country were shown as follows:[1]

New England States	$1.176
Middle States	.962
Southern States	1.426
Central States	.972
Western States	1.492
Pacific States	1.745

The United States Geological Survey Report for 1907 gives returns for the manufacture of coal gas and water gas separately.[2] These returns, however, include not only gas works of the ordinary type, but coke ovens of which gas is a by-product. Returns were received in that year from 516 companies manufacturing coal gas and 520 companies manufacturing water gas. The total output of coal gas sold was approximately 55 billions of cubic feet, of which approximately 5/9 was consumed for light and 4/9 for fuel. The average price realized was 67 cents per 1000, this low average being brought about through the great increase of coke oven gas sold for fuel for industrial purposes at a very low rate. The entire value of coal gas manufactured in 1907 was about $36,500,000. Of oil and water gas there was manufactured and sold approximately 95 billions of cubic feet, of which a little more than ¾ was used for light and the rest for fuel. The total value of the water gas was $90,000,000, the average price being 95 cents, and being practically the same for both light and fuel.

Figures for by-products from coke ovens are not given separately. Taking the coal gas works and coke ovens together, the amount and value of the various products were as follows:

Coke; amount 8,093,140 tons, value $30,332,644.
Coal tar; amount 103,577,760 gallons, value $2,651,527.
Ammoniacal liquor; amount 54,066,541 gallons; value $1,128,176.
Anhydrous ammonia; amount 16,556,995 pounds; value $1,472,881.
Ammonium sulphate; amount 48,882,237 pounds; value $1,525,472.

[1] Twelfth Census, Vol. X., p. 712. In the Census table there is an evident error in the average price for the Middle States, which I have corrected.
[2] See pp. 291 to 322.

Total value of by-products, $37,110,700.
Total value of coal gas manufactured, $36,462,304.

247. Special features of gas franchises.—Gas has long been regarded as one of the most profitable of public utilities. The amount of gas stocks outstanding in 1900 was almost double the amount of bonds outstanding. As a matter of fact, gas stocks are usually regarded as safe investments. They do not by any means represent in all cases actual cash paid in by the stockholders. They have, however, quite generally been given real value either by the re-investment of profits, by the appreciation of real estate and street mains, or simply by long-continued payment of dividends. In the granting of a gas franchise, therefore, a city has to deal with a long-established utility in which the possibility of profits under monopoly are very great. The question of rates, coupled with heat-giving and light-giving quality and pressure, is one of paramount importance. In communities where incandescent mantles are in general use the candle-power of the gas is unimportant. The light results from the heating of the mantle, and accordingly a gas with a very low candle-power and of high heating quality is better for illumination where mantles are used than a gas of a much higher candle-power and lower heating value would be. Inasmuch as the light from incandescent mantles is vastly better and more economical than the light from the naked gas flame no matter how good the gas may be, it is important to encourage the use of mantels and lay emphasis on the heat-unit value of the gas. In this way the interests of the consumer using gas for lighting, heating and cooking will be harmonized. It is believed that the heat value of gas should not be less than 590 or 600 British Thermal Units, while under the conditions mentioned an illuminating value of 16 candle power is sufficient. The difference in cost to the consumer as between a 16 candle power gas and a 22 candle power gas would probably be not less than ten cents per 1000 feet. If the price of mantles can be reduced to a reasonable figure, every consideration of public policy points to the desirability of securing cheaper gas even at the sacrifice of candle power.[1] Gas franchises have been more frequently exclusive in terms than grants for any other class of public utilities except water works. It

[1] See National Civic Federation Report, 1907, *op. cit.*, Pt. 1, Vol. I., p. 208.

is not easy to explain just why this should be so, unless on account of the fear of the multiplication of nuisances. A gas plant is recognized as a disagreeable neighbor in any residence section of a city. The multipication of gas pipes in the streets with the possibility of leaks and consequent disintegration of pavements, destruction of trees and explosions in man-holes, seems in many cases to have appealed to the city authorities as worse than the dangers of monopoly. Particular care should be taken in every gas franchise adequately to protect the property of the city and the property and lives of the people against the dangers inherent in the distribution of gas. Not the least important of these is the danger of asphyxiation through leaky fixtures. Slight leaks coupled with the impoverishment of the air resulting from combustion in all likelihood will gradually affect the health and vigor of the citizens unless especial care is taken. Aside from the problem of rates and the problem of danger, there is the specially difficult problem of uniform pressure with a constant supply ready to meet the heaviest demand for both lighting and heating. Elaborate provision is necessary for the regulation of pressure and the inspection and testing of gas by the municipal authorities. Gas pipes, like water mains, should be laid below the frost line to prevent freezing. It is also especially important in gas franchises that the consumer should be protected in the matter of the accuracy of meters, the laying of service pipes and the furnishing and care of fixtures.

248. Natural gas for heating and lighting.—It is said that natural gas was used as early as 1821 to light the village of Fredonia, N. Y.[1] It was not, however, until about 1883 that the natural gas industry developed any importance as a public utility. The supply of natural gas so far as it has been discovered, is limited for the most part to a few states, of which Pennsylvania, Ohio, Indiana, West Virginia and Kansas are the most important. The development of the natural gas industry for a few years after 1883 was extremely rapid. It is estimated that more natural gas was used in 1888 than in any single year since that time. The estimate for that year is 750 billions of cubic feet, which is five times as much as the entire output of artificial gas in the year 1907. Owing

[1] Special Reports of the Census Office, "*Mines and Quarries, 1902*," p. 773.

to the enormous pressure developed when the natural gas reservoirs of the earth were first tapped and in accordance with the general spirit of extravagance which has prevailed in matters relating to natural resources in the United States, immense amounts of natural gas were wasted in the early years of its use.

"Natural gas is used principally as a source of light and heat in domestic service," says Mr. F. H. Oliphant.[1] "It is employed extensively in industrial establishments for many purposes, notably in the manufacture of glass, in the generation of steam, puddling of iron, in roasting ores, in heating, furnaces, and in the manufacture of steel, and it is also utilized as a source of power in the gas engine, in drilling and operating oil and gas wells, and in pumping oil. The heat value stored in natural gas is greater than that caused by any artificial combination of carbon and hydrogen, and is a perfect fuel as it issues from its original rock-sealed reservoirs. No preparation is necessary for its combustion and no residue is left. It is not affected by ordinary temperature and it is easily distributed by pipes to points of consumption. It is a most economical source of light and power, and an ideal household fuel."

Natural gas consumed with an ordinary tip at the rate of seven or eight cubic feet per hour gives light of about six or seven candle-power. In an Argand burner with a chimney consuming five or six cubic feet it gives about twelve candle-power. When incandescent mantles are used, "the result is the cheapest and best illuminant known." Mr. Oliphant states that the introduction of natural gas into the household has been accomplished without personal inconvenience or loss of life except in rare cases. He says that the risk of fire is less than when wood or coal is used. Asphyxiation has resulted, however, in some cases from the use of a gas stove in the room without a flue connection, inasmuch as under these conditions the combustion is imperfect, and the air is likely to become saturated with carbonic acid gas. Out of a total of 651 natural gas companies in the year 1902, 430 reporting to the Census Bureau had a capital stock of $92,190,000 and a bonded debt of $19,444,000. The value of the gas produced in that year from the 14,556 wells in

[1] Special Reports of the Census Office, "Mines and Quarries, 1902," *op. cit.* p. 774.

operation was $30,868,000, and the total length of natural gas pipe laid up to December 31, 1902, was approximately 25,000 miles There were 510,000 domestic consumers supplied with natural gas. This number more than doubled in the next five years, for in the Geological Survey Report for 1907, the number of domestic consumers is given as 1,055,181, and the number of industrial consumers as 13,005.[1] In the latter year, the amount of natural gas produced was estimated at 404 billions of cubic feet, or nearly three times the total amount of artificial gas made. The average price of natural gas was 13.07 cents per 1000 feet, making the total value of the product for the year 1907 approximately $53,000,000. Of the total amount of gas consumed, about 130 billions of cubic feet was used for domestic purposes at an average price of 23 cents per 1000, while the remaining 273 billions used for industrial purposes sold at an average price of only 8.3 cents. The number of wells in operation had increased from 14,556 in 1902 to 18,674 five years later.

The natural gas companies owned in 1907 about 700 square miles of land and held under lease nearly 10,000 square miles more. In some cases the original pressure at the gas wells was as high as 1500 pounds to the square inch. In most cases, however, the pressure has gradually diminished with the escape or use of gas, so that some fields have had to be abandoned altogether while in others special machinery has been installed to pump the gas and force it through the pipes at sufficient pressure for a distant supply. In some instances natural gas is carried through pipe lines not less than 250 miles to the point of consumption. Pipe lines are now being laid from the West Virginia fields to Cincinnati and it is proposed to lay other lines from the same state to Baltimore. It is also proposed that lines be laid from the Oklahoma fields to St. Louis, a distance of about 350 miles. Although the pressure at the field end of the pipe lines is very great, gas is generally distributed to private consumers in cities at a pressure of from three and one-half to seven ounces to the square inch. Regulators are placed between the high pressure pipe lines and the low pressure distributing mains in a way that is analogous to the use of transformers on high tension electric wires.

[1] *Op. cit.*, p. 328.

There are great fluctuations in the supply and value of natural gas in the principal fields of production. The increase and decrease in the value of this product in the five leading gas producing states for five different years from 1882 to 1907 are shown in the following table, compiled from the Geological Survey Report of Mineral Resources of the United States for 1907:[1]

	1882.	1888.	1896.	1902.	1907.
Pennsylvania	$75,000	$19,282,375	$5,528,610	$14,352,183	$18,844,156
Ohio	.....	1,500,000	1,172,400	2,355,458	8,718,562
West Virginia	.....	120,000	640,000	5,390,181	16,679,962
Indiana	.....	1,320,000	5,043,635	7,081,344	1,572,605
Kansas	.....	.....	124,750	824,431	4,843,019
All other States	140,000	407,500	493,117	864,266	2,217,531
Total	$215,000	$22,629,875	$13,002,512	$30,867,863	$52,866,835

No state other than the five for which statistics have just been given had ever reached the million dollar mark in the production of natural gas in any one year up to 1907. In that year the value of the natural gas production of New York was $766,157; of Oklahoma $417,221; of Kentucky $380,176. Twenty-one states in all are mentioned as producing some natural gas.

249. Artificial and natural gas franchises compared.—A franchise for the supply of natural gas to a city, while containing all the safeguards required in an artificial gas franchise, should also contain certain special provisions. The supply of natural gas is derived practically always, at least in the case of the more important cities, from distant fields, and frequently from other states. Under these circumstances, it is probable that the company distributing the gas will not be the same corporation as the one building the pipe line or the one developing the field. At any rate, the necessity of passing through many jurisdictions and the possibility of having the supply exhausted through the service of other communities, complicate the situation. The franchise once having been granted and the supply of manufactured gas having ceased, the city is pretty well at the mercy of outside interests unless the franchise is most carefully guarded

[1] Pages 824, 825.

by the imposition of penalties for failure to furnish a constant supply at uniform pressure at the price fixed. The question of pressure is especially important because natural gas is generally used not only for lighting and cooking, but also for heating residences, and on this account, when the weather turns suddenly cold, there is a tremendous increase in the demand for gas. Moreover, as natural gas is ordinarily fed into the distributing system direct from the pipe lines, not being stored up in holders to meet a heavy demand, it is absolutely essential that the pipe lines should be of sufficient capacity to prevent a gas famine just at a time when gas is most needed. It is said that the uncertainty during the winter months of supply in some localities is so great that manufacturing concerns do not depend upon gas for fuel except during the summer months. On account of the likelihood in any particular case that, irrespective of the capacity of the pipe lines, the supply will in time become deficient or give out entirely, it is of great importance that every natural gas franchise should make provision for the furnishing of manufactured gas in case of necessity. Adequate provision should also be made for proper notice to the people and supervision by the company of the installation of fixtures adapted to the use of natural gas.

A special committee of the Cleveland Chamber of Commerce, after an investigation made in connection with an application for a natural gas franchise in that city, recommended in its report of March 19, 1907, the insertion of certain important provisions in the pending ordinances.[1] It recommended that the applicant companies should bring their supply from the West Virginia fields only, and that their pipe lines should not be tapped to serve any other large city. The gas furnished should not be of less than 900 or 1000 heat units and should be delivered "as it comes from the earth, without mixture with air or other adulteration." The committee further recommended that the companies should be required to maintain their existing gas works in a state of readiness to manufacture gas at any time upon the failure of the supply of natural gas. They were to be required to maintain a constant supply at a uniform pres-

[1] "Report of the Special Committee on Natural Gas Ordinances," adopted by the Cleveland Chamber of Commerce, Mar. 19, 1907.

sure and particularly to maintain in constant use the holders then being used for artificial gas for the purpose of equalizing pressure. It was also recommended that the companies should be required to furnish meters and meter connections without cost to the consumers and to install without charge a safety-valve at some point in the supply pipe on the premises of each consumer. This valve would be for the purpose of shutting off the supply whenever the pressure should fall below the point at which the gas would burn in any burner. The companies were also to be required to place at their own expense a pressure regulator near each meter. It was also recommended that if the companies should sell gas for other than domestic purposes at a price other than the one to be fixed in the ordinance, they should be required to charge the same rates to all consumers using gas for similar purposes "without regard to the quantity consumed; a possible exception only being a special rate to the City of Cleveland."

While the proposition for granting a new natural gas franchise failed to pass the city council in Cleveland on account of irreconcilable differences in regard to rates, these recommendations of the Chamber of Commerce committee are of importance in connection with natural gas franchises generally.

CHAPTER XX.

GAS FRANCHISES WHERE ONLY ARTIFICIAL GAS IS AVAILABLE.

250. History of gas franchises in New York City.—There are at the present time twenty-one operating gas companies in New York City, which in the year 1907 supplied approximately 997,752 consumers.[1] Most of these companies, however, are controlled either by the Consolidated Gas Company of New York or by the Brooklyn Union Gas Company, and these two companies are themselves closely affiliated. In fact, there were only about 30,000 consumers being supplied by companies even nominally independent of these two great systems. The total amount of gas manufactured by all these companies during the year ending June 30, 1907, was 34,657,000,000 cubic feet. Of this amount, between 5 and 6 per cent was unaccounted for, being lost through leakage, condensation or in some other manner. The gross receipts of the various companies, not counting the extra twenty cents per thousand cubic feet which the Consolidated Gas Company collected from the consumers and deposited with the United States court pending the final decision of the eighty-cent gas litigation, amounted to about

[1] See Annual Report of Public Service Commission for the First District, New York for year 1907, vol. 2, p. 458.

$27,247,000 of which $967,000 was received from the city for public lighting, and about $557,000 was received from the rent of gas stoves, engines, lamps, etc. The gross amount received on prepayment meters was $2,373,000.

The franchises exercised by the various gas companies of New York City were originally granted by three cities, nine villages and twelve towns. This does not include the franchises of the borough of Richmond which appear to have been established in large part by acquiescence in the first four wards of that borough formerly occupied by four towns and three villages. The first gas franchise in old New York was granted in the form of a contract dated May 12, 1823, to the New York Gas Light Company which had been incorporated during the same year by special act of the legislature.[1] Under its legislative charter the company was authorized to "manufacture, make and sell gas, to be made of coal, oil, tar, peat, pitch or turpentine or other materials," and to be used for lighting the City of New York and its streets, "and any buildings, manufactories or houses therein contained and situate." It was provided, however, "that no public street, lane or highway in the City of New York shall be dug into or in anywise injured or defaced without the permission" of the city having first been obtained. In accordance with this authority, the common council granted the company "the sole and exclusive privilege and right of laying or placing underground pipes in all and every of the public streets and parts of streets" south of the line running from the foot of Grand Street at the East River to the foot of Canal Street at the Hudson River, "for conducting gas for lighting the public lamps" and the houses and buildings adjacent to the streets south of this line.[2] The company was "to have and to hold and to enjoy" these privileges "for and during and until the twelfth day of May, which will be in the year of our Lord one thousand eight hundred and fifty-three." The company agreed that within two years it would establish and complete "good and sufficient buildings, works and apparatus for the preparing and manufacture of gas," and that it would cause pipes of sufficient capacity to be laid and would manufacture and sup-

[1] Laws of New York, 1823, Chapter 85.
[2] Contract dated, May 12, 1823.

ply, "in the most approved manner, sufficient quantities of the best quality gas, commonly called inflammable gas, for lighting the houses and public lamps in the street called Broadway in the said city from the Battery to Grand Street." The company also agreed that after the expiration of five years it would supply gas for lighting all the streets and houses within the district covered by its franchise whenever the city should "by resolution or by-law reasonably require" such supply. The company's pipes were to be constructed "in the most approved manner of cast iron, and of the best materials." The company agreed also to light the public lamps in the streets where it had pipes at a yearly expense to the city "not exceeding what would be the expense of lighting and supplying an equal number of the said lamps with oil of the quality generally used for that purpose, estimating the price of oil at the average price of the same in the city of New York during the preceding year." The company was also to furnish at its own expense "the necessary conductors of metal of sufficient capacity to the lamp posts." It agreed that the lighting should be "of a quality, brilliancy or intensity equal to the gas in use for the public lamps in the City of London," but "the expense of lamps, lamp irons, lamp posts and fittings up" was to be paid by the city. It was expressly provided, however, that the city should be "at no other expense for fixtures, conductors, repairs, or on any other account whatsoever." Forty-eight hours' notice was to be given by the company to the street commissioner prior to the opening of any street for laying or repairing gas pipes, and the company was required to "replace the earth which they may remove in so doing, before sunset of the day on which any such opening shall be made," and to "replace the pavements and repave and repair the same in such reasonable time and manner" as the city should direct and "in as good and firm a manner as the streets were in before being broken up for the aforesaid purposes." All street repairs made necessary by the company's pipes were to be made by the company at its own expense. It was also stipulated that the company should so conduct its manufactory or manufactories of gas as not to create a nuisance, and that it should be governed by such reasonable and necessary rules and regulations relating to the opening of

streets and the laying of pipes as the city might from time to time ordain. It was expressly stipulated that the franchise should not be so construed as to prevent any person from erecting on his own premises any building or appurtenance for the purpose of lighting his own house or manufactory with gas. It was also provided that if the company did not fulfill all the convenants and conditions of the contract, the common council might by resolution or ordinance "annul and vacate this grant."

On May 8, 1833, a franchise was granted to the Manhattan Gas Light Company which had been incorporated February 26, 1830, by a special act of the legislature.[1] Like the preceding company, this one had no authorization to dig into the city's streets without the consent of the municipal authorities. The city's grant to this company was for that portion of Manhattan Island lying north of the exclusive territory of the New York Gas Light Company. This franchise was not exclusive and was made to expire on May 12, 1853, the same date on which the exclusive grant of the original gas company for the southern portion of the Island would expire. The company agreed that any gas house or works erected by it should be established on the margin of either the Hudson or the East River, and should not be south of Fourteenth street. The company was required to supply public lamps adjacent to its mains and light them in accordance with regulations prescribed by the city. The yearly charge to the city for lighting and supplying lamps south of Sixth street was not to exceed $15 each. This franchise contained substantially the same provisions as the preceding one relating to the quality of gas, the supply of fixtures and the digging up of the streets. There was an additional clause, however, to the effect that no street was to be opened or the pavement removed and no excavations to be filled up or the pavement replaced "except under the direction and supervision of a competent person" appointed by the street commissioner. This person was to be considered an employee of the city, but was to be paid by the company at a rate to be fixed by the street commissioner, but not to exceed $1.50 per day during actual employment. There was also a clause providing that the streets should not be disturbed

[1] Laws of New York, 1830, Chapter 59.

between December 1 and March 1 of any winter without the consent of the street commissioner. It is to be noted that after ten years' experience the city had made some progress in franchise regulation. This second franchise was in contrast with the first in three important respects. It was expressly non-exclusive. It made provision for the direct supervision of the company's street work by a city inspector. It provided that the streets should not be torn up in the winter without special permission.

On May 5, 1848, five years before the expiration of the original grant to the Manhattan Gas Light Company, the city gave this company a new franchise to run for a period of twenty years covering that portion of its former franchise territory lying south of Forty-second street. In this grant a provision was made for extensions. The city reserved the right to order the company's mains to be extended in and along all the streets and avenues within the territorial limits of the grant "commencing at Grand and Canal streets and continuing through each street in regular succession," but the company was not to be compelled to expend more than $6,000 a year in such extensions. The rate for public lighting was to remain at $15 a year for each lamp. There was an additional clause put in, to the effect that the city might require the public lamps to be kept burning at other times than as had been customary, but it was provided that if, as a result of the city's order, the whole number of hours during which all or any portion of the lamps were kept burning should exceed the average number of hours which public lamps had been kept burning during the five years preceding the date of this grant, then the company was to receive an additional compensation "equivalent to a pro-rata increase of the compensation hereinbefore allowed, proportioned to the increased number of hours beyond the said average number." For the purposes of this contract, this average was estimated and fixed at 2300 hours per annum. It was expressly stipulated that the burners in the public lamps should be equal to those already in use in the city and have an average consumption of three cubic feet per hour. The company agreed to furnish the necessary metal conductors to the lamp posts at its own expense and to fit up public lamps at a cost to the city of $5 each, but the city was required in addition to pay

the cost "of the posts, lanterns and repairs." The provision relating to inspection of street work was changed in this franchise so as to relieve the company of the expense of paying for it. The city furthermore agreed that it would pass all ordinances necessary to protect the company's interests "which of right ought to be passed for that purpose." In the search for franchises that might not have expired, the Consolidated Gas Company's attorney turned up a new one in 1909, upon which the company hangs a claim for perpetual rights in that portion of old New York north of Forty-second street. This recently-discovered franchise was approved by the Mayor, April 8, 1853, just a few weeks prior to the expiration of the Manhattan Gas Company's original grant. It is in terms as follows:

"Resolved, that the Manhattan Gas Light Co., be and are hereby authorized, and permitted to lay their Street Mains beyond the line of Forty-second street, northward."

The New York Gas Light Company's franchise was not renewed in 1853; neither was the company ousted from the streets. On April 25, 1855, a franchise was granted to a third company known as the Harlem Gas Light Company. This grant was for the portion of old New York north of Seventy-ninth street. It was not limited as to time, was not exclusive and reserved to the city the right "to purchase at any time from the said company, all the material, pipes, fixtures, buildings, and all and singular all the personal and real property owned by said company, by paying to the said company the cost of the same, and ten per cent over and above said cost." Furthermore, the city reserved the right to revoke the grant on satisfactory proof of the company's failure to comply with its conditions. The company was granted exemption from taxation on its personal property for a period of three years, but was required to "proceed immediately or within one year from the approval" of the franchise to lay its mains in the district covered by the grant, and within three years to supply gas to the corporate authorities and to private consumers. The company was not to impede or interrupt public travel in laying its mains "more than cannot possibly be avoided." It was to restore the streets to as good condition as they were in before being

opened and was to be at all times subject to restrictions, ordinances or resolutions adopted by the common council, and to be under the control of the street department. It was stipulated that the company "shall furnish a supply of gas to all persons who may desire the same, and shall deprive no consumers of gas, upon their refusal to pay or for a dispute of the bill rendered until they have served such disputants with the affidavit of their inspector as to the correctness of the register of their meter, and that all the gas for which said disputants are charged has actually passed through said meter."

During the same year, 1855, a fourth gas company, the Metropolitan Gas Light Company of the City of New York, received a charter from the legislature authorizing it to manufacture and supply gas in the City of New York and to lay pipes and adopt any other necessary means "to furnish gas to any inhabitant of said city."[1] Under this charter the company was required to secure the permission of the two boards of the common council before commencing operations. The boards were authorized, however, "to grant and vest exclusive permission and authority to and in said company for said purposes to such extent and under such regulations as to them shall seem expedient, and such permission and authority shall be conclusive and shall continue as thus fixed during the period designated by said boards at the time of granting the same." It was stipulated, however, that the rights and privileges granted by this charter should not be construed "to affect or impair any exclusive rights or privileges vested in any incorporated company in said city." On December 22, 1858, the common council passed a resolution over the mayor's veto authorizing this company "to lay pipes for conducting gas through the streets, avenues, lanes, alleys and squares" of the city "for the period of thirty years, to be subject to the same restrictions as to the mode of laying down said conductors as apply to and govern the New York and Manhattan Gas Light Companies in that respect."

On September 17, 1863, another gas franchise was passed by the common council over the mayor's veto, granting to the Anthracite Gas Lighting and Heating Company of New York the right to lay its pipes "for conducting gas for il-

[1] Laws of New York, 1855, Chapter 545.

luminating and heating, and other purposes" through the streets, alleys and public places of the city for a period of fifty years. Street work was to be done under the supervision of the street commissioner and the streets were to be restored by the company. The resolution granting this franchise was amended two years later by adding after the name of the company the words, "and their assigns."

On April 30, 1868, a franchise in almost the same terms as the Metropolitan grant of 1853, was granted for a period of thirty years to the New York Mutual Gas Light Company. This company had been incorporated by a special act of the legislature in 1866.[1] Under its legislative charter the company was not permitted to open the streets of the city without first obtaining the permission of the municipal authorities, unless in place of such permission "the majority of the owners in the interest of the property immediately adjoining the part of the street or highway so dug into, injured or defaced, shall give their consent thereto in writing." This charter also provided that whenever the company's profits, after deducting the operating expenses, should exceed in any one year ten per cent "upon the whole capital stock," the excess over such amount should be divided half and half between the company's consumers pro rata according to consumption, and the company's stockholders pro rata according to the amount of stock held, with this limitation, namely, that no stockholder should be entitled to this dividend upon more than fifty shares of stock. It was also stipulated that if the directors of the company should consolidate with or transfer the franchise granted by the state to any of the organized gas companies of the City of New York, the director or directors voting for such consolidation or transfer should be deemed guilty of a misdemeanor, and upon conviction be punished by imprisonment in the penitentiary for a period of not less than six months or more than a year. This clause prevented this company from going into the combination of companies which formed the Consolidated Gas Company in 1884. It did not prevent, however, the acquirement of the Mutual company's stock at a later date by the Consolidated Gas Company.

On June 12, 1871, by a special act of the state legislature,

[1] Laws of New York, 1866, Chapter 651.

certain individuals were given a franchise to manufacture and sell gas for the purpose of lighting all that portion of the City of New York lying north of Seventy-ninth street, and also including the whole of Central Park "in its entire width and length."[1] The grantees were authorized to lay pipes in the streets, alleys, parks and public places of that portion of the city and to adopt any other necessary means to furnish gas to any inhabitants in the district. The grantees were required to conduct their business in such a way as not to create a nuisance and were to see that all street work in connection with their enterprise was done "in a proper and workmanlike manner, with as little delay and inconvenience to public travel as practicable, and without injury to the Croton pipes." It was stipulated, however, that this grant should not be construed as authorizing the laying of any gas pipes or conduits in Central Park or in any other public place under the control of the Department of Parks without its consent. It was expressly stated that "the rights and privileges hereby granted are exclusive; but shall not be construed to affect or impair any exclusive rights or privileges, if any, vested in any incorporated company in said city." It was provided that any person wilfully injuring the gas works or fixtures of the grantees should forfeit to them "treble the amount of the damage sustained by means of such offense or injury." It was also expressly provided that "this act shall be deemed a public act, and shall be favorably construed for the purposes herein expressed and declared, in all courts and places whatsoever." This franchise has been many times transferred by individual assignments and is now owned by certain individuals connected with the Consolidated Gas Company. The right to use it was granted by its owners by contract on February 25, 1874, to the Union Gas Light Company and again on December 11, 1876, to the Knickerbocker Gas Light Company which later went into the Consolidated Gas Company.

The city's desire for competition in the gas business was not yet satisfied. In 1876 a blanket resolution was adopted by the board of aldermen in the following terms:[2]

"Resolved: that permission be and is hereby given to all incor-

[1] Laws of New York, 1871, Chapter 944.
[2] Resolution approved by the Mayor, Dec. 23, 1876.

porated gas light companies to lay gas mains and pipes in the streets, avenues and public places in this city for the purpose of supplying gas to this city and its inhabitants upon such conditions as may be prescribed and approved by his honor the Mayor, the Comptroller and the Commissioner of Public Works who are now by law authorized to make provisions for lighting the streets of this city."

On authority of this resolution the three executive officials named granted franchises to two companies, one of which was not incorporated until six years after the original resolution was passed. Litigation arose and it was held by the Court of Common Pleas that the board of aldermen had no power to delegate its function of giving consent to any other authority. Thereupon, on September 1, 1884, a resolution was adopted repealing the general resolution of 1876, but providing that this repeal should not prejudice or affect any right, interest, privilege or power which had theretofore "arisen, accrued or been conferred" by the original resolution or by action of the executive officers designated by it. All rights and privileges granted by these officials under the terms and provisions of the old resolution were expressly "confirmed, ratified and approved." Furthermore, the state legislature in an amendment to the "Consolidation Act," as the New York City charter was known in those days, enacted in 1885, inserted after the clause giving to the common council the right to regulate the opening of the streets for the laying of gas and water mains the following provision: [1]

"Nothing in this subdivision shall apply to or shall affect or impair the right to lay such pipes and mains in the streets, avenues and public places of said city, heretofore conferred or intended to be conferred upon any corporation, by the Mayor, the Comptroller and the Commissioner of Public Works, acting under and in conformity with the resolution of the common council adopted and approved in the month of December, 1876; and any and all grants made by such officers under and pursuant to said resolution, prior to April 21st, 1883, are hereby in all respects ratified and confirmed."

Prior to the passage of the general resolution of 1876, the City of New York had been enlarged so as to include all that portion of the present borough of the Bronx on the mainland west of the Bronx River. All of the companies now operating in the City of New York whose rights have come down from companies that operated during the period

[1] Laws of New York, 1885, Chapter 530, Section 2.

between 1876 and 1884, when this resolution was in effect, claim perpetual franchises under it, without reference to whether the original companies received any additional authority from the executive officers named by the resolution or not. As already stated, only two franchises were granted by these officers. The earlier of these was given to the Municipal Gas Light Company of New York on March 22, 1877. Important conditions were attached to this grant. The company's gas works were to be conducted so as not to be "in any way detrimental to the public health," or so as otherwise to create a nuisance. The gas furnished by the company was to be of the best quality of illuminating gas of not less than 16 candle-power when tested at a distance of not less than one mile from the place of manufacture. The company was to supply the public lamps along its mains at a maximum rate of $20 per year for each lamp burning 3833⅓ hours and consuming 3 feet of gas per hour under a pressure of 1 inch. This rate for public lighting was to "include gas, lighting, extinguishing, cleaning, repairing, reglazing and painting the lamp posts and lanterns, replacing the cocks, tubes, burners, cross heads, lamp irons and lanterns." The company's maximum charges for fitting up and repairing lamp posts were fixed as follows:

For fitting up each lamp-post,	$10.00
For straightening each lamp-post,	1.50
For releading each column,	1.50
For refitting each column	3.50
For removing each lamp-post	3.50
For resetting each lamp-post	10.00

It was also provided that if at any time during the continuance of the grant in the opinion of the commissioner of public works, the cost of producing or manufacturing gas had been reduced so as to admit of the lighting of public lamps at a lower rate, then three arbitrators were to be appointed for the purpose of determining "a fair and equitable rate" below that sum. Gas was to be furnished to public buildings and city offices on the lines of the company's mains at a rate not in excess of $2 per 1000 feet; and after January 1, 1878, gas was to be supplied to private consumers at a maximum rate of $2.40. It was also provided, as in the Harlem Gas Light Company's legislative charter, that

no consumer should be deprived of gas on account of his refusal to pay or on account of a dispute as to the bill rendered by the company until such consumer had been served with an affidavit of the company's inspector as to the correctness of the meter. The common council was to have the right to order the company's pipes extended along any of the streets of the city, with this limitation, namely, that the company should not be compelled to spend more than $10,000 a year in laying mains. The company's trenches were to be filled immediately after the pipes had been laid and the earth was to be thoroughly rammed as it was thrown into the trench, and the pavement was to be replaced in a good and workmanlike manner satisfactory to the commissioner of public works; otherwise the work might be done by the city at the company's expense. The company agreed to be governed by the city ordinances and the regulations imposed by the commissioner of public works relative to the laying of mains, the protection and filling of trenches, the taking up and replacing of pavements and the lighting and maintenance of public lamps. The franchise, unless sooner repealed by the common council for failure on the part of the company to perform any of the conditions of this grant, was to continue for a period of thirty years, but was not to be assigned or transferred by the company without the previous consent of the common council. It was expressly provided that this grant should not be considered exclusive, and that the permission was not to become operative until the company had signified its assent to the conditions imposed. As a matter of fact, the company at once accepted the grant upon the prescribed terms.

The other grant to which reference has been made was given to the Equitable Gas Light Company on December 26, 1882. Several new and important conditions were imposed upon this company. It was provided that the gas furnished should be of 25 candle-power and that, "as regards purity, the gas shall be free, within limits not injurious to the public health, from ammonia, sulphuretted hydrogen and other sulphur and noxious compounds." The maximum rate for public lamps consuming three feet of gas per hour under a pressure of one inch and burning 4000 hours was to be $12. It was also stipulated that whenever the public authorities

issued a call for proposals or estimates for supplying light for public lamps, the company should submit a bid for furnishing gas and maintaining lamps situated on the lines of its mains at not to exceed the specified rate. The price of gas for public buildings situated along the company's mains was limited to $1.50 per 1000 cubic feet, and the company was required to submit proposals for furnishing gas at this rate whenever the city called for estimates for lighting public buildings, markets, armories or city offices. The rate to private consumers was limited to $1.75, and the city reserved the right to compel an extension of the company's mains along any streets designated by the common council, with the limitation that the company should not be required to spend more than $20,000 a year on such extensions. The pipes were to be laid so as not to interfere with the sewers or water mains. No street was to be opened by the company without a permit from the commissioner of public works. The company was required to render a weekly report to the commissioner of all openings made in the pavements during the preceding week, including openings for the laying or repairing of service pipes, the repairing of gas mains or the discovery and stoppage of leaks. It was also to render a monthly report of all gas mains laid, "stating on which side of the street the mains were laid and from and to what streets, the distance from the curb, the depth of the trench and the diameter of the mains laid." The company was required to commence the erection of gas works within six months and was to spend at least $200,000 on its works before laying more than one mile of pipes. Illuminating gas was to be distributed by the company within two years from the acceptance of this grant, which was to continue for a period of thirty years unless sooner revoked on account of the company's failure to fulfil its conditions. The company was to pay into the city treasury 20 cents per lineal foot of trench opened for mains. It was forbidden to "make or enter into any combination, arrangement or agreement with any other company or companies in regard to the amount of gas mains to be laid or to the streets in which mains are to be laid, or in regard to the quantity of illuminating gas to be manufactured, or the price for which gas is to be sold, exceeding the prices fixed in these conditions." In case the company

violated this prohibition the grant was to become null and void without further action on the part of the city. This grant was also accepted subject to the conditions prescribed.

Two years later six of the principal gas companies of the city combined to form the Consolidated Gas Company and capitalized their franchises at $7,781,000. The value of the tangible assets of the six constituent companies, according to an inventory made at the time, amounted to a little less than $30,000,000. This consolidation was effected for the purpose of escaping from the "horrors of war."

Two years later still another company came into the field. By chapter 248 of the laws of 1886, entitled "an act to facilitate the supply of illuminating gas in the City of New York at a reasonable price," the legislature, without the approval of the governor, gave to the Standard Gas Light Company of the City of New York authority to lay gas mains in all the streets and public places of the city. The gas supplied was to be of 25 candle-power and the rate charged to be no greater than $1.50 per 1000 feet. It was provided, however, that the company was to be subject to the provisions of any general laws that might be passed regulating the price of gas in the City of New York. It was provided that the company should "not consolidate, or in any way unite with any other gas company in said city, or in any way pool its earnings or receipts with any other company or organization organized for the distribution and sale of illuminating gas." The rate to be charged for gas supplied to public buildings was not to exceed $1.25 per 1000 feet. Street lamps along the company's lines were to be supplied at a maximum rate of $12.50 per annum for each lamp burning 3833⅓ hours and consuming three feet of gas per hour under a pressure of one inch. It was expressly provided that the company was to file with the city comptroller a stipulation or agreement covering these terms and conditions, and that if after filing such stipulation the company violated its terms, the attorney-general should institute proceedings to forfeit and annul the charter and corporate rights of the company. This company is still operating, but is controlled through stock ownership by the Consolidated Gas Company.

Finally in 1892 still another general gas franchise for

the City of New York was granted by the legislature.[1] This grant was approved by the Governor, April 19, 1892, and gave to the East River Gas Company of Long Island City most remarkable powers. This company was already supplying gas in Long Island City as the successor to a chain of companies that had been in operation probably since 1853. By its new grant, it acquired the right to supply both gas and electricity in the City of New York. At the time this act was passed, Long Island City was not a part of the City of New York, so that the company was in a sense a "foreign" corporation so far as New York City was concerned. This company was "authorized, without other or further authority of law or ordinance, to lay and maintain requisite conductors, mains and pipes through and under any streets, avenues, or public places" of the city. The company was also expressly authorized to construct and maintain mains under and across the East River and across any intervening land belonging to the City of New York or to private persons. It was provided, however, that the company's river mains should be so laid and maintained as not to obstruct navigation, commerce or anchorage of any navigable waters, without the consent of the Secretary of War. The company was given the right to acquire real estate easements in land by condemnation or purchase. A tax of three per cent of the company's gross receipts from "gas furnished by it to private and public buildings in the City of New York through mains laid by it as herein authorized" was imposed for the benefit of the city, payments to be made annually. It was provided that in laying and maintaining its gas pipes the company should be subject only to such regulations not inconsistent with the powers conferred upon it as might from time to time be prescribed by the department of public works of the city. The company was expressly given the right to supply gas and electricity to any other company engaged in the lighting business in the City of New York. It was also authorized to lease any property of any other company engaged in supplying gas and electricity in the city upon such terms as should be agreed upon by the boards of directors and trustees of the respective companies, and be assented to in writing by the holders of two-thirds of the

[1] Laws of New York, 1892, Chapter 338.

capital stock of each company concerned. It was provided that nothing in this act should authorize any increase in the price of gas then lawfully charged in the City of New York, but the company was expressly empowered to continue to charge for gas in Long Island City the price then authorized by law. Finally, "all acts or parts of acts, general, private or local, inconsistent with, impairing or limiting the rights or powers conferred by this act, so far as they are inconsistent with, impair, limit or impose other or additional conditions upon the exercise of such rights or powers," were as to this company expressly repealed.

Two years after the passage of this act, the entire capital stock of the East River Gas Company was taken over by another corporation, which later was merged with the Equitable Gas Light Company into the New Amsterdam Gas Company. The original New Amsterdam Gas Company had acquired no local franchises. It is now operating as a subsidiary of the Consolidated Gas Company. The relations between the New Amsterdam Gas Company and the East River Gas Company of Long Island City are so intimate as to give rise to the claim on the part of these companies that it would be impossible to separate their property and assets in a report to the Public Service Commission. On the other hand, they claim that the separate identities of the two companies has been so well guarded in law and contract as to make it impracticable for the two companies to merge their corporate entities. For one purpose they are so merged that they cannot tell each other apart; for another purpose they are so separate that they could not merge if they desired to do so.

In addition to the companies and franchises already described, there are three others operating in portions of the Bronx which are affiliated with the Consolidated Gas Company's system. Their franchises were obtained from the towns and villages having jurisdiction north of the Harlem River and were acquired prior to the annexation of this district to New York City in 1874 and 1895. There is also one small independent company supplying gas and electricity in a portion of The Bronx. All the companies whose franchises have been described are absolutely controlled by the Consolidated Gas Company. By any reasonably strict construc-

tion of franchise rights, most or all of the rights conferred upon the various gas companies by the old City of New York have expired or been forfeited. To bolster up their enormous properties, however, these companies have resorted to certain most extraordinary claims in regard to their franchise rights. Starting with the accepted judicial doctrine in the State of New York that a franchise not expressly limited by its terms is perpetual, the companies make the following claims:

1. That exclusive franchises granted for a certain period of years are perpetual after the expiration of that period, although no longer exclusive.
2. That franchises granted for a limited period of years for the purpose of laying gas mains are perpetual after the expiration of that period for the maintenance of mains already laid.
3. That permits issued by the city's administrative authorities or resolutions passed by the common council directing that gas mains be laid in certain specified streets constitute perpetual franchises.
4. That wherever mains have been laid without express authority, perpetual franchise rights have been secured through acquiescence.
5. That even where franchises have expired by their express terms, the companies cannot be compelled to remove their property from the streets.

The doctrine of franchises by acquiescence has received considerable support by a decision of the Appellate Division of the Supreme Court relative to the franchise rights of the New York and Richmond Gas Company, which operates in Staten Island.[1] A few years ago the city refused to issue a permit to this company for the opening of certain streets for extensions of the company's mains on the ground that the company had no franchises in the districts affected. The company, on the other hand, claimed that it had succeeded to all the rights and franchises of the original company which began to furnish gas in 1856. While unable to present to the court any documents showing that the municipal authorities of the old townships had expressly consented to the laying of gas mains originally, the company

[1] Case of *People ex rel. New York & Richmond Gas Co.*, vs. *Cromwell*, 89 App. Div. 291.

held that inasmuch as the mains had been laid without protest and gas had been supplied with the knowledge of the public authorities for nearly fifty years, the city was estopped from denying the company's rights in the streets. The court upheld the company's contention and the case was not appealed to the highest court. At the present time, therefore, the doctrine of franchises by acquiescence is in good and regular standing in the City of New York, although it is extremely doubtful whether the Court of Appeals would sustain many of the claims made by the companies on the strength of the decision in the case referred to.

By the recent decision of the United States Supreme Court in the 80-cent gas case,[1] the right of the legislature to regulate rates was substantially upheld. The court ruled, however, that the franchise values capitalized by the Consolidated Gas Company in 1884 under the authority of the laws of New York now constitute a portion of the company's property upon which it is entitled to earn a six per cent profit. This decision leaves the way open, however, to prevent by rate regulation any increase in the value of gas franchises. Furthermore, the court did not pass upon the validity of any of the specific franchises claimed by the Consolidated Gas Company and its constituents.

251. The sliding scale—Boston.—The first gas franchise in Boston was granted by the board of aldermen August 27, 1822, to certain individuals who later received a corporate charter from the Massachusetts legislature under the name of the Boston Gas Light Company. By their original franchise from the city they were authorized to lay iron gas pipes underneath the sidewalks subject to the direction of the commissioner of highways. A little later they were given the right to cross the street with their pipes. Under the company's state charter it was required to get the consent of the mayor and board of aldermen before opening the ground in any part of the public streets. As a matter of fact, gas was not supplied until towards the close of 1828. The price from that date to 1844 was $5 per 1000 cubic feet and has since been gradually reduced till on July 1, 1907, it was fixed at 80 cents.[2]

[1] Decided Jan. 4, 1909. See Section 47, *ante*.

[2] *Annals of the American Academy of Political and Social Science*, May, 1908, "The Boston Consolidated Gas Company: its Relation to the Public, its Employees and Investors," by J. L. Richards, *op. cit.*, p. 593.

The experience of Boston with gas franchises has been in many respects similar to that of other cities. In Massachusetts, however, gas companies are authorized under general law to "dig up and open the ground in any of the streets, avenues and highways" of the city "so far as is necessary to accomplish the objects of the corporation," but this may be done only "with the consent in writing of the mayor and aldermen."[1] Cities are authorized to construct, purchase, lease and maintain within their corporate limits one or more plants for the manufacture or distribution of gas.[2] They are not permitted, however, during the pendency of proceedings to bring about municipal ownership, arbitrarily to revoke any rights granted to a person or corporation engaged in the gas business. It is also provided by the statutes that in any city where a gas company is in active operation no other gas company shall dig up and open the streets for the purpose of laying gas pipes without the consent of the local authorities "granted after notice by publication or otherwise to all parties interested and a public hearing." While the local authorities unquestionably have the right, subject to the approval of the State Board of Railroad Commissioners to revoke street railway locations, there seems to be no provision of law upon which to base a claim of similar authority in regard to the locations of gas mains. Moreover, it is believed that a duly organized gas company could not be prevented from laying its mains by arbitrary action of the city authorities and could not be compelled to accept onerous conditions other than reasonable regulations for the opening and care of the streets and the protection of life and property.[3]

A considerable number of gas companies were incorporated from time to time by special acts of the state legislature to supply gas in different portions of Boston and its environs. Finally, in 1903 an act was passed to bring about the consolidation of eight existing companies to form the Boston Consolidated Gas Company, which was to be organized "for the purpose of making, selling and distributing gas for light or other heating, cooking, chemical and mechanical pur-

[1] Revised Laws. Chapter 110, Section 76.
[2] *Ibid.*, Chapter 34.
[3] Letter of F. E. Barker, Chairman of the Board of Gas & Electric Light Commissioners, June 2, 1908, to Milo R. Maltbie, of the Public Service Commission, New York City.

poses."[1] This new company was authorized to take over from the eight constituent companies all their "property, locations, rights, licenses, powers, privileges and franchises" except as otherwise expressly provided. The special charter of one of these companies, the Massachusetts Pipe Line Gas Company, was amended so that it should no longer be compulsory for the local authorities to grant the company locations for its pipe lines. This particular charter already provided that the company should be subject to the regulations and restrictions made by the local authorities in regard to their street work, that it should restore all streets opened by it to as good a state of repair as they were in when opened "and to the satisfaction of the local authorities of the city." Locations granted by the local authorities were made expressly subject to revocation with the consent of the State Board of Gas and Electric Light Commissioners. This company's charter was also amended so as to require the approval of the local authorities for the leasing, purchase or operation of the works or distributing system of any other gas company. The Boston Consolidated Gas Company was by express provision of its charter endowed with the privileges conferred by the law authorizing the purchase of gas works by cities. The privilege of most importance in this connection was the right to have the company's plant purchased by the city at its fair market value as a preliminary to the establishment of municipal gas works.

By another special act of the State Legislature approved May 26, 1906, the sliding scale was established to determine the rates which this company might charge for its product.[2] The standard rate fixed by this statute for gas supplied to the company's patrons was to be 90 cents per 1000 cubic feet, and the standard rate of dividends to be paid by the company to its stockholders was fixed at 7 % on the par value of the capital stock. It was then provided that if during any year the maximum net rates charged by the company had been less than the standard rate of 90 cents, during the following year the company should be authorized to declare dividends exceeding the standard rate of 7 % to the amount of 1/5 of 1 % additional for every one cent of reduction in the maximum net price of gas below the standard price. The com-

[1] Acts of 1903, Chapter 417.

[2] Acts of 1906, Chapter 422.

pany was required to publish annually in the month of September in one or more newspapers of Boston a report of the preceding fiscal year showing the cost per 1000 cubic feet of gas in the holders. This cost was to be itemized so that wages at the works and the main items of materials would be shown separately. This report was also to show the cost per 1000 feet of distribution and the amount per 1000 feet charged for depreciation or maintenance repairs, together with any other items of account that might be prescribed from time to time by the State Board of Gas and Electric Light Commissioners. This board was given authority upon petition of the mayor or board of aldermen to revise, after a hearing, the company's method of determining the cost of gas and "to determine finally and conclusively the actual cost of the gas furnished, and the clear profits made by the said company applicable to payment of dividends". It was provided that if the profits applicable to dividends should in any year amount to more than enough to pay the dividends permitted under the provisions already described, the excess to the extent of 1% per annum of the par value of the company's capital stock might be invested in securities for the purpose of accumulating a reserve fund. The maximum limit of this fund was to be 1/20 of the par value of the company's capital stock. This fund could be used from time to time to meet any extraordinary claim or charge arising against the company "from fire, accident or other circumstances which due care and management could not have prevented." This fund could also be used for the purpose of supplementing the clear profits of the business applicable to the payment of dividends whenever such profits were insufficient to pay the authorized dividend rate. It was provided that if in any year the company's clear profits applicable to the payment of dividends should exceed the amounts expended for that purpose and the amounts to be set aside for the reserve fund, such excess of profits should be paid to the cities and towns to which the company supplied gas in proportion to the number of miles of mains in each of them. It was also provided that after the expiration of ten years from June 30, 1906, the Board of Gas and Electric Light Commissioners should have authority, upon the petition of the company or of the mayor, to lower or raise the standard price of gas "to such

extent as may justly be required by reason of greater or less burdens which may be imposed upon the company, by reason of improved methods in the art of manufacture, by reason of changes in the prices of materials and labor, or by reason of changes in other conditions affecting the general cost of the manufacture and distribution of gas."

Under the terms of this charter, the price of gas has been successively reduced from 90 cents to 85 cents and then to 80 cents, which has permitted the dividend rate to be increased from 7 per cent to 8 per cent and then to 9 per cent.

Referring to the organization of the Boston Consolidated Gas Company by acquisition of the properties of its several predecessor companies, Mr. Richards, president of this company, in a recently published article, said[1]: "It is well known that when the new interests secured control of the properties mentioned, various companies were looked upon with disfavor by the public, and realizing that fact the present management has endeavored to conduct the business affairs of the corporations on a broad, liberal, business basis, believing that one of the most valuable assets that a public service corporation can have is the confidence of the public." In support of this statement and to prove that the new policy had been successful, Mr. Richards quotes from a magazine article written by Mr. Louis D. Brandeis, one of Boston's best-known citizens, as follows:

"Boston has reaped from the sliding scale system far more than cheaper gas and higher security values. It has been proved that a public service corporation may be managed with political honesty, and yet successfully, and that its head may become a valuable public servant. The officers and employees of the gas company now devote themselves strictly to the business of making and distributing gas, instead of dissipating their abilities, as heretofore, in lobbying and political intrigue. As a result, gas properties which throughout the greater part of twenty years had been the subject of financial and political scandals, developing ultimately bitter hostility on the part of the people, are now conducted in a manner so honorable as to deserve and secure the highest public commendation."

252. Gas franchises in other Massachusetts cities—Worcester; Springfield; Somerville.—The Worcester Gas Light Company was incorporated by a special act of the legislature in 1850 and made subject to the provisions, restrictions and conditions of an ordinance adopted by the city council in

[1] *Annals, op. cit.*, vol. 31, p. 596.

the preceding year granting to certain individuals the right to erect coal gas works in the city and lay pipes for distributing gas through the streets.[1] It was also provided that the city "shall have the right to purchase the franchise of said corporation by paying therefor the actual cost of the works they shall have erected with 10 per cent interest thereon after first deducting such amounts as may have been paid to the stockholders as dividends upon the stock". These provisions of law were almost immediately repealed, however. In place of them a new provision was added to the effect that "the said corporation shall make such extensions of their pipes and furnish the gas in such quantities as the city council may from time to time direct, provided the city council shall guarantee to said company a profit of 6 per cent per annum on such extension."[2] The rates of charges to the city and the inhabitants were not to "exceed the rates that may be charged for gas of similar kind and quality in either of the cities of Boston, New York or Baltimore." A company of the same name and composed of the same people was incorporated by another special act of the Legislature a year later.[3] The new company was required to assume all the liabilities of "the present proprietors of the gas light works in Worcester in relation to the making and selling of gas." It seems likely that the legislative acts of 1850 were never accepted or made effective by the company.[4]

The general form of permit for the opening of streets by the gas company, in use in the city of Springfield, subjects the grantee to certain conditions. It is provided that locations for street work shall be designated and approved by the city engineer, and that the grantee shall within thirty days after completing the work "delineate on the plans for underground work on file with the said city engineer, the location, depth and materials used for said work". Where no such plan exists, a new plan must be filed with the city engineer showing these details. It is provided that the company shall immediately notify the superintendent of streets and sewers in each instance of the commencement and completion of the work of laying mains. No gas mains may be

[1] Acts of 1850, chapter 29, referring to local franchise of May 3, 1849, to Blake, Darracott and their associates.
[2] Acts of 1850, chapter 237.
[3] Acts of 1851, chapter 159.
[4] Letter of F. E. Barker, June 9, 1908.

laid "under or in close proximity to the roots of any tree, or so as to interfere with any water pipe or any other city property or the proper access thereto, in any public street, highway or place." Streets which have been opened must be restored to good condition. All rights granted are conditioned upon the express agreement "that these privileges in the streets and public places are not to operate in any way as an enhancement of said company's properties or values, or be an asset or item of ownership in the appraisal thereof, in the event that said city shall ever acquire by purchase any or all of said company's property."

The general form of permit for the laying of gas pipes used by the city of Somerville provides that the company shall immediately restore the streets opened by it to a condition satisfactory to the commissioner of streets and maintain its pipes and fixtures at all times in a manner satisfactory to him. The company also agrees to indemnify the city from any loss by reason of the laying or maintenance of its pipes or fixtures. The permit is granted expressly subject to all provisions of law and all existing or future ordinances of the city and orders of the board of aldermen. The permit is to become null and void at the option of the board of aldermen in case the company fails to comply with any provisions of such laws, ordinances or orders. The company acquires no rights under the permit until it files with the city clerk an agreement satisfactory to the city solicitor to comply with the terms and conditions of the permit.

253. The lease of a great municipal plant—Philadelphia. — The history of the gas business in Philadelphia is unlike that of most other American cities. A proposition to light the city with gas was made to the councils as early as 1803. This proposition, as well as a similar one advanced in 1817, was rejected. Beginning with 1825 there was an annual effort made to induce the State Legislature to incorporate the Philadelphia Gas Light Company, but the scheme was continually defeated through the influence of members of the city councils.[1] In 1835, however, an ordinance was passed providing for the construction of gas works and the incorporation of a gas company, with the

[1] Dr. Leo S. Rowe, "*Relation of the City of Philadelphia to the Gas Supply*," vol. 1, part 2, of the National Civic Federation Report on "Municipal and Private Operation of Public Utilities," page 588.

right reserved to the city at any time to take possession of the works and convert the company's stock into 6 per cent bonds. The plant was completed in 1836, and in 1841 complete municipal ownership was established. Thereafter, until 1887, the Philadelphia Gas Works were under the control of a Board of Trustees which stood somewhat apart from the city government as a whole. In 1887, control of the gas works was taken away from the trustees, and the Bureau of Gas was established as an integral part of the municipal administration.

On November 12, 1897, the city executed a lease with the United Gas Improvement Company, according to the terms of which the company was to improve and operate the gas plant for a limited number of years.[1] In the ordinance authorizing this lease, it is recited that the sole source of supply for Philadelphia is the city works except for the gas manufactured and supplied to the city under contract by the Philadelphia Gas Improvement Company, and except that a certain outlying portion of the city is supplied by an independent company. It is further recited that "very large sums of money ought now to be expended in laying additional mains, services and connections, in supplying meters and appurtenances, and in the erection of new and additional apparatus necessary for the economical manufacture, storage, and distribution of gas sufficient to supply the present and prospective demands for gas by the city and its inhabitants". It is also recited that "the requirements of the city for other municipal purposes are of such a pressing character that it would be extremely inconvenient for it to make said expenditures at the present"; and that "it is deemed desirable to secure by contract with a desirable company the maintenance, operation, development, and extension of its gas plant, and of its system of distribution of gas, for a term of years, and also to resume at the end of said term possession of its works and plant, modernized and fully equipped, without impairment of the exclusive privilege of supplying gas within the limits of said city now vested in it." Accordingly, under the terms of this agreement the city turned over its entire plant to the company for the period

[1] This lease is reprinted in Part II, vol. 1, of the National Civic Federation Report, *op. cit.*, p. 652.

beginning November 12, 1897, and ending December 31, 1927, unless the lease should be terminated December 31, 1907, under a special option reserved to the city. Under this contract the company was entitled "to retain possession of, maintain, change, alter and repair, and to operate said gas works and appurtenances and all the property hereby leased, and to lay, repair, remove, relay, extend, and maintain mains, pipes, services and appurtenances along and beneath the surface of the highways, streets, avenues, alleys, ways and public places in said city for the supply and distribution of gas." The company's rights were made exclusive. The company was bound to observe the general rules and regulations in force from time to time relative to the opening and restoration of the streets. In case the city at any time in the future should construct a suitable subway, the company agreed to place the gas pipes in the subway at its own expense when requested to do so by the city, but no rental was to be charged by the city for the use of such subway.

The company was authorized to assign its contract and to enter into agreements with other companies "for the performance, in whole or in part, of this contract," but in case of the assignment of the lease the primary obligation for the fulfilment of its terms was to remain upon the United Gas Improvement Company, which was to be held jointly responsible with its assignee by the city. No assignment of the lease could take effect until after the filing of notice with the city.

An inventory of the coal, coke, tar and lime on hand in the city's gas works and of all gas on hand was to be prepared by the city, and the value shown by this inventory or appraisement was to be paid by the company. Gas on hand was to be reckoned at the cost of gas in the holders, and other items were to be appraised at their market price. Current bills for gas were to be collected by the company, and the receipts accruing from gas furnished prior to the taking over of the works, were to be accounted for to the city. The company was required to execute a bond in the penal sum of $1,000,000 conditioned on the faithful performance of the obligations of the lease. The city's rights under the contract with the Philadelphia Gas Improvement Company for the manufacture of gas were assigned to the lessee.

The city reserved the option, upon giving at least six months' notice, to terminate the lease and resume possession of the gas works on January 1, 1908. In that case, however, and prior to resumption of control, the city was to make a payment to the company that would be a reimbursement of all sums expended by the company "in or about the buildings, apparatus, machinery, mains, pipes, services, connections, meters, appliances and appurtenances of the Philadelphia Gas Works" and of the gas works then owned by the Philadelphia Gas Improvement Company. This payment was to include, however, only such sums of money paid "in and about the alteration, enlargement, removal, extension, betterment and improvement of all said manufacturing and distributive systems and plants, with interest thereon at the rate of 6 per centum per annum, simple interest"; together with a sum equivalent to the appraised value of the Philadelphia Gas Improvement Company's property with 6 per cent interest from the date of the lease to the date of payment. In case the city failed to pass an ordinance prior to July 1, 1907, declaring its intention to terminate the lease, or in case it failed to pay over the money due to the company on or before December 31, 1907, the option to terminate the lease before 1927 would "cease and be forever at an end."

The company was required to file annual statements with the city controller showing in detail the expenditures during the preceding year "for alterations, enlargements, removals, betterments and improvements, not including repairs made by it in or about the gas works and for the mains, meters, services and appurtenances."

In case the city did not exercise its option to terminate the lease at the end of 1907, the contract would expire December 31, 1927, and the company would be required to deliver over to the city the entire works in good condition, including alterations, extensions, betterments and improvements; and also the property of the Philadelphia Gas Improvement Company. The entire works, including the property last mentioned, were to be delivered to the city "free and clear of all debts and obligations of every sort, kind and description". The city was also to receive "the right to use all processes of every kind useful in the manufacture of gas then established and in use in any of said works." It was expressly

stated as the intent of the agreement that the city at the expiration of the lease should "without charge or cost receive all of the said works in the condition of alteration, improvement and change in which the same shall then exist, and the same shall be so maintained as to be then in first-class order and condition." The company was to keep the property insured to the extent that similar properties of gas companies are usually insured, and on the termination of the contract either in 1907 or 1927, the city was to have the option of purchasing all the supplies and residual products on hand at the works at the market price, or if it chose, it might require the company to remove them at its own expense. Gas on hand at the termination of the contract was to be accounted for to the company at holder cost when paid for by consumers. The company agreed to spend at least $5,000,000 in the improvement and extension of the manufacturing and distributing systems within three years, and, during the thirty-year period of the lease, to spend at least $15,000,000 and as much more as should be required for these purposes. The company bound itself to extend distribution pipes on such streets as might be necessary to meet the demand for gas, subject to this limitation, namely, that at least one consumer for every 100 feet of the proposed extension should first agree in writing to take gas for a period of not less than one year at the general rates then in force. The company was not, however, to be required to lay pipes while there was frost in the ground. The expense of furnishing and laying service pipes from the mains to the consumer's property line and of furnishing and setting meters, was to be borne by the company. It was expressly declared to be the intention of the contract that all changes and improvements needed to meet the demand for gas should be made in such a way "as shall maintain said gas works in first-class condition, with the best and most economic processes in use that are customary in the best regulated gas works." Gas of 22 candle-power, as determined by tests made in the presence of a representative of the city, was to be furnished by the company, and the supply was to be maintained during the continuance of the lease unless prevented by accidents beyond the company's control. If, after the expiration of two years from the date of the lease, the company failed to comply

with the requirements of this contract relative to tests, quality and candle-power of gas, it was to forfeit a penalty of $500 for each day during which such failure continued. All gas needed for illuminating purposes in public buildings and for public lamps adjacent to the mains, was to be furnished the city free of cost. The public lamps were also to be lighted by the company, and the city might require an addition of 300 street lamps each year over the number furnished during the preceding year. These lamps were to be lighted every night and all night. Connections, equipment, maintenance and repair of street lamps and lamp-posts were to be furnished by the company free of cost to the city. The price of gas to private consumers was fixed at $1 per 1000 cubic feet, until changed by ordinance. The city was forbidden, however, to reduce the price below 90 cents before December 31, 1907; below 85 cents before December 31, 1912; below 80 cents before December 31, 1917; or below 75 cents during the remainder of the period of the lease. It was expressly provided, moreover, that the company should pay into the city treasury for gas sold all receipts in excess of the minimum prices just recited, after the dates when the councils could put such prices into effect. The company agreed to provide a proper place for the office of the city inspector of meters, who upon the complaint of a consumer might require the company to disconnect any meter and deliver it to the inspection station for examination. It was stipulated that any such meter should be disconnected between 8 o'clock in the morning and 3 o'clock in the afternoon and within 48 hours of the time when the company received notice to disconnect. The meter was then to be tested and returned to the company within 24 hours of its arrival at the testing station, bearing a seal with the report of the inspector as to whether it was correct or incorrect. If incorrect, "the percentage which it runs fast or slow, and the bill of the consumer about which the complaint has been made shall be corrected according to such finding and report of the inspector." The company was required to contribute $10,000 a year toward the salaries and expenses of the inspector of meters and his assistants. It was expressly required that upon removal of a meter for testing, the company should at its own expense replace it by another meter,

the object being that no consumer should be without light. The type of meter used was to be "such type as shall be in general use in other large cities in the United States."

The city reserved the right to enter upon and examine the premises leased, to inspect them and to test the candle-power of the gas. The company was not to be liable in any way for any indebtedness of the city incurred on account of the gas works, but was, on the other hand, expressly required to assume and discharge all the contracts made by the city Bureau of Gas for the purchase of supplies which had not been delivered prior to the date when the lease went into effect. The city was to be indemnified against damages caused by negligence of the company in connection with its operations under the lease. It was also expressly stipulated that nothing in the lease should be construed as authorizing or consenting to the conduct of a gas business in the city by the United Gas Improvement Company or its assigns after the expiration of the lease.

The city has not chosen to reduce the price of gas below $1, preferring to receive a substantial profit from the lease of the works at the expense of the consumers. This profit was approximately $680,000 for the year 1905.[1] During that year the company came forward with a proposition for the modification of the lease. According to this proposal, the term of the lease was to be extended unconditionally until the year 1980.[2] The city was to give up the right to receive an annual payment in lieu of the reduction of rates, and in place of it was to get $25,000,000 in cash, payable in installments during the years 1905, 1906 and 1907. The city was also to surrender the right to lower the price of gas and rates were to be definitely fixed at $1 per 1000 cubic feet until 1911; at 90 cents from that time until 1930; at 85 cents from then until 1956, and at 80 cents for the remainder of the period until 1980. This proposition was adopted by both branches of councils, but raised such a storm of protest from the citizens of Philadelphia that the legislative body did not dare to pass it over the mayor's veto.

254. City may buy back exclusive franchise at end of forty years — Minneapolis.—By an ordinance approved February

[1] National Civic Federation Report, *op. cit.*, pt. 2, vol. 1, p. 650.
[2] "A Review of the Gas Situation in Philadelphia," issued by the Committee of Seventy, June, 1905.

24, 1870, the City of Minneapolis gave to certain individuals and their assigns the exclusive privilege of manufacturing and selling gas within the city limits for a period of forty years.[1] This grant included the right to lay pipes in the streets and to adopt any other means necessary for furnishing gas to the inhabitants of the city. It was provided, however, that the grant should not interfere with the right of private individuals to manufacture gas for lighting their own premises. In case the city should be unable to agree with the grantees as to the price to be charged for gas the question was to be left to arbitration. It was also stipulated that gas should be furnished for city purposes "at rates not exceeding those charged by companies in neighboring cities, regard being had to freight and charges for material for manufacturing gas." The gas manufactory, real estate, all pipes and coal and other materials used by the grantees in the business of manufacturing gas were exempted from municipal taxation for a period of three years. The ordinance provided that at the expiration of forty years the city should have the right to purchase the franchise pertaining to its territory and the gas pipes, works, fixtures and other property pertaining to the business at their actual value, to be fixed by arbitration. If, however, the city should decline to purchase at the valuation so fixed, the rights, franchises and privileges of the grantees were to continue twenty years longer.

It is to be noted that the territory covered by the city at the time this franchise was granted lay exclusively on the west side of the Mississippi River. On the other side of the river the city of St. Anthony, now a part of Minneapolis, on December 5, 1871, granted an exclusive gas franchise for fifty years to certan other individuals.[2] The terms of the St. Anthony franchise, including the purchase clause, were practically identical with the terms of the Minneapolis franchise, with the exception that the original grant was for fifty years instead of forty, and the renewal period in case the city failed to purchase was for twenty-five years instead of twenty. At the time these franchises were granted Minneapolis was little more than a village. At the expiration in 1910 of the

[1] *Charter, Ordinances*, etc., *op. cit.*, p. 584.
[2] *Ibid.*, p. 586.

period for which the original franchise was granted, the city will probably have a population of more than 300,000 people, and will at that time have the extraordinary privilege of buying back from the company at its actual value not only the gas plant and its appurtenances, but also the exclusive privilege of furnishing gas in a great and rapidly growing city, a privilege that if not purchased will be good for at least twenty years more.

In 1894 in the exercise of its general powers, the city of Minneapolis passed an ordinance providing for the appointment of an inspector of gas and prescribing rules and regulations for the manufacture, measurement and quality of gas supplied to consumers in the city.[1] The gas inspector under this ordinance was to be a suitable person recommended to the city council as competent to test gas meters and the quality, purity and illuminating power of gas. An examining board was established to consist of the Professor of Chemistry and the Professor of Physics in the Minnesota State University and the Principal of the Minneapolis Central High School. This board was to hold an examination every two years of all persons applying for the position of gas inspector. After the examination, the board was to certify to the city council the names of such persons who had taken the examination as the members of the board should deem fully competent to make the tests required. Only persons certified by the board were to be eligible to appointment, except that the person first appointed as inspector of gas should be eligible to re-appointment without being certified again. Under this ordinance any consumer of gas was to have the right, on the payment of a fee of $1, to have his meter tested. Three tests were to be made by the inspector:

First, to prove accurately the registration of the meter,

Second, to prove the steadiness of the light and the freedom of the meter from leakage,

Third, to prove that the meter registered small quantities of gas.

If the meter was found to register inaccurately to the injury of the consumer to an extent exceeding 2 per cent, the fee of $1 was to be refunded and the meter readjusted. It

[1] *Charter, Ordinances*, etc., *op. cit.*, p. 586.

was stipulated that if the company should at any time furnish an all-coal gas, the quality required should be 18 candlepower under pressure of not more than six-tenths of an inch. Other gas was to have a quality of 25 candlepower at a pressure of not more than eleven-tenths inches. These standards were to apply to a "lava-tipped, fish-tail or bats-winged burner" consuming five cubic feet per hour. The illuminating quality specified was required at the point where gas leaves the holder. It was required that in all tests other than at the holder the proper corrections should be made for the depreciation of the illuminating power of the gas in passing from the holder to the point where the test was being made, but the company was required to adjust its distributing mains so that the illuminating power of the gas within a radius of one and one-half miles from the works should be at least 92 per cent of the illuminating power of the gas as it leaves the holder. It was provided that the gas should not contain more than twenty grains of sulphur in any form or more than five grains of ammonia in any form in 100 cubic feet, and that it should "be free of the impurity known as sulphurated hydrogen, said impurity to be determined by passing the gas through a glass vessel containing strips of bibulous paper moistened with a solution of the acetate of lead, and if any discoloration of the test paper is found to have taken place this is to be held conclusive as to the presence of sulphurated hydrogen in the gas." The company was required so to adjust and complete its system of holders and mains that the gas should be distributed throughout the entire system of gas mains in the city at a proper and reasonable pressure subject to the approval of the gas inspector. It was provided that for all-coal gas furnished of quality inferior to 18 candlepower the company should forfeit to the city a sum equal to one-fifteenth of its aggregate charges to consumers for each candlepower that the gas had less than the standard. In case of other gas, the forfeit was to be one-twentieth of the regular charge, for each candlepower less than the standard. These forfeits, however, were not to be required in case the company gave rebates to its consumers of one-eighteenth and one-twenty-fifth respectively for each candlepower of the coal gas or other gas furnished below the standards.

255. Rates to be fixed by courts if council rates are unreasonable—St. Paul.—In the year 1900 the new St. Paul charter went into effect with provisions that every franchise granted by the city must provide for the payment of at least 5 per cent of the gross receipts of the grantee into the city treasury; that no exclusive franchise could be granted; that no franchise could be granted for more than twenty-five years, and that every franchise-holder should make an annual report to the city showing in detail the financial status of his business for the preceding year. There was also a provision to the effect that the city council should not grant any extensions of any kind to existing franchise companies except on their written agreement to exercise the franchises they already had under the terms and conditions of the charter.

By an ordinance passed January 21, 1904, the St. Paul Gas Light Company was given a franchise for a period of twenty-five years from January 1, 1907, to supply gas for all purposes.[1] The company was required within one year after accepting the franchise to prepare "in convenient book or atlas form substantially bound * * * a profile showing all the main pipes, tunnels and conduits then laid and constructed, with their dimensions and locations," to be filed with the commissioner of public works. This profile was to be made complete by the company, as to extensions and new construction, in the month of January of each year. It was expressly stipulated that the company should be bound by the requirements of the city charter in regard to franchises, including the payment of an annual license fee of 5 per cent of its gross earnings derived or accruing from the exercise of its franchise, and "all manner of business transacted thereunder, including the sale and disposal of all residuals." It was provided, however, that the gross receipts tax should not apply to earnings derived from the sale of gas stoves, gas fixtures and appliances. It was agreed that after January 1, 1907, the company should be held to derive from this ordinance and from the present charter of the city its sole and only right to occupy the streets of the city for its gas business. The net price of gas to private consumers was fixed at $1.15 per 1,000 cubic feet until December 31, 1904; at $1.10 for the year 1905; at $1.05 for the year 1906, and

[1] *Ordinances*, 1907, *op. cit.*, p. 568.

at a maximum net rate of $1.00 for the twenty-five years commencing January 1, 1907. The company, however, was authorized to add 20 cents to the net price on failure of the consumer to pay his bill for any month on or before the 15th of the succeeding month. It was also provided that the company might make a minimum charge of 25 cents per month even though the amount of gas consumed at the price fixed would figure out a less sum. Gas for lighting the streets and the public buildings of the City of St. Paul and the County of Ramsey was to be furnished at a price that would never exceed $1.00 per 1,000 cubic feet for the gas actually consumed. The gas furnished was to be "good and first class for illuminating purposes, free from all noxious impurities." If the company furnished all coal gas, it was to be of not less than 16 candlepower; if water gas, it was to be not less than 22 candlepower. The standard was to apply in either case within a radius of one and one-half miles from the company's holders. The company was required to furnish to all persons along its mains "without discrimination, an ample and adequate supply of gas for illumination, fuel or other proper purpose, at current prices" under reasonable rules and regulations adopted by the company. The company was required during the life of the franchise to bid in good faith for the public lighting contracts at prices not in excess of the current rates. In case there should be an emergency when the city had no contract for furnishing public lighting, or in case the city was deprived of light for any other reason, the company agreed to make temporary provision for lighting at the request of the city. It was stipulated that if the city should acquire, construct or authorize the construction of a system of conduits, tunnels or subways in any understreet or streets, it might order the company to remove its pipes to such subways at the company's expense. Moreover, the city reserved the right to charge the company a reasonable rental to be fixed by the common council for the use of any such subways.

It was provided that the common council should have authority, "independent of whether or not the present provisions of the city charter in that behalf are continued in force during the life of this franchise," to regulate the maximum prices to be charged by the company, subject only to

the provision that the prices fixed by the city should be fair and reasonable. It was stipulated that if the company should ever dispute the fairness and reasonableness of any maximum prices thereafter prescribed by the council, and should carry the question for litigation into any court of competent jurisdiction, and if such court should determine that the prices fixed by the city were not fair and reasonable, then in the same action upon the evidence adduced, the court should itself "decide, fix and determine what maximum prices are fair and reasonable." The prices so fixed by the court were to be binding upon the company until the city should take further action in the matter, or until the conditions bearing upon the fairness and reasonableness of such prices should have materially changed and the company should have again brought the question into litigation. It was stipulated, however, that the court should never fix a maximum price for gas in excess of $1 per 1,000 cubic feet.

The company agreed to extend its mains within one year along certain enumerated streets. It also agreed that after January 1, 1907, it would extend its mains along any street in the city and furnish an ample supply of gas to residents on such street within six months after receiving the petition of the residents requesting the extension and agreeing that they would become "regular customers and consumers of gas" along the line of the extension. But it was required that the petitioners should be sufficient in number to average at least one house or building to be supplied with gas for every 100 feet of new main to be laid, not including street crossings. The company, however, was not to be required to lay any mains or erect any lamp-posts during the months of December, January, February, March and April. In addition to extensions made under the conditions just described, the common council was given unconditional authority to require extensions to the amount of three miles of mains in any one calendar year; and also, whenever the company was under contract for public lighting, to require the erection and maintenance by the company of additional iron lamp-posts with the necessary connections and service pipes for the purpose of such lighting.

The company was expressly forbidden to request any deposit or advance payment for installing service "in excess of

what is reasonably necessary to secure payment of current bills for gas consumed." On deposits for this purpose, the company was required to pay annual interest at the rate of 5 per cent. It was also stipulated that if current monthly bills should not be paid as due by customers, the service might be discontinued until the bills were paid, but that unpaid bills unless due from the owner should not be charged against the property, and no person not himself in arrears, should be denied service because any previous occupant of the premises happened to be in arrears with the company. Any sale, assignment or lease of the franchise was forbidden except by consent of the city evidenced by a two-thirds vote of the common council. This prohibition, however, was not to apply to any mortgage or deed of trust. The company was required to remain separate and apart from, and entirely independent of, all competing companies that might thereafter be engaged in the gas business in St. Paul. The company was forbidden in any manner to consolidate or pool its stock or business, or make any division of business or territory with any other company, or to acquire or use in any way the franchises or property of any other local gas company without the council's consent.

It should be noted that the St. Paul Gas Light Company also does the principal electric business in St. Paul. As a condition of this new gas franchise, the company was required to agree that all the electricity franchises held or controlled by it should be exercised subject to the terms and conditions of the city charter. The city agreed to recognize these franchises as valid for a period of twenty-five years, at the end of which time they were definitely to expire. The company had claimed that its electricity franchises were perpetual, while the city had attempted by ordinance to terminate them on January 1, 1907. Accordingly, by a compromise reached under the franchise ordinance of January 21, 1904, which we have just described, the company's gas and electricity franchises were brought definitely under the terms of the city charter and limited by agreement to a period of twenty-five years ending January 1, 1932.

256. Company's plant appraised in anticipation of purchase — Des Moines.—On May 16, 1895, the City of Des Moines passed an ordinance to fix the price of illuminating

gas and to prescribe the conditions under which persons and corporations dealing in illuminating gas could use the streets of the city.[1] Gas companies were entitled under this ordinance to charge $1.40 per 1,000 cubic feet for gas used for illuminating purposes and $1.10 for gas used for fuel purposes, a discount of 10 cents being allowed in either case for prompt payment. Illuminating gas was not to be of less than 24 candlepower; if the candlepower was less, the rate of charge was to be proportionately less. Gas for street lamps was to be furnished the city at $17 per annum, including lamp-posts, service pipes, lamps and maintenance. The lamps were to be "lighted one-half hour after sunset and one hour before moonset, and extinguished one hour before sunrise and one hour after moonrise, except when the condition of the weather may render street lights necessary, in which event they are to be kept burning all night." The lamps were to be regulated to burn not less than 6 feet of gas per hour. All gas companies were required to file semi-annual statements with the city, showing the amount of gas manufactured and furnished to the city or its inhabitants by them, and the rate per 1,000 feet received for such gas. Meters were to be furnished by the companies at their own expense. Service pipes were to be laid to the lot line free and from the lot line to the meter for not more than 15 cents per foot. It was provided that any company accepting this ordinance which already had its service pipes in the strects might continue to occupy the streets and alleys of the city for the purpose of furnishing illuminating gas so long as the city's consent should continue. In case any company refused to furnish gas at the rates prescribed in this ordinance, the city reserved the right to declare the forfeiture of all such company's rights and privileges already possessed or granted in this ordinance.

By another ordinance passed February 7, 1896, the ordinance just described was amended and modified as respected the Capital City Gas Company.[2] By the amended ordinance this company was authorized to charge during the years 1896 and 1897 a net rate of $1.30 per 1,000 feet; during the years 1898 and 1899 a net rate of $1.25; during the years 1900 and 1901 a net rate of $1.20; during the years 1902,

[1] Ordinance No. 724. [2] Ordinance No. 751.

1903 and 1904 a net rate of $1.15; during 1905 a net rate of $1.10, and during the succeeding five years a net rate of $1. The company was authorized, however, to add 10 cents per 1,000 cubic feet to each of these rates in case payment for gas was delayed beyond the fifteenth day of the month following that in which the gas was used. For street lamps and the gas consumed by them the city agreed to pay $18 each per year until the number of lamps reached 500. After that the price was to be $17. The city's gas bills were to be paid monthly, and five-foot burners or their equivalent in illuminating power were to be used. The gas was to be of not less than 22 candlepower.

The city reserved the right to purchase the company's plant at any time after five years and within fifteen years from January 1, 1896. This right to purchase was to vest in the city in its corporate capacity or in the city's trustees, or in the city in any other manner by which the privilege of purchase by the city might be exercised in good faith. The value of the company's plant at the time this ordinance was passed was to be determined by three appraisers, who were to make a complete inventory and appraisal of the company's property. The company was required to file with the city annually a statement, in complete detail, of expenditures for betterments and repairs, and the city was to have full facilities for verification of these reports by experts of its own selection. It was stipulated that replacements and ordinary repairs should not be counted as betterments, but that in the event of the purchase of the plant by the city, the actual cost of the betterments should be added to the first appraisement, "and no more." It was stipulated that the provisions of this amendment to the ordinance of 1895 should not be construed as either confirming, recognizing or denying franchise or other rights claimed by the company, and that the privilege granted by the amendment should absolutely cease at the end of fifteen years. It was also stipulated that the amendment should not be construed as conferring upon the company an exclusive right for any period of time to furnish gas either to the city or to private consumers, or as limiting the authority of the city to purchase or construct gas or electric light works for the purpose of lighting the streets and supplying the city and its citizens with light, fuel

or power. As a condition of this franchise, the company was to dismiss its suit against the city then pending in the United States Circuit Court and was to pay the city two per cent of its gross receipts, semi-annually after January 1, 1896. If the company at any time reduced the price of gas to its patrons below the rate fixed by the ordinance, it was prohibited during the entire period of the grant "from charging any person or persons or patrons of said company for gas, a price in excess of that which said company has charged any other person." It was provided, however, that this clause should not be construed to prohibit special contracts for lower rates to large consumers. The amendment was not to go into effect until accepted by the company.

257. Price of gas to be regulated at intervals—Saginaw. —The City of Saginaw, Mich., includes two districts which until a few years ago constituted separate cities. In East Saginaw a new franchise was granted January 25, 1886, to a reorganized gas company.[1] Under this franchise the company was required to furnish to the city and its inhabitants "such quantity of gas as may be required, equal in quality, and not exceeding in average price, the gas furnished in cities of like population in the State, similarly situated as to cost of manufacture and supply thereof, the price in no event to exceed $2.50 per 1,000 cubic feet for the first five years of the corporate existence." Moreover, the common council was authorized at the expiration of the first five-year period, and every five years thereafter, by resolution or ordinance to change and again fix the price of gas "subject only to the condition that the same shall not be reduced below the price charged for gas in other cities of the State similarly situated with reference to the cost of manufacturing and supplying the same." For failure to supply gas or keep the gas works and fixtures in good order for a period of three months the franchise was to be deemed forfeited and the city council was to have the right to confer it upon any other person or corporation. Previous to the opening of any improved streets or alleys for the purpose of laying, relaying or repairing any main or service pipe the company was to give the board of public works at least twenty-four hours' notice, and, in making such openings, to obey the reasonable

[1] Compiled Ordinances, City of Saginaw, 1898, p. 92.

directions of the board as to guarding the excavations so as to prevent accidents, and within a reasonable time was to close the openings and repair the street. The company was also to be liable for all damages to persons or property resulting from its neglect properly to make or guard such excavations. Whenever the city determined to grade or pave a street, notice was to be served upon the officers of the company residing in the city. Within ninety days after the service of such notice, the company was to enter upon the street and complete the laying and extending of its mains and service pipes in the portion ordered paved, and within the same period was to relay or repair any existing pipe or pipes located within the limits of the contemplated improvement, so far as they might require relaying or repairing. It was provided, however, that when a street improvement was ordered at any time between November 1 and April 1, the time within which the company was to do the work should be a period of sixty days from April 1 following the receipt of notice from the city. In case the company neglected or refused to extend its pipes or repair existing pipes in advance of the contemplated street improvement, it was to have no right thereafter without special consent of the common council to enter upon any street so improved for the purpose of laying its pipes within the lines of the pavement, but must lay its pipes outside of the curb line unless the common council should direct otherwise for good cause shown, and furthermore the company was to have no right to relay or repair its existing pipes under these circumstances without the consent of the common council unless it appeared to the satisfaction of that body that the necessity of relaying or repairing pipes arose after the expiration of the period within which, under the provisions of the ordinance, the company should have attended to the matter, or that such necessity had not been discovered by the company within that period. In such cases, the company was to have the right to open the pavement for the purpose of relaying or repairing its pipes subject to the supervision of the commissioner of streets, but was required to restore the pavement to as good a condition as it was in before being disturbed. Whenever the company desired to lay service pipes to connect with its mains in paved streets it was to do so by tunnelling wherever practicable without disturbance of

the pavement. In case, however, the removal of the pavement was necessary, the company was required to get special permission for the work from the common council, as provided in the general ordinance regulating sewer, gas and water connections in paved streets.

The gas franchise for the western district of Saginaw was granted originally on April 22, 1868, and amended July 16, 1894.[1] This franchise was granted to individuals, was exclusive in its terms and extended to all the streets of the city and to all territory that might thereafter be annexed to the city. The grantees were required to organize a corporation under the laws of Michigan and within eighteen months to erect good, permanent and sufficient gas works in the city and lay down at least 9,000 feet of mains in the streets. The company was to furnish gas to all persons along the line of its mains "who shall suitably supply their premises with service pipe and fixtures for receiving and burning gas, and who shall sign the rules and regulations of said gas company (such as are usual with such companies) and who shall require gas and pay for the same at a rate not exceeding, exclusive of a reasonable rent for meters, four dollars per 1,000 cubic feet for private lights." The maximum rate to the city for public lamps was to be $3.50 per 1,000 feet. It was also provided that after the expiration of the eighteen months, "as other parts of the city may become more compactly built so as to afford responsible applicants as consumers of gas in fifteen different buildings, who shall agree to take and continue to use and pay for gas lights therein on foregoing terms and conditions, for each additional 1,000 feet of main pipe," the company was to make the required extensions on demand. It was stipulated that the office of the company should be in the City of Saginaw, and that one or more of the company's directors should reside there. It was provided that if the company should not comply with the conditions of this franchise, or should at any time fail to keep its works in good repair, or fail to supply the city or its inhabitants with the requisite quantity of gas "of as good quality as is furnished by other companies to cities similarly situated" the franchise should be forfeited. It was provided that the quality of the gas should be subject to inspec-

[1] Compiled Ordinances, *op. cit.*, p. 96.

tion by three competent persons, one appointed by the common council, one by the company, and the third by these two. It was provided that at the end of ten years and at the end of every five years thereafter the price of gas should be fixed for the ensuing five-year period at the request of the common council by five disinterested persons who in making their decision were to be governed "by the price of gas in neighboring cities similarly situated with regard to the cost of production." The written decision of the majority of the arbitrators was to be final. At the end of thirty years, the city was required to renew the franchise "for a like term of time," or else purchase the plant at an appraised valuation. By an amendment of 1894 the provisions of the East Saginaw ordinance relating to the laying of pipes in advance of the improvement of streets were incorporated in this ordinance.

On December 21, 1908, the common council of Saginaw granted a new thirty-year franchise covering both districts of the city to the Saginaw City Gas Company. Under this franchise the price of gas for two years and five months following December 31, 1908, was to be $1.15; for the next ten years $1.10; and for the remainder of the franchise period the price was to be as fixed by arbitration. Within sixty days prior to June 1, 1921, either party was to have the right to institute arbitration proceedings to determine the price of gas for the next ten years. The arbitration was to be conducted by five disinterested persons, two of whom should be chosen by the city, two by the company and the fifth by these four. The price fixed by these arbitrators was to be redetermined in like manner after the expiration of another period of ten years. It was provided, however, that at all times a discount of 20 cents per 1,000 feet should be allowed from the established rate in the case of consumers paying or offering to pay their bills "at any time during the first twenty days of the month following that in which the gas is used." The company was authorized to charge a lower rate than the one fixed in the ordinance on condition that any such rate should be "open to all like consumers using gas for the same purposes and in like quantities." The company was required to render a bill to each consumer by the fifteenth day of each month for the gas used during the preceding month, and it

was stipulated that this bill should state "the last previous and present index of the meter, the number of feet of gas used by such consumer during such month, the amount due the grantee at the prices hereinbefore specified or hereafter fixed, and the discount to which the consumer is entitled if paid before the twentieth day of the month." In case of refusal or neglect on the part of any consumer to pay for gas used by him, the company was authorized to cut off the supply from the premises so long as they were owned or occupied by the person in arrears. The company agreed to extend its mains when directed by the common council to do so, so as to supply gas in any case where prospective consumers to the number of one for each 100 feet of main required should petition for an extension and agree to use gas for the period of one year. Coal gas furnished by the company was to have a heat value of at least 570 British Thermal Units and an illuminating value of at least 16 candlepower. Water gas was to have the same heat value and an illuminating value of 20 candlepower. If the two kinds of gas were mixed, the standard in each case was to be the same as for coal gas alone. Pressure in the gas pipes at the consumers' meters was limited to a maximum of four and five-tenths inches and a minimum of one and eight-tenths inches. Provisions similar to those in preceding Saginaw franchises relative to the laying of mains and service pipes in advance of paving were included in this grant. There was also a rather elaborate provision for the inspection of meters. It was provided that if the meter upon being tested was found to register more than two per cent fast, the cost of the inspection should be borne by the company. In case, however, the meter was found to be correct within two per cent or to be more than two per cent slow, the city was to pay the company fifty cents "to cover the cost of producing the meter at the place of inspection." In case the meter was found to be fast the company was to repay the consumer "a sum equal to the per cent fast multiplied by one-half the amount of all bills paid by such consumer for gas registered by such meter between the date of the removal of such meter for such testing and one year or such part thereof as the meter may have been in use immediately preceding the date of such removal." In case the meter was found to be slow the company was to have author-

ity to collect from the consumer an amount to be determined in a similar way.

258. Percentage payment of receipts from all sources, including by-products—Nashville.—On February 20, 1900, the Nashville Gas Company was granted a twenty-five year license from the city for the manufacture and distribution of gas.[1] It was stipulated that when the company should tear up a macadam street for the purpose of laying or repairing pipes, it should on refilling the excavation thoroughly stamp each six-inch layer of material used, but the top layer was in every instance to be "new, clean macadam filled to a depth not less than ten inches." The company was required to furnish "a good commercial gas suitable for illuminating and fuel purposes" capable of producing light of 16 candlepower "as near as practicable, but never less than 15 candlepower," in a burner using five feet of gas per hour. The price to be charged was not to be more than $1.10 per 1,000 feet with a discount of 10 cents per 1000 on bills paid in the first five business days of the month following the month for which they were rendered. The company was required to make an annual payment to the city of 5 per cent of its gross receipts "derived from gas, coke, tar, ammonia and meter rents." At any time after ten years the city was to have the right, upon giving twelve months' notice, to purchase the company's plant, "embracing every appliance thereof for the manufacture and furnishing gas for lighting and heating." Such purchase was to be at a fair valuation to be arrived at by arbitration. It was expressly agreed by the company that the sale under these circumstances should "be taken and construed as a voluntary surrender" of the franchise, which should not be valued in the appraisal. The value of the plant and appliances was to be fixed, however, as that of "a plant in actual operation, the right to the immediate operation of which will vest upon the completion of the sale, exclusively" in the city. The company was required to file an annual sworn statement with the city, and the city recorder or some expert designated by the mayor and council was to have the right at all times to examine the company's books and accounts and to report to the city authorities. It was particularly stipulated that no convict labor should be used by the

[1] Laws of Nashville, *op. cit.*, p. 1030.

company or by any person or corporation working for the company, and that the company should not use any material that was a production of convict labor. It was provided that whenever the city paved a street with granite, brick, asphalt, or any other permanent material, before the work was done the company should run the service pipe from its mains to the sidewalk for each and every lot "no matter whether such lot be vacant or improved." This ordinance was submitted to the qualified voters of the city and ratified by them by a vote of 1,301 to 101 at an election held April 19, 1900.

259. Gas charter awarded after public advertisement—Springfield, Ill.—By a special act of the legislature of Illinois approved February 27, 1854, five individuals and their associates were created a body corporate and politic under the name of the Springfield Gas Light Company.[1] This corporation was given authority to manufacture and sell gas "to be made from any and all substances or combinations thereof, from which inflammable gas is or hereafter may be obtained." The company was also authorized to erect the necessary works and lay pipes for conducting the gas in any of the streets of Springfield or its suburbs, on the sole condition that no permanent injury should be done to any such street. The company was given the exclusive privilege of supplying gas for lighting purposes for a period of twenty-five years. It was provided, however, that the persons named in the act as the corporators should receive proposals from any association or individual for supplying the city, its citizens and the state buildings and offices with gas. Each proposal was to state the price at which gas would be furnished, the quality of the gas, and the time when the work would be commenced and finished. All the proposals received were to be submitted to the Governor, the State Auditor and the State Treasurer, who were to award the charter to the association which in their judgment offered the most advantageous terms to the public. The parties receiving the award were to execute a bond in the sum of $10,000 to the city to guarantee their compliance with the terms and conditions offered by them, and thereupon they were to become incorporated and invested with the privileges conferred by the act and supersede the corporation created by the act. It was

[1] Private Laws of 1854, Special Session, p. 189.

provided, however, that the company must secure the consent of the city before occupying any street or alley with its pipes.

On April 18, 1854, in accordance with the terms of this act, the gas charter was awarded to certain individuals who submitted a proposition to build works and supply the city of Springfield with gas.[1] According to the terms of their proposal, they were to lay down at least two miles of pipes and as much more as might be necessary to furnish gas to the main business parts of the city. They were also to extend their gas pipes to any parts of the city when directed to do so by the city authorities, on condition that for such extensions the city should guarantee to them an income from the consumption of gas by individuals yielding not less than eight per cent on the cost of the extensions. It is to be noted that this return on the investment was to be in addition to any revenue derived from street lamps on the extensions laid. The applicants bound themselves to furnish a full supply of gas equal in quality to that being furnished at the time by the Chicago and St. Louis Gas Light Companies. All individuals along the lines of the gas mains desiring service were to be supplied at the rate of $3.25 per 1000 cubic feet. Consumers were to furnish their own burners and fixtures. The city was to pay $20 a year for the gas consumed by each street lamp erected by the company at the city's expense, and $5 additional for the care of each lamp. The city had the alternative, however, of taking gas at the regular price charged to private consumers. The applicants proposed to commence work within thirty days after obtaining authority from the city and stated that they would expect to complete their work during the current year. In fact, they would agree to do so, with the provision that if they were delayed "by any untoward and unexpected event," such as the prevalence of an epidemic sickness to a degree sufficient to embarrass them, or the impossibility of obtaining brick or other materials, no forfeiture should operate against them until the first of May of the succeeding year, 1855.

By an ordinance passed April 20, 1854, the city gave its consent to the laying of gas pipes by this company.[2] A few simple conditions relating to the tearing up of the streets and the indemnification of the city against damages were attached

[1] Franchise Ordinances, City of Springfield, *op. cit.*, p. 37. [2] *Ibid.*, p. 40.

to this consent, and the city accepted the price for public street lighting offered by the company, that is to say, $20 per annum for each lamp, and the gas consumed by it, and $5 in addition for maintaining it. In 1884 the company's privileges were extended for a period of ten years on certain conditions.[1] The price for street lamps was to be reduced to $15 a year per lamp, including all charges for maintenance. The price for gas used by the city for purposes other than street lighting, and for gas furnished to private consumers was to be $1.50 per 1,000 cubic feet, but the company was authorized to add a penalty of 25 cents per 1,000 feet to bills of consumers who failed to pay within ten days after the end of each month. The city reserved the right to order extensions of gas pipes on condition that the company should be assured a consumption, either by the city or by private individuals, of not less than 1,000 cubic feet of gas per day for every 400 feet of the extension. No other company was to be given a franchise during the ten-year period.

By an ordinance passed May 20, 1895, the city gave a franchise to the Provident Gas Company.[2] Under this grant the company was to furnish service pipes at its own expense. It was to supply illluminating gas with an average quality of 22 candle-power at a maximum price to private consumers of 85 cents per 1000 cubic feet of gas used for lighting and of 65 cents for gas used for fuel, with the provision that a penalty of 10 cents per 1,000 feet could be added "if bills are not paid by a certain date in each calendar month to be fixed by said company and stated in said bills." The city reserved the right to request the company to furnish gas and service for street lamps at a rate of $12 per annum for each lamp "consuming five cubic feet of gas per hour with boulevard globes." The company was to pay into the city treasury during the first five years of its franchise, a sum equal to one per cent of its gross receipts, and after the expiration of the five-year period, a sum equal to two per cent of its gross receipts. The franchise was granted for a period of twenty years, on the express condition that at the expiration of the period the city should have the right to purchase the company's entire plant and all its property and effects of every description within the limits of the city at an appraised

[1] Franchise Ordinances, *op. cit.*, p. 41. [2] *Ibid.*, p. 44.

valuation. One appraiser was to be appointed by the city and one by the company, and the two so selected were to choose a third, but if they could not agree upon a third, then he was to be selected by the judge of the Circuit Court of Sangamon County.

260. Exclusive grant for twenty years to highest and best bidder—Newport, Ky.—On June 3, 1880, an ordinance was passed by the city of Newport granting to the Newport Light Company an exclusive privilege of supplying gas to the city and its inhabitants for a period of twenty-five years, and until the city should give the company twelve months' notice of the termination of the franchise.[1] The gas furnished was to be equal in quality to Cincinnati gas. The price to the city for gas used in its street lamps was to be $1.20 per 1000 cubic feet, and gas was to be furnished to private consumers at $1.90 for the five-year period from June 11, 1882; at $1.80 for the succeeding five-year period; and at $1.75 for the fifteen years thereafter, with a five per cent discount during the entire franchise-period for cash within ten days. The company was to furnish the street lamps, lamp-posts and all necessary fixtures, and erect them at such times, in such numbers and at such points along the company's mains as the city might direct. The city might even order the lamp-posts to be moved from one point to another at the company's expense. If the use of any lamp-post was discontinued, however, the city was required to purchase it, with the requisite fixtures, at the original cost. Street lamps were to be cleaned, lighted and kept in repair at the expense of the city. In case the company refused to extend its pipes to any point required by the city for the purpose of supplying public lamps with gas, the city reserved the right to lay the pipes at its own expense. The company was not authorized to use such pipes excepting for the purpose of furnishing gas for public lamps, or to lay other pipes in the same streets until it had refunded to the city the entire amount of its expense in making such extensions. The company was unconditionally obligated, however, to lay not less than 1,000 feet of gas pipe every year at the request of the city. It was recited in this ordinance that the existing contract between the city and the Covington Gas Light Company would expire on June 11, 1882, and that

[1] Special Ordinances, City of Newport, Ky., p. 366.

under the terms of this contract either the city, or the company securing a new lighting contract with the city, could purchase the old company's pipes, lamp-posts and fixtures at a valuation to be determined under the original ordinance of June 11, 1857. Accordingly, this right to purchase was assigned by the city to the Newport Light Company, and in turn the city reserved the right to purchase this company's property at the expiration of the franchise unless the grant should be renewed. The company was authorized to adopt "any other mode equal to gas for supplying light to the city and its inhabitants" on condition that such other light should be furnished at no greater cost than the cost of gas light.

In 1904 notice was served upon the successor of the Newport Light Company that its franchise would not be renewed. Accordingly, an ordinance was passed May 5, 1905, requiring the city clerk to advertise for two weeks in various local and Cincinnati papers and one engineering journal to the effect that the General Council of the city of Newport would receive sealed bids for the exclusive franchise of supplying artificial gas in the city for a period of twenty years.[1] The franchise was to be awarded to the highest and best bidder, but the General Council reserved the right to reject any and all bids offered. Certain conditions were enumerated which would apply to the successful bidder or his successors. Gas was to be supplied not later than June 12, 1907, throughout all that portion of the city which at the time was being furnished under the existing gas franchise, and the gas mains were to be extended from time to time whenever the owners of one-half of the frontage of the property abutting upon the proposed extension should petition the General Council for an extension, and the General Council should order it. The cost of service connections was to be divided between the company and the consumer at the curb lines. The gas furnished was to be of not less than 16 candle-power, 600 heat units per cubic foot and thirty-tenths pressure. The successful bidder was to execute a bond in the sum of $50,000 to indemnify the city against damages caused by the exercise of the franchise, and an additional bond in the sum of $10,000 to guarantee the faithful performance of the conditions prescribed in the ordinance. In case the successful bidder should furnish gas

[1] Special Ordinances, *op. cit.*, p. 380.

to any town or district in the vicinity at a lower rate than stipulated in the bid for the city of Newport, then such lower rate should immediately become effective in Newport. The conditions upon which street work was to be done were carefully prescribed. The city reserved the right of purchase at the expiration of the grant by giving one year's previous notice, and agreed to transfer to the successful bidder its option of purchase of the pipes and fixtures of the existing company. It was provided that "the provisions of this ordinance shall apply to and mean artificial gas, and no other." By a resolution approved July 6, 1905, the bid of B. Bramlage to furnish gas at a net price of 70 cents per 1,000 feet was accepted.

261. Extensions at the discretion of the common council. —Syracuse. —The first gas franchise granted by the city of Syracuse was given in 1849. Another grant was made in 1880, but neither of these contained any particularly important provisions.[1] On February 20, 1890, however, a franchise was granted to the Onondaga Gas Light Company which required among other things that in all cases where the city contemplated laying asphalt pavements, notice of its intention must be given to the gas company at least sixty-five days before the commencement of the work, in order to enable the company to lay its pipes and mains in advance of the improvement. The company was required to render a weekly report to the proper city official of all openings it had made in the pavements for laying or repairing service pipes or for the discovery or stoppage of leaks. The company was also to render a monthly report of the mains which it had laid during the preceding month. It was provided that if the company failed to replace the pavements or repair the streets which had been disturbed by its work or to maintain them for a period of one year, such restoration and maintenance were to be taken care of by the city, and the expense was to be paid by the company as a special deposit for street and highway repairs. Furthermore, the company was to be penalized in the sum of $25 a day for every day's failure or neglect to repave or repair the street after proper notice from the city to do so. The company agreed to lay the necessary mains and pipes through all the streets and alleys of the city "where

[1] Abstracts of gas and other franchises of Syracuse were furnished to the author by Dr. Chas. W. Tooke.

the same are now built up and improved," and also through all streets and alleys "that may hereafter be so built up whenever the common council of said city shall direct."

Another franchise was granted on June 17, 1895, to Frank Hiscock and others, which contained a clause to the effect that all mains, lateral pipes, connections and other appliances for manufacturing and supplying gas should be constructed and maintained under the supervision and direction of the commissioner of public works, and should be "of such materials, quality and weight as shall be approved by the common council." The grantees were required at their own expense to furnish and lay all service pipes through the wall of the building of any person desiring to have gas connections. It was expressly provided that when the council should determine to pave any street the grantees, if directed to do so by resolution of the council, should lay their mains and service pipes in such streets, within a certain specified period after receiving notice. In case they failed to lay the pipes within the time limit set, the commissioner of public works was to be authorized to lay such mains and service pipes at the expense of the grantees. In case they refused to pay the bills within ten days after delivery, the expense of the work was to be assessed against their property and collected in connection with taxes. There was a general provision requiring the grantees to lay gas pipes on streets contiguous to streets where pipes were already laid, within ninety days after being ordered to do so by the council; on the condition, however, that in the opinion of the council the amount of gas consumed by the parties for whose benefit the extensions were made would justify the laying of the pipes and the making of the connections. The commissioner of public works was authorized to appoint proper persons to superintend the laying of pipes and the repairing of the streets during the time that the grantee's lines were in process of construction, and the salaries of such superintendents "not exceeding, however, one person for every two blocks on any one street at a rate not exceeding $3 per day for each person so employed" were to be paid by the grantees.

Another franchise granted December 18, 1893, to the Syracuse Gas Company contained no important provisions not included in the preceding ones.

CHAPTER XXI.

GAS FRANCHISES IN CITIES WITHIN REACH OF NATURAL GAS FIELDS.

262. Natural gas superseding artificial gas—Cincinnati.—Under the general laws of Ohio the rates charged for either natural gas or artificial gas are subject to regulation once in ten years by municipal ordinance. Exercising this authority, the Board of Legislation of Cincinnati passed an ordinance July 31, 1899, fixing the rates to be charged by the Cincinnati Gas Light and Coke Company for the succeeding period of ten years at 75 cents per 1000 cubic feet of 16 candle-power gas furnished to public buildings and to private consumers for illuminating purposes; and at 50 cents for gas used exclusively for heating or fuel purposes through a separate service and meter.[1] The company was entitled, however, in either case to charge an additional 10 cents per 1000 feet on bills not settled "within the five calendar discount days heretofore allowed."

[1] Ordinance No. 341, *Ordinances of the City of Cincinnati*, p. 124.

On December 26, 1905, a new franchise was granted by the city council to the Cincinnati Gas and Electric Company, authorizing it to supply natural gas for heat, light and power "and all other necessary uses by both public and private consumers." [1] The company was to use, however, its existing distributing system and such extensions of its system as might thereafter be authorized or made. Authority was granted to open the streets for laying additional mains, pipes and fixtures from time to time for the transportation of natural gas to consumers "throughout the city, as the same now exists or may hereafter be extended by annexation or otherwise." The declared object of the grant was "to enable and require said company as far as practicable to use its present gas pipe system and so avoid as far as may be the necessity of opening or disturbing the public ways and grounds for the purpose of supplying the city and its inhabitants with natural gas." It was provided that if the company, through no fault of its own, should be unable to supply natural gas in sufficient quantities because of the failure or deficiency of its own supply, or on account of its inability to purchase a supply from other companies delivered to the company's mains at a reasonable contract price, then the company should furnish artificial gas on the conditions, regulations and limitations that would have been in force if the new franchise had not been granted. It was stipulated, however, that before the company should be permitted to charge the rates fixed for artificial gas, or any other rates in excess of the rates fixed for natural gas, it should first establish to the satisfaction of the Board of Public Service that, through no fault of its own, it was, on account of the failure of its own supply, unable to furnish natural gas, and that it was unable to purchase such gas at a price determined to be reasonable by this board.

The company was required within six months to commence laying the necessary mains within the city limits to conduct natural gas to its holders, and to make the necessary connections and lay the necessary mains and to construct all proper appliances to enable it to supply natural gas. All of this work was to be completed within one year after the acceptance of the franchise. The company was also to begin

[1] Ordinance No. 1222, *Ordinances of the City of Cincinnati*, p. 58.

within six months to lay the main line or lines from the nearest source of adequate supply to the city of Cincinnati, such line or lines to consist of continuous piping of sufficient size and capacity to supply the consumption demanded. This work was also to be completed within one year from the acceptance of the franchise, unless prevented by *bona fide* litigation or other causes beyond the company's control. Any existing mains and service connections physically unsuitable for the distribution of natural gas were to be immediately repaired and replaced with suitable ones subject to the inspection and approval of the Board of Public Service. This work also was to be completed within a year, "so that within said period every portion of the city of Cincinnati shall be prepared to receive and use natural gas; and said company shall immediately thereafter commence to supply natural gas in quantities sufficient to meet the demands throughout the city." It was provided, however, that the time consumed by delays on account of injunctions and other causes of a similar nature should not be considered in estimating the company's time limit. The Board of Public Service was to give the city and its inhabitants "seasonable notice" within the year and not less than thirty days' prior to the time when the supply of natural gas was to begin, so that all consumers would be in a position to make suitable provisions, to be first approved by the city authorities, for receiving and consuming natural gas upon their premises. The company was authorized to prescribe reasonable regulations, to be first approved by the Board of Public Service, governing the use of gas. A preliminary notice of supply was to be published in both English and German newspapers, and the company's regulations were to be printed in both these languages and distributed by it among the consumers. As soon as, and as long as, a sufficient supply of natural gas was available the company was to be relieved from the obligation to furnish artificial gas. It was stipulated that whenever new service pipes were required the company should lay them at its own expense to the inside of the curb line and, with the consent of the owner of the property, it should place and maintain at least one service pipe to the point of consumption on the premises. Standard gas meters, tested and sealed, were to be furnished by the company and to remain at all times subject to a rea-

sonable system of inspection by "a competent, disinterested chemist or gas expert" employed by the city to inspect meters upon complaint; to test the pressure and heat-unit quality of the gas at least once a day, and to analyze the gas for dilutants or impurities. All regulations regarding the opening, restoration and repair of streets to which the company was subject under its old franchises were to remain in force. Permits from the proper authorities were required before the commencement of any street work and the company was obligated to execute an indemnity bond in favor of the city in the sum of $50,000. The grant was to continue for a period of 25 years subject to the the right of the city to regulate the price of natural gas from time to time as provided by law and to purchase the company's plant and works. This franchise was expressly non-exclusive. The heat quality of the gas furnished by the company was to be of not less than 800 British Thermal Units to the cubic foot, as furnished at the point of consumption, and the pressure was never to be less than four ounces or more than twelve ounces to the square inch at that point. In case the quality of the gas fell below the standard for an aggregate period of 72 hours in any month, the bills to consumers were to be discounted ten per cent from the net price, and an additional discount of ten per cent was to be allowed for every additional 72 hours or portion of that time during which the gas was below the standard. It was provided that if the company should be unable to furnish and distribute natural gas within the period required, or should refuse to do so in accordance with the prices fixed by the city council, or should fail to comply with any of the conditions of this franchise, it should thereupon at the option of the city, forfeit all the privileges granted by this ordinance.

By another ordinance passed on the same date, the city council established a natural gas rate "for street lighting and all other purposes and to private consumers," of 40 cents per 1000 cubic feet with a discount of 10 cents per 1000 on bills paid before the tenth day of the month following that in which the gas was used.[1]

As a matter of fact, under this ordinance as late as May 27, 1909, the company was supplying natural gas to only

[1] Ordinance No. 1223, *Ordinances of the City of Cincinnati*, p. 64.

about one-third of the city. It was expected, however, that natural gas would be supplied to the whole city not later than the following July. A partial supply of natural gas was at that time being obtained through the Ohio Gas, Fuel and Supply Company, from the natural gas fields of Ohio. There was under construction, however, a pipe line from the West Virginia gas fields, from which the company expected to receive its ultimate supply.

263. Artificial and natural gas in competition—Cleveland.—The original franchise of the Cleveland Gas Light and Coke Company was granted to certain individuals on March 9, 1849.[1] The pipes laid were to be of cast-iron or other material equally durable. In case, however, the grantees wished to use other material than cast-iron they were to execute a bond to the city guaranteeing "that said pipes if made of other material than cast iron, shall be equally as good and durable as iron, and if not found so, to substitute iron within such time as the council may prescribe." Gas for public lamps along the company's "leading or main pipes" was to be furnished at "a price not exceeding the prices paid either in Cincinnati, in this State, or in Buffalo, New York." The lamp-posts, meters and lamps were to be furnished at the expense of the city. The price of gas to private consumers was not to exceed $3 per 1000 feet. If at any time the city council desired to erect lamps at engine houses or any other public buildings, grounds, and bridges within the city and the grantees refused for a reasonable compensation to extend the gas pipes as required for such purposes, then the city was to have the privilege of extending the mains and providing for as many public lamps for the purposes mentioned as it might deem necessary. The lamps thus erected were to be furnished with gas by the grantees, and the pipes laid down at the expense of the city were not to be used directlly or indirectly except with the city's consent for furnishing gas to individual citizens, and the grantees were not to lay down any other gas pipes in the same streets until they had refunded to the city the entire amount it had expended in laying the pipes in the first instance. The grantees were to commence work on or before the first day of May, 1850, and lay 240 rods of leading pipe by the first day of October following. Their

[1] Special Ordinances, *op. cit.*, p. 5.

apparatus for generating gas was to be completed by the first of December of the same year. It was stipulated that temporary failure to perform any of the conditions exacted of them, except as regarded the original completion of the work, when such failure was occasioned by accident or untoward events, should not work the forfeiture of their privileges, "provided such accidents or events be remedied within a reasonable time".

In or about 1867, the city granted another franchise, this time to the People's Gas Light Company.[1] Rates for public lighting were limited to $2.25 per 1,000 feet and the rates to private consumers were not to exceed $3. The company was to lay service pipes from its mains to the houses of persons desiring to have gas connections "at as low a price as may be charged by responsible, practical plumbers." This franchise contained the same provisions in regard to extensions and forfeiture as were contained in the earlier grant. There was an additional provision that after the expiration of two years, the city should have the right of purchasing the company's "pipes, buildings, fixtures and other apparatus owned and used by them in and about providing the city and citizens with gas, at a fair price and compensation." The price was to be determined by five disinterested persons, two chosen by the city, two by the company, and the fifth by the four thus selected.

On July 23, 1900, an ordinance was passed by the city of Cleveland to fix the price and prescribe the terms and conditions upon which the two companies should be required to furnish the city and its citizens with gas for the ensuing ten years.[2] The price was fixed at 75 cents per 1000 feet, meters to be furnished by the companies at their own expense. It was declared that this price should be both a minimum and a maximum, and should "neither be increased nor diminished at any time during said period of ten years." The companies agreed to pay, in semi-annual instalments into the city treasury 6 1-2 per cent of thir gross receipts from the sale of gas. They were required to make detailed statements to the city every six months and to keep in proper book form complete and detailed accounts showing the quantity of coal and other materials used, the number of cubic feet of gas

[1] *Special Ordinances, op. cit.*, p. 8. [2] *Ibid.*, p. 11.

manufactured by them, the number of meters in use, the name of each consumer and the number of his meter, and the amount of gas consumed and paid for by each consumer. All these accounts were to be open to the inspection of the city auditor. If not satisfied with the correctness of any report furnished by the company, this official was authorized, with the mayor's approval, to designate a competent person to make a thorough investigation of the company's books, or such of them as he or they should deem necessary to make the investigation complete. In case the company's reports were found to be incorrect as a result of such investigation, the reports were to be corrected and the payment of receipts to be adjusted accordingly. The gas furnished by the company was to be of not less than 17 candle-power. This standard of quality was specifically defined as such that a burner consuming five feet of gas per hour at a pressure of not more than two-tenths of an inch should give a light of at least 17 standard sperm candles each consumming 120 grains per hour. The light-giving quality of gas was to be determined by a monthly average of semi-weekly tests made by the proper city official. It was stipulated that there should not be more than twenty grains of sulphur or ten grains of ammonia in any 100 feet of gas and that there should be no "sulphureted" hydrogen. The pressure in the mains was to be at all times "wholly subject to and under the control and direction of the Director of Public Works." The companies were required to "furnish the necessary materials and labor in the lighting, extinguishing, cleaning, furnishing and replacing of glass, setting burners and care of street gas lamps" in accordance with certain specifications. Lamps were to be lighted and extinguished in accordance with the time-table adopted from time to time by the Director of Public Works, and the lighting and extinguishment were to be done within 45 minutes of the time indicated by such time-table. All broken glass in lamps was to be removed and replaced with new glass. The companies were also to furnish lamps, and glass required for additional lamps ordered by the city from time to time. The glass in the public gas lamps was to be thoroughly cleaned at least once a week, and oftener if deemed necessary by the Director of Public Works. Lamps having street signs attached to them were to

be replaced with the signs facing the proper street after each cleaning, and signs broken were to be replaced at the expense of the company. Burners were to be examined every time a glass was cleaned, and tested at such times by lighting the jet. When necessary, the burners were to be cleaned so as to give a broad, even flame at all times. Worn-out burners were to be replaced at the expense of the company. Repairs and renewals of lanterns and lantern frames were to be made by the companies, and the lowering of lamp service pipes and the changing and resetting of posts were to be done by the companies at their own expense. The city reserved the right to increase or decrease at its option the number of street lamps to be lighted and cared for during the term of the ordinance. Whenever new street lamps were desired by the city, the companies were bound to furnish at their own expense "all required lanterns, glass, piping, labor of setting posts, cocks and burners, and in fact, everything necessary to put the said lamps in a completed condition for use, except the posts which * * * the city is to furnish, the entire outfit thus furnished by the said companies respectively to be and remain the property of the city of Cleveland on the termination of this ordinance," except as otherwise provided. The companies also agreed that if the city should at any time within one year from the date of the ordinance decide to replace its street gas lamps to the number of 5,000 or more with "Welsbach Boulevard Gas Lamps," the companies would furnish, equip, maintain and supply with gas as many lamps of the Welsbach Street Lighting Company of America as the city should require, for a sum not to exceed $22 a year for each lamp thus furnished without extra charge for gas consumed. The time these lamps were to burn was fixed at 3,760 hours a year and each lamp was to give a 50 candle-power light. If the city decided to use this style of lamp, however, the lamps were not to become the city's property at the expiration of the ten-year period. It was stipulated, however, that nothing in the ordinance should prevent the city during that period from advertising for bids and letting a contract for as many Welsbach boulevard lamps or any other kind of gas lamps as it might determine, and in that event the companies were to furnish gas for such lamps at the regular rate of 75 cents per 1000 feet. It was expressly pro-

vided that nothing in the ordinance should be held to require the city to continue to use for public lighting during the period of ten years the gas furnished by the companies. Each of the companies was required to file its written acceptance of the terms and conditions of the ordinance within five days after its passage.

Another ordinance was passed in the following year authorizing the mayor to enter into an agreement with the companies to settle certain disputes which had arisen.[1] It was provided by this agreement that the city might discontinue any of the lamps in use at any time; but whenever the city displaced an existing lamp and substituted another for it, the interested company was to be relieved for the future from lighting, extinguishing and maintaining such lamp or any additional lamps, and the city was to be credited with $2 per annum for each lamp furnished and maintained by it or by anyone other than the gas companies. In order to ascertain the amount of gas furnished to the city for public lighting, tests were to be made every three months, or oftener if either party requested it. For each of these tests, 100 burners supplied with gas by the companies were to be taken, 50 from each of two places, one place selected by the city and one by the company. The burners were to be taken consecutively in any direction from each place, the direction to be designated by the Director of Public Works. The tests were to apply to all lamps other than the Welsbach boulevard lamps, and in case the consumption of gas by the flat-flamed burners as shown by these tests should be four and one-half feet or more per lamp per hour, the companies were to be paid on the basis of four and one-half feet per hour for gas consumed by that class of burners. Otherwise, if the average consumption was more than four feet, the company was to be paid on the basis of the average. It was stipulated that the company should be paid nothing for any lamp consuming less than four cubic feet per hour, but that such lamp should be counted as a burner in obtaining the average, and treated as consuming nothing. For gas consumed by other than flat-flamed burners and Welsbach boulevard lamps, payment was to be made for the amount of gas actually consumed as shown by the tests. All tests were to be

[1] *Special Ordinances, op. cit.*, p. 19.

made under pressure of one and six-tenths inches of water. The Director of Public Works was authorized at any time, having first notified the company interested, to test the pressure of gas furnished to any lamp by suitable apparatus provided for the purpose at the joint expense of the gas company and the city. If the director found the pressure to be less than one and six-tenths inches of water, only half-price was to be paid for the gas consumed in that lamp, and if the pressure was found to be less than one and two-tenths inches, the company furnishing the gas was to be relieved from the deduction as soon as the pressure had been restored to one and six-tenths inches as shown by a new test.

On June 23, 1902, a franchise was granted to the East Ohio Gas Company for the transportation and supply of natural or manufactured gas for fuel and heating purposes only.[1] The company was required to lay in all paved streets occupied by it two lines of pipe, one on either side of the street. These lines were to be laid between the curbs and the property lines if so ordered by the Director of Public Works. If, however, the director deemed it impracticable to lay the pipes in this location, they were to be laid under the paved parts of the street at a distance of not more than 4 feet from the curb, unless the space was already occupied. The company was not authorized to cross paved streets in laying its pipes except at street intersections, without the consent of the city. It was stipulated that the city should "do all refilling, puddling, paving or repaving made necessary by the construction and repair of the mains and service pipes and other fixtures" in paved streets and alleys, but the cost of the work was to be paid by the company. Except as thus provided, the company's trenches were to be refilled and the streets restored by the company itself. The company was not to interfere in any way with the lines or property of any other company building or operating pipes for the transportation or distribution of artificial or natural gas, or with the water pipes or sewers of the city, or with the operation of any street railway, or with pipes and conduits of any other person or corporation lawfully laid in the streets. The company was required to commence work within thirty days from the acceptance of the ordinance, and to be ready

[1] Special Ordinances *op. cit.*, p. 22.

to supply gas within six months from that time on thirty miles of streets. Within 18 months from the acceptance of the ordinance, the company was to be ready to supply 100 miles of streets distributed through the eleven councilmanic districts of the city. In addition to this requirement, the company was to extend its mains into other streets whenever contracts with at least fifty consumers to each mile of street were assured. The company was required to supply all demands for gas up to 100,000 feet per day for each mile of street piped by it, except as to extensions laid under the special order of the city council. The total amount of gas which the company could be required to furnish was limited, however, to 36,000,000 cubic feet per day. The rates were fixed in this ordinance for a period of ten years. The price for natural gas was to be 31 cents per 1000 cubic feet both to the city and to private consumers with a reduction of one cent per 1000 feet upon bills paid within ten days after presentation. The price for manufactured gas was to be 41 cents, with a similar discount, and if manufactured and natural gases were mixed, the price was to be fixed between 31 cents and 41 cents according to the proportions of the mixture. If the manufactured gas furnished should be of less than 600 heat units per cubic foot, the price charged for it or for the mixture in which it was an element was to be correspondingly lowered. The company agreed to establish at least four collection stations in districts to be designated by the council.

In 1907, the interests controlling the two companies furnishing artificial gas in Cleveland applied for a natural gas franchise. The negotiations failed, however, because of inability to reach an agreement with the city as to rates. The applicants for the franchise insisted on a rate of 30 cents per 1000 cubic feet, while the city held out for rates ranging from 20 cents to 27 1-2 cents. It was in connection with this application that the special committee of the Chamber of Commerce of Cleveland made its investigation and report to which reference has been made in a preceding section.[1]

264. Ten per cent gross receipts tax on natural gas sold for more than 15 cents per 1000 feet—Columbus, Ohio.—A

[1] *Ante*, Section 249.

franchise for the supply of artificial gas was granted June 27, 1892, to the Columbus Gas Light and Coke Company.[1] The city reserved the right to purchase the company's works and all the appurtenances belonging thereto "at any time during the continuance of the franchise." The company agreed to pay the city an annual lump sum of $4,000 and to sell gas for the first ten years following the passage of the ordinance at a price not exceeding $1.10 per 1000 cubic feet, with a discount of 10 cents per 1000 on monthly bills paid before the 15th of the following month. The gas was to be of at least 16 candle power.

By ordinances approved May 27, 1899, August 1, 1899, and April 4, 1900, natural gas franchises were granted to the Federal Gas and Fuel Company.[2] Under the first two of these grants the company was authorized to supply natural gas for fuel for public or private use in the buildings or manufacturing establishments and otherwise in the city. Under the grant of 1900, the company was authorized to supply either natural or artificial gas to be used for fuel or for lighting and illuminating purposes. The conditions in all of these grants were in most respects the same. No excavation was to be made for laying pipes in High Street, the principal thoroughfare of the city, wherever that street was paved with block-stone or asphalt or other paving material, except when necessary to cross the street. Neither were pipes to be laid in other paved streets except where necessary and for the purpose of crossing. Wherever practicable, the pipes were to be laid in alleys, and otherwise, under the sidewalks inside the curbstone. It was provided, however, that pipes placed under sidewalks should consist of an inner and an outer pipe, the former for the conveyance of gas, the latter to be ventilated to the surface of the street by pipes at intervals of 1000 feet. The company was required to furnish to the proper city official, plans of any proposed excavation in advance of making it. Under the second franchise this plan was subject to approval or amendment by the director of public improvements. There were the usual provisions for care in street work, and under the second franchise it was stipulated that all pipes, mains and appara-

[1] Codified Ordinances, p. 357.
[2] Record of Ordinances No. 11, City of Columbus, pp. 322, 345, 423.

tus used by the company should be "of the most approved material, design and quality," and all pipes used were to be of standard weight. The usual provisions were made for the indemnification of the city against damages resulting from the company's operations. It was stipulated that the pressure of gas in the pipes within the city limits should not exceed ten pounds per square inch unless the pipe containing gas at any higher pressure was enclosed in a larger pipe which should be ventilated at regular intervals of 300 yards by pipes passing through the surface of the street out into the open air. Under the first ordinance, the company was to bring gas to the corporate limits of the city and have its distributing pipes laid within 18 months, "unless prevented by order of the Court, strike or other unavoidable cause." For failure to comply with this provision the city council was to have the right to forfeit the franchise after giving the company thirty days' notice of its intention to do so. A corresponding provision in the second franchise was substantially the same. The original grant was for a term of twenty-five years. In the first two grants it was stipulated that the company should not dispose of its franchise either directly or indirectly to any person or corporation interested in supplying natural gas to the people of Columbus. In the second franchise there was a provision that the company should pay into the public treasury ten per cent of all monies received from the sale of natural gas in the city at a price exceeding 15 cents per 1000 cubic feet. It was stipulated that the privileges granted by the second ordinance should not be forfeited by any temporary suspension of the company's operations which might occur after the pipes had been laid, and the furnishing of gas to the citizens had been commenced unless such suspension should be for a period of six months or more. In that case, the city council would have the right to declare the franchise forfeited. It was also provided in the second grant that when not less than ten neighboring householders in the same locality of 400 feet square and on the same street should file a written request with the company for gas to be used in heating their respective houses and agree to take gas for that purpose for a period of five years, then the company should connect the property of the subscribers with the gas mains and supply gas to

them. Under this ordinance, also, the city was to have the right to purchase the gas mains and pipes within the city limits at any time. In case the company and the city could not agree upon the price the matter was to be referred to arbitration, and both parties were bound "to abide by the findings and the price fixed by any two of the three arbitrators". It was stipulated, however, that nothing in this ordinance should be construed as preventing the city from acquiring the company's property, franchises and rights by the exercise of the power of eminent domain. It was also stipulated in this second franchise that the company might cut off the gas from any consumer who had made default for ten days in the payment of his gas bill, but after payment had been made gas was to be furnished again to such consumer on request. A special provision was inserted in the second franchise to the effect that if the company failed to lay its mains from the natural gas fields to the city line or failed to deliver at that point a flow of natural gas equal to 6,000,000 cubic feet per 24 hours within 18 months from the date of the franchise, the company was to forfeit to the city the sum of $50,000. It was provided, however, that if the company was delayed in laying its mains to the city by a strike or by injunction from a court of competent jurisdiction, this stipulated period should be extended for a corresponding length of time. It was also stipulated that if the natural gas in the Sugar Grove Natural Gas Field should become exhausted before the expiration of the eighteen-months period, then the company should be released from this penalty. Under both the first and the second ordinances the company was required to give an indemnity bond of $50,000. This bond, however, was separate and apart from the penalty just described under the second franchise.

By an ordinance passed July 1, 1901, in pursuance of its powers granted by the general laws of Ohio, the city of Columbus fixed the price of natural gas for the ensuing period of ten years at 35 cents per 1000 cubic feet, with a discount for prompt payment of 15 cents during the first and second years, 10 cents during the third and fourth years and 5 cents during the remainder of the ten-year period.[1] It was ordained that if at any time within ten years from the date

[1] Record of Ordinances No. 11, p. 606.

of this ordinance any gas company should be unable to furnish natural gas for fuel by reason of insufficient quantity to supply the demand, and if such company should devise or construct a system or means for furnishing fuel gas it might charge a rate not to exceed 60 cents per 1000 feet, with a 10-cent discount for payment within ten days after the end of the month in which the gas was used. This rate was to apply to fuel gas only. It was stipulated that if there was a difference of opinion between the city council and the company as to whether or not the company was unable to furnish natural gas as required, the question was to be submitted to arbitration. The ordinance was to be accepted, and by accepting it any company was to bind itself not to sell natural gas or to furnish it to be sold in any other city or town outside of Columbus, except the towns already being supplied, until all demands for gas in the city of Columbus were supplied at the rates fixed in the ordinance. This agreement was to hold good even though higher prices were offered for gas by some other city or town. The company was to be permitted to sell to other cities only such gas as it had in excess of the demand in Columbus.

A natural gas franchise had been granted on February 4, 1889, to the Columbus Natural Gas and Fuel Company, but this grant had no important provisions that were not contained in the later grants.[1]

265. Manufactured gas entirely superseded—Kansas City, Mo.—A franchise for artificial gas was passed by the common council of Kansas City January 9, 1895.[2] Another artificial gas franchise was passed over the Mayor's veto on August 24, of the same year.[3] Both of these franchises covered by express provisions all of the streets and avenues of the city "as the boundaries thereof are now and may hereafter be." Both franchises were for a period of thirty years. Both provided for 22 candle-power gas to be furnished for public and private consumption at a price not to exceed $1.10 per 1000 feet, with a discount of 10 cents for prompt payment. Under each grant the city was to receive semi-annual payments of two per cent on the gross receipts

[1] Codified Ordinances, 1896, p. 353.
[2] Franchise Ordinances for Public Utilities, *op. cit.* p. 2.
[3] *Ibid.*, p. 10.

of the grantees. In both cases, the grantees agreed to bid, when requested, for an annual contract for supplying gas for the street lamps at a rate not to exceed $12 per annum per lamp, if lighted by Philadelphia or moonlight schedule, or $18 per annum per lamp if lighted every night half an hour after sunset and extinguished one hour before sunrise the next morning. This price was to include furnishing, constructing, lighting, extinguishing, cleaning and repairing the lamps. The grantees were to extend their pipes for the distribution of gas on graded streets to be named by ordinance wherever at least six consumers, on an average, for every 400 feet of extensions would first agree in writing to take gas for a period of at least one year at the general rates. Each tap for public lighting was to be counted as one consumer. The earlier one of these franchises appears to have been for the construction of a new gas plant. The later one was for the acquisition and continued operation of the existing gas works. Under the former the grantees were required on or before the time of accepting the franchise to deposit $50,000 to be forfeited to the city unless within six months thereafter they had expended $50,000, and within three years had expended $300,000 on their plant. In lieu of this deposit, however, the grantees might furnish a bond in the sum of $75,000. Under the earlier grant the plant was to be in operation within eight months from the acceptance of the ordinance unless work was prevented or delayed by injunctions or other legal proceedings. It was stipulated that prevention by injunction proceedings of the laying of pipes upon any street or of the construction of any particular portion of the works was not to be construed as relieving the grantees from constructing other portions of the works within the required period. It was also stipulated that in case legal proceedings were commenced against the grantees by which any particular portion of their work was prevented or delayed, they were immediately upon the commencement of such proceedings to put the streets which had been disturbed by them in as good condition for travel and use as they had been in before the commencement of the company's operations. If, however, the grantees instigated any injunctions, suits or other legal proceedings against themselves for the purpose of gaining more time in which to complete their

work, the ordinance and all amendments to it were to become null and void. Under both franchises the city reserved the right to purchase such portion of the plant and property at the end of twelve years as might be situated within the city limits or adjacent thereto, upon paying its actual value. In case the city determined to exercise this option and was unable to agree with the grantees as to the value of the plant, such value was to be ascertained by one of the judges of the state circuit court then having jurisdiction within the city. The petition was to be filed by the city with the circuit court naming one of the judges and asking him to proceed to value the works. In performing this function the judge was to have regard only to the actual value in money at the time of making the estimate "of the lots or ground, buildings, pipes, lamps, lamp-posts, apparatus, works and fixtures" of the grantees or other property of every kind owned or controlled and used by them and necessary to the manufacture and distribution of gas. It was expressly stipulated that the value of the unexpired franchise, the value of the capital stock and the earning capacity of the gas works were not to be taken into consideration in this valuation. Furthermore, no consideration was to be given to damages paid during construction, attorneys' fees, interest on money held for the construction of the works, or the expense of tearing up and replacing pavements in streets where the grantees had not been compelled actually to tear up and replace pavements. The grantees in both cases were required to maintain a complete system of gas works and not to encumber it with liens beyond the reasonable cost of such system. In case of purchase by the city, the plant could be taken over at the city's option subject to the encumbrances upon it, the amount of which were to be deducted from the appraised valuation. On the other hand, if the city chose so to do it might pay the appraised valuation into the court and thereupon acquire title to the gas works free and clear of all encumbrances. In such case, after payment of the money by the city, the liens of the encumbrances would exist "only against the money so paid in and not against the said works or plant." After the appraisal the city was to have one year in which to pay for the plant. Under the terms of the second franchise the grantees were required within 75 days after their acceptance of the

ordinance to file with the city a complete statement of all the pipes, mains, shut-offs, lamps, lamp-posts, buildings and appliances of every kind and nature included in their existing plant. This statement was also to indicate the location of the various items of property enumerated. In both cases the grantees were forbidden to assign their rights without the city's consent to any person or company engaged or organized for the purpose of engaging in the manufacture or sale of gas within the city limits under any other ordinance or franchise. The grantees were not to enter into any combination with any other person or company concerning rates. It was expressly stipulated that no officers, employees or managers of a gas plant provided for in either ordinance should at any time be in charge of or be an employee or manager of any other gas works manufacturing or selling gas in the city. The grantees, who were in each case individuals, were to be permitted to transfer their rights to companies organized by them. Under both ordinances the city reserved the right to appoint one or more gas inspectors and to prescribe their duties by ordinance. These inspectors were to enforce the provisions of the franchise in regard to candle-power and quality of gas, its correct measurement and the proper pressure at which it should be delivered so as to produce "the best obtainable light with the least consumption of gas." The cost of this inspection, aside from the salaries of the inspectors, was to be paid by the companies.

The supply of gas under the ordinances just described has been entirely superseded by the supply of natural gas under a franchise granted September 27, 1906 for a period of thirty years.[1] Under this franchise, the grantees agreed to be ready by January 1, 1907, to furnish natural gas on not less than 75 miles of mains to all consumers, and not later than March 1, 1907, to be supplying gas on not less than 50 miles of additional mains, and by August 1, 1907 to be furnishing gas to "all present consumers on the lines of the Kansas City Missouri Gas Company." The grantees were to file their written acceptance of the ordinance within ten days and deposit at the same time a fund of $50,000 in cash which would be forfeited to the city unless the requirements just described were fulfilled. The grantees were also to

[1] *Franchise Ordinances*, etc., *op. cit.*, p. 19.

file within twenty days after their acceptance of the ordinance a bond in the sum of $250,000 to be paid to the city as liquidated damages if they failed to have the amount of work done that was required of them on March 1 and August 1, 1907. It was provided, however, that if the commencement of the work or the laying of the pipes either inside or outside of the city or the delivery of natural gas at or within the city limits should be prevented, hindered or delayed by injunction or legal proceedings "or by inclement days or by labor strikes" or by any cause beyond their control, or if the acquisition by the grantees of the ownership or control of the pipes and property of the Kansas City Missouri Gas Company should be hindered or delayed by legal proceedings, the time lost in such manner should not be reckoned in estimating the grantees' time allowance; but it was provided that no such delay should be excused or the grantees' time extended if they could by the excercise of reasonable diligence and at reasonable expense "obtain natural gas elsewhere." It was stipulated that the grantees should at all times keep and maintain in all places where gas was to be furnished such pressure as might be required by ordinance, but the pressure so required was to be "reasonable and practicable." Extensions of mains were to be made by the grantees wherever required by ordinance in case at least three consumers, on an average, for each 200 feet should agree in advance to take gas for a period of not less than a year at the general rates, but whenever a graded street was about to be paved the grantees were to make extensions of their pipes, including the connections to the curb where buildings were already located, in advance of the paving without regard to the number of consumers along the line. For failure to comply with the ordinance requiring extensions on petition of the required number of consumers, the grantees were to pay $5 a day to the city as long as their failure or refusal to make an extension should continue. The right was given to shut off gas from any consumer who was in arrears for a longer period than 15 days, but the delinquent consumer could "reinstate his right to obtain gas on payment of the bill and shutting-off charge of fifty cents". Inspection of meters, pressure and other matters concerning the supply of gas were to be provided for by the city at the company's ex-

pense. The maximum rate agreed upon for the period of five years immediately following the introduction of natural gas was 25 cents per 1000 cubic feet. For the second period of five years the rate was fixed at 27 cents and for the remaining period of the grant at 30 cents. The grantees were authorized also to make special contracts with consumers at less than the rate in force at the time. Such contracts were to be based upon the amount of gas used, and the conditions of the contract and special rates were to be the same to all consumers using the same amount under the same contract conditions. Schedules of special rates and contract conditions were to be filed with the city clerk from time to time and were to be open to the city's inspection. It was agreed that the grantees should make special contracts "at as low rates as those at which natural gas is sold at the time to any consumers of the same class using the same amount of gas under the same contract conditions who are located approximately as distant from the fields from which they are at the time supplied as Kansas City, Missouri, is from the field from which it is at the time supplied and who are supplied by the grantees, or anyone from whom the grantees obtain their supply, or anyone whose supply is obtained from those from whom the grantees obtain their supply", but the requirement to make special contracts at the rates described was not to be construed as compelling the grantees to offer as low rates as might be in effect at the time in the locality where the grantees or those from whom they obtained their supply or anyone else who obtained his supply from the same source should be in *bona fide* competition with any other supplier of natural gas in the same locality. It was also stipulated that if the demand from special rate consumers should threaten the general supply the grantees might shut off the supply in whole or in part from all its patrons other than domestic consumers. The grantees were authorized to add ten per cent to the bills of all consumers who were in arrears for more than ten days. They were also authorized to collect a minimum of 50 cents per month from any person who had a meter installed. Under the franchise, natural gas was to be furnished for illuminating, heating and mechanical purposes and was to be at all times of the same character and quality as when it came from the earth

and not to be mixed with air or otherwise adulterated. If the reasonably accessible supply of natural gas should at any time be inadequate to warrant the grantees to continue to operate under the terms of the franchise and the common council should find this to be a fact, the grantees would be under obligation thereupon to make and furnish manufactured gas to the city under the terms of the artificial gas franchises granted in 1895 which have already been described, until the expiration of those franchises. The rates fixed in those franchises, however, were not to control, but the question of rates was to be determined by arbitration in case the city and the company could not agree upon the matter. The arbitrators were to be three judges of the Circuit Court of Jackson County, one selected by the city, one by the grantees and the third by the first two. The grantees agreed to pay the city two per cent of their gross receipts, and the city reserved the right to examine their books to determine the correctness of any reports made by them relative to gross earnings. It was provided that for any violation of the ordinance or failure to do any act required by it the grantees should forfeit their franchise, on condition that their failure should continue unrectified for sixty days after written notice from the city. As long as the natural gas held out the grantees were to furnish free of charge sufficient gas to light all the city buildings on condition that the lights should be kept extinguished when not needed for illuminating purposes. The grantees were authorized to acquire by purchase, lease or otherwise, the pipes and property of the company then supplying artificial gas in the city, but no such acquisition was to interfere with the city's reserved right to purchase the plant, and it was expressly stipulated that this right of purchase should also apply to the pipes and property of the grantees under this franchise. It was expressly stated that the contract of the grantees for gas supply was with the Kaw Gas Company and the Kansas City Pipe Line Company, and it was agreed that the division of gross income received from gas between the distributing company and the supply companies after the expiration of two years from the introduction of natural gas into Kansas City, should be in the proportion of three-eights to the distributing company and five-eights to the supply companies. The grantees expressly covenanted

that the terms of this contract agreement with the supply companies should not be changed without the formal consent of the city. They also agreed that if the city should acquire the plant and property, they would transfer to it free of cost their rights under their contract with the supply companies. The grantees also agreed to procure from the supply companies and file with the City Clerk within ninety days after the passage of the franchise a written agreement to the effect that if the city should acquire the plant, the supply companies would upon demand continue to furnish gas during the remainder of the franchise-period upon the same terms upon which they had agreed to furnish it to the grantees. The city, on the other hand, agreed not to exercise its option of purchase for a period of ten years unless before the expiration of that time the grantees had ceased to furnish natural gas. It was expressly agreed by the grantees that as long as they continued to supply natural gas they would bid annually for the street lighting contract at a price not to exceed $9 per lamp, including gas, repair and maintenance, and that they would set such additional street lamp-posts as the council might demand and connect them with the mains, and furnish, repair and maintain them for a price, including gas, of not more than $12 each per annum. The city reserved the option, however, to require the grantees, in lieu of such bidding, to furnish gas alone for the existing street lamps free, and also for any additional lamp posts that might be set by the city at the rate of 100 lamps for each 8000 inhabitants above 200,000. The population for the purpose was to be calculated on the basis of two and one-half times the number of names in the city directory of the largest circulation, including the names of business firms. If the city should elect to take natural gas free and itself furnish or contract with others for furnishing an incandescent equipment for the maintenance of the lamps, it was to have the right to use the posts owned and set by the grantees not less in number than those which at the time had been set by the Kansas City Missouri Gas Company. Moreover, the city agreed that the lights should be kept extinguished between sunrise and sunset. The grantees were prohibited, except as otherwise provided in the ordinance and except with the formal consent of the city, from selling,

leasing or transferring their plant or privileges to any person engaged or about to engage in the manufacture or sale of gas in the city under any other ordinance. The grantees, moreover, were not, without such consent, to enter into any combination with any other person or company concerning the price to be charged for gas; and it was stipulated that no officer, employee or manager of the grantees' gas plant was to be at the same time connected with any other gas works in the city. The grantees were authorized, however, to transfer their rights to a corporation to be organized by them, but notice of such transfer or of any later transfers was to be filed with the city clerk within ten days of the execution of the transfer. It was provided, however, that the grantees should have a "full, complete and unqualified right to assign and transfer and convey this franchise and their property, by way of mortgage, deed of trust or other form of security in the nature of a mortgage or deed of trust, for the purpose of securing *bona fide* indebtedness, and for the purpose of acquiring property and of raising funds to provide, build, construct, equip and operate said plant, and to conduct the business thereunder." The grantees bound themselves, as a matter of contract, to obey the laws of the state and the ordinances of the city "now in existence or hereafter passed, in prohibition of mergers, consolidations and pooling." The city expressly reserved the right to own or operate a plant or plants for supplying itself and its inhabitants with either natural or artificial gas for lighting, heating and manufacturing purposes, and also reserved the right to own and operate a plant or plants for supplying any other sort of light. "It being the purpose to safeguard and make sure that there may always be competition in the matter of supplying gas and that gas will be supplied within the city," says the ordinance, "the grantees and assigns agree that any action on their part impairing or limiting or preventing such competition, or any substantial or continued failure for a period of sixty days to furnish gas in compliance with the provisions of this ordinance, shall constitute a violation of this ordinance, and the city shall have the right to repeal this ordinance by ordinance, and shall have the right to purchase the plant" under the same terms and conditions prescribed in the gas ordinance passed August 24, 1895.

Under the provisions of this iron-clad ordinance, natural gas is now being furnished exclusively in Kansas City. It is said that during the winter of 1908 and 1909, when the temperature fell to zero for a day or two, the pressure in the natural gas mains proved inadequate to supply the sudden increase in the demand for fuel and that in the portions of the city farthest removed from the point where the pipe lines entered, the pressure failed entirely.[1] At the time of this investigation the gas was being brought by two 16-inch mains from the fields of Southern Kansas. The experience of the winter demonstrated that the supply company, over which the city had no direct control, would have to lay additional pipe lines if the people of Kansas City were to be supplied under conditions that would be safe for all emergencies of the weather.

266. Division of net earnings with city—Topeka, Kansas.—A franchise was granted August 18, 1903, by the city of Topeka, to the Continental Oil and Gas Company for a term of twenty years for the purpose of furnishing natural gas.[2] The pipes were to be not less than fifteen inches beneath the surface of the earth when laid in travelled streets and not less than six feet from the curb line. The expense of service pipes was to be divided between the company and the consumers, the point of division being at the curb line. The company was required to furnish the city free of charge sufficient gas for light and heat for one building containing a council chamber and office room for the transaction of the city's business, and for one auditorium. For incandescent street lights, the city was to pay not more than 50 cents each per month, the city to furnish the burners and lamp posts and provide at its own expense for repair and maintenance and for lighting and extinguishing the lights. These street lights were not to burn more than twelve hours in any twenty-four. The company agreed to furnish not less than 10,000,000 cubic feet of natural gas in every thirty days. On September 8, 1904, the council adopted an amendment requiring the company to commence operations by March 1, 1905, and to complete the laying of mains and be ready to furnish gas in the principal parts of the city within three years. The

[1] See article by S. M. Reynolds, in *Baltimore News*, May 24, 1909.
[2] Revised Ordinances, City of Topeka, 1905, p. 208.

company was also required to deposit with the city treasury the sum of $1,000 as a guarantee that its plant would be constructed according to its franchise.

On September 9, 1904, a franchise was granted to the Excelsior Coke and Gas Company for supplying artificial or manufactured gas for a period of thirty years.[1] Under this grant, the company was limited to a charge of $1.25 per 1000 cubic feet for gas furnished to the city or to private consumers. It was also provided that whenever the sale of gas in any one year should reach 200,000,000 feet, the price of gas for the following year should be reduced to $1.20; and that when the sales reached the amount of 400,000,000 feet a year, the price for the following year should be $1.10; and when the sales reached 800,000,000 cubic feet a year, the price thereafter should be limited to $1.00. It was also provided that the company should not at any time charge the city a higher rate for gas than the lowest current rate charged any of its customers. The company was required to file semi-annual statements with the city clerk showing the cost of improvements made during the preceding six months, the amount of gas manufactured and the amount sold, the amount and cost of fuel used, the amount of by-products produced, the disposition of them, the number of miles of mains and meters in use, the total amount of capital invested in the plant and the total receipts and expenditures. It was also stipulated that the company should pay annually into the city treasury ten per cent of its net earnings over and above ten per cent earned on its investment. During the life of the franchise, the common council was to have the right by ordinance to fix a reasonable schedule of maximum rates, on condition that it should at no time fix a rate that would prohibit the company from earning at least ten per cent on its capital invested in the city over and above reasonable operating expenses for maintenance and taxes.

At the termination of the franchise period, the city was authorized to acquire the plant and property pertaining to it. If the city desired to take advantage of its option, it was to file a petition in the District Court of Shawnee County giving a general description of the plant or property, setting forth the interest or property rights of the company or others

[1] Revised Ordinances, *op. cit.*, p. 223.

in the plant, and praying that it be permitted to acquire title to the property under the general laws of the state. It was stipulated that thirty days notice should be given to all persons interested in the property by publication in three successive issues of some weekly newspaper in the city having general circulation. Notice was also to be served upon the manager in charge of the company's property if he could be found in the county. Thereupon the property was to be appraised as provided by law. Under the general law in regard to this subject, the appraisal was to be made by three disinterested commissioners, non-residents of the city, one, an expert engineer, to be appointed by the Court; one to be appointed by the city, and one by the company.[1] The commissioners so appointed, after being sworn to the faithful and impartial discharge of their duties, were to proceed immediately to determine a fair value of the plant. The commissioners were to have power to administer oaths, compel the attendance of witnesses and the production of books and papers; and any citizen, taxpayer or officer of the city was authorized to appear before them and be heard as to the city's interest. They were to report within thirty days after their appointment unless for good cause shown the time was extended by the court. Within ten days after the filing of the report any citizen or other person interested might file exceptions to it and thereupon the court was to appoint a time, not more than thirty days from the filing of the report, for a hearing at which the exceptions were to be heard in a summary manner without pleading, and the court was authorized either to confirm the report or to set it aside and appoint new commissioners. The city was to pay the commissioners of appraisal $3 a day for their services. At any time within four months after the district court had confirmed the award of the commissioners, the city might deposit the amount of the award with the county treasurer for the use of the company owning the plant and thereupon become the absolute owner of all privileges, property and property rights of the company and of all others in any way interested in the plant "free and clear of the claims of all persons theretofore interested therein." The determination of the proper disposition of the money paid by the city with reference to the rights

[1] Laws of Kansas, 1903, chapter 122.

of incumbrancers, owners and others interested in the plant, was to be left with the court.

Under the terms of its franchise the company agreed to improve its gas plant, increase its capital and extend its mains and services so as to furnish the portions of the city not then supplied. Service pipes and meters were to be put in free of charge to consumers. Improvements and extensions costing at least $175,000 were to be made within twenty-one months from the date of the franchise. This grant was expressly limited to artificial gas. This franchise was vetoed by the mayor, but passed over his veto by the common council.

On May 4, 1905, another ordinance was passed authorizing this company to lease its plant to the Consumers Light, Heat and Power Company, which had in the meantime taken over the franchises of the Continental Oil and Gas Company for furnishing natural gas.[1] Under this ordinance, the supply of natural gas was to be furnished on or before January 1, 1906. This ordinance required that in case of insufficient supply of natural gas, the artificial gas company should immediately resume the supply of manufactured gas under its franchise.

267. Artificial gas for lighting supplied by the city and natural gas for fuel supplied by companies—Wheeling.—An exclusive franchise was granted to a private company as early as 1850 for supplying gas to the city of Wheeling.[2] The grant was for a period of thirty years with the right on the part of the city to purchase the plant after the expiration of twenty years at a price to be fixed by arbitration, the value of the franchise and good-will being excluded from consideration. For several years the company charged the maximum statutory price of $3.50 per 1000 feet to private consumers. About 1859 the consumers held an indignation meeting, however, and many of them entered into an agreement to discontinue the use of gas. The company thereupon made a concession to the extent of granting a ten per cent discount from the established rate for prompt payment. The dividends paid by the company for fifteen years prior to 1870 were from 12 per cent to 24 per cent per annum. The city

[1] *Revised Ordinances, op. cit.*, p. 229.
[2] See National Civic Federation Report, 1907, *op. cit.*, pp. 427, 429.

took over the plant under its option at the expiration of the twenty-year period, and has been operating it ever since.

The city of Wheeling has, however, granted four different gas franchises to private companies.[1] Each of these franchises, however, forbids the supply of gas for lighting purposes. Two of the franchises granted in 1886 and 1888 were to associations of manufacturers and merchants, who were permitted to supply gas to their members only. The franchise of the Natural Gas Company of West Virginia, granted April 17, 1885, was unlimited in duration, and was in specific terms exclusive and for the whole area of the city. The franchise granted to the Virginia Oil and Gas Company on July 15, 1904, was for a period of fifty years, and was by its express terms non-exclusive. The exclusive feature of the earlier grant is believed to have been invalid. The Natural Gas Company of West Virginia was permitted by an amendment of its franchise in 1896 to increase the price of gas from 15 cents to 20 cents per 1000 cubic feet, with a discount of 2 cents for payment of bills within ten days. The Virginia Oil and Gas Company carries its gas through Wheeling, but has never attempted to supply gas to private consumers within the city limits. The city reserved the right to purchase the Natural Gas Company's plant after twenty years, or at the end of any five-year period thereafter. The price was to be fixed by arbitration, and the arbitrators were to have regard only to "the then actual value of the property and rights to be purchased," excepting that the gas wells were to be figured in at their original cost to the company. The arbitrators were not to consider the value of the company's franchises, or grants of privileges from any public authority, or the dividends or profits accruing to the stockholders. No method was provided, however, by which the city should have knowledge and control of the company's accounts. The Natural Gas Company, by the terms of its franchise, agreed to furnish free all the gas needed for any public building, public school or public works adjacent to the company's pipes. The Virginia Oil and Gas Company, whose rate to private consumers was limited to 19 cents with a discount of 2 cents, for prompt payment, was required under its franchise to furnish gas free for heating purposes

[1] National Civic Federation Report, *op. cit.*, pp. 459 to 489.

at the city buildings and at hose-houses adjacent to its mains. This company was also to furnish gas needed for heating purposes at two hospitals; and gas used for heating purposes at the municipal gas plant and at the city water works was to be furnished at 10 cents per 1000 feet net. The National Civic Federation investigator stated in 1907 that with the city charging 75 cents for gas for lighting purposes furnished by a municipal plant and giving a limited and poor service with inadequate pressure, it had been found practically impossible to prevent the citizens from using natural gas furnished by a private company at 18 cents per 1000 feet for illuminating as well as for fuel purposes.

268. Partnership versus control—Baltimore.—The first municipal gas franchise granted in the United States was, so far as known, an ordinance passed by the city council of Baltimore, June 17, 1816, authorizing the Gas Light Company of Baltimore to lay its pipes under the streets of that city.[1] This franchise was not limited as to time. Among other things, it provided that with the approval of the Mayor and the consent of the owners and occupiers of houses fronting upon or adjacent to any street or avenue, the company might attach its lamps, pipes or other apparatus "to any part of any such house, or houses, upon such terms as may be agreed upon by and between said company and the owner or occupier of any such house or houses". This company was granted a special legislative charter during the same year, under which it was authorized to manufacture, procure or collect "gas or inflammable air", and preserve, use and distribute it as a means of giving light or for any other useful purpose, or for lighting the streets and public places and houses and other buildings in the city and precincts of Baltimore or elsewhere in the State of Maryland.[2] The rights and privileges granted by the city in the franchise ordinance already mentioned were expressly confirmed by this act.

Contracts for public lighting were entered into from time to time between this company and the city of Baltimore. Of particular interest is the contract ordinance of May 3, 1859, under which the company agreed to "lay mains on streets to be designated by ordinance or resolution in the

[1] *Public Service Corporations of Baltimore, op. cit.*, p. 626.
[2] *Ibid*, p. 620.

future, at a cost not to exceed $10,000 in any one year." [1] On the other hand, the city pledged its credit to repay the company the cost of such mains, without interest, in case the city should authorize any other person or company "to use any of the thoroughfares of the city, where the said Gas Light Company shall have laid gas pipes for the purpose of supplying the city with gas." The Gas Light Company, however, was to make an allowance to the city of $18 for each attachment for private consumers which might have been made up to the time when the city repaid the company for the extensions. It was also stipulated that the company should furnish the city annually a statement of the number of feet of mains laid under this contract, and a plan showing their location. The city reserved the right to repeal this ordinance.

A second gas company was incorporated by special act of the Maryland legislature in 1860 and was given the same rights which the original Gas Light Company of Baltimore had obtained under the ordinance and legislative act of 1816.[2] In 1867 a third company was incorporated and received similar powers.[3] In this act there was a specific provision to the effect that the company should not in any manner injure or displace any of the water pipes of the city or any of the pipes of the Gas Light Company. The company was also required to restore the surface of any streets disturbed by it for the laying of its pipes.

In 1868 an ordinance was passed requiring the pioneer company to record in the office of the city commissioner the name and portion of each street in which it had laid any main or service pipe, and in the case of a service pipe or other pipe not considered a main, the company was to give the number of the house to which the pipe was to be attached and the date of laying the main and the service pipe or attachment.[4] Special provision was also made for the repaving of streets opened by this company.

In 1876 still another company received a charter from the legislature granting it all the powers and privileges conferred by the original ordinance and act of 1816.[5] This company

[1] *Public Service Corporations of Baltimore, op. cit.*, p. 628.
[2] *Ibid*, p. 621.
[3] *Ibid*, p. 624.
[4] *Ibid*, p. 628.
[5] *Ibid*, p. 622.

also received a franchise direct from the city council on June 12, 1876.[1] Under this grant the Consumers Mutual Gas Light Company of Baltimore City was authorized to lay pipes in the streets of the city and was required after laying, repairing or removing them to fill and repair the excavations which it had made in any street for that purpose. The company was not to displace other pipes laid by the city or by other gas companies. The city reserved the right to purchase the plant after two years, and before the expiration of five years, upon the payment of its cost plus ten per cent. All of these companies and one other, which appears to have received no special franchise for general lighting, were finally brought together into the Consolidated Gas Company of Baltimore City, incorporated in 1888.[2] This company in turn was joined with the United Electric Light and Power Company and as a final result, the Consolidated Gas, Electric Light and Power Company of Baltimore City was organized in 1906, and received a special charter from the legislature authorizing it to manufacture and sell gas for all purposes in the territory through which it had the right to operate by reason of the powers it had inherited from its constituent companies.[3] All of the gas franchises held by this company are unlimited as to time.

In 1909 there has been considerable agitation in Baltimore and Maryland for the establishment of a Public Utilities Commission to regulate the rates and service of the corporations supplying public utilities in Baltimore. In May, 1909, the Consolidated Gas, Electric Light and Power Company brought forward a proposition to bring natural gas to the city through pipe lines 230 miles long from the West Virginia fields. The company proposed to charge 58 cents per 1000 cubic feet for domestic lighting service; 45 cents for cooking, and 40 cents for fuel and power, in place of the flat rate of $1.10, with 10 cents discount for cash, which is being charged for artifical gas. The company at first proposed that the mayor and the governor acting together should name five of the eighteen members of the company's board of directors, and that 40 per cent of the company's net profits, after paying all fixed charges and four per cent on its com-

[1] *Public Service Corporations of Baltimore, op. cit.*, p. 630.
[2] *Ibid.* p. 614.
[3] *Ibid*, p. 603.

mon stock, should be turned into the public treasury.[1] For carrying out this plan it was unnecessary for the company itself to secure new franchises from the city or the state. What was required was the friendly coöperation of the public officials, and the acceptance by the city and the state of the partnership scheme in lieu of the establishment of a Public Utilities Commission with power to regulate the rates and service of the company. The coöperation of the Governor, the Attorney-General, the Mayor and the City Solicitor apparently was promised before or immediately after the public announcement of the company's proposition. These officials in giving their support to the scheme argued that the presence of five men representing the public interest on the company's board of directors would insure complete publicity of the company's policies and profits, and would in this way expose abuses and enable them to be corrected either by force of public sentiment or by future regulations by the city or state.

It can readily be seen that the partnership scheme is radically different from the plan of control by a state or city commission having authority to regulate rates and service. By the promised division of net profits the city's representatives on the board of directors might naturally be brought to the same point of view taken by the company's own men, for the reason that the city would get no share of the profit unless the company made good profits to begin with. It was alleged by the *Baltimore News* that the company's common stock represented water. An examination of the company's charter shows that its authorized capital stock is a little less than $22,000,000, of which approximately $9,500,000 is common stock and the remainder either preferred stock or prior-lien preferred stock.[2] All of the preferred stock of both classes is entitled to 6% cumulative dividends out of the profits before any dividends are to be paid on the common stock. Apparently, therefore, the city would not under this proposition have been in a position to receive any profits at all until the company had earned very handsome returns upon its capital investment. This sort of a combination fails to distinguish the essential difference between a public and a

[1] See verbatim report of the hearing before the governor and cabinet, published in the *Baltimore News*, of June 29 and June 30.
[2] *Public Service Corporations, op. cit.*, p. 603.

private interest in relation to municipal franchises. A private company operating a franchise must necessarily be guided by private motives and, so far as it is permitted to do so, will shape its policy so as to receive from the enjoyment of its monopoly in the streets the largest possible revenue. On the other hand, public interest demands that municipal monopolies shall be conducted primarily in the interest of the consumer, and that accordingly service and rates be so adjusted as to leave only a sufficient profit upon the capital actually invested to induce people to put their money into the enterprise. In view of this radical difference in motives, the partnership scheme will always inevitably reduce itself to one of two situations. Either the minority directors representing the city will be lured, through the promised division of profits, to go over to the private point of view so that the consumers will not be represented at all, or the majority directors representing the private point of view will outvote and overrule the minority. While the minority directors would undoubtedly be in a position, if they were men of leisure, experience and persistence, to compel publicity of the company's affairs, they would have absolutely no direct power of control and would be compelled either to establish a gentlemen's agreement with their fellow-directors, or else maintain a constantly disagreeable attitude toward them.

Having encountered considerable opposition to its original plan the company came forward in August, 1909, with a specific ordinance which it desired to have passed by the Baltimore council. In this ordinance the partnership directorate and profit sharing scheme is abandoned, and instead of it the company proposes to rebate to its domestic consumers of gas and electricity one-half of the net profits of its business in any year after the payment of 4% dividends on its present common stock of the par value of $6,300,034. The city is to contract with the company not to reduce during a period of twenty years the rates for natural gas named in the ordinance or the rates for electritity as fixed in the company's present schedules. In case the supply of natural gas should prove insufficient or fail altogether, the company would be permitted to furnish artificial gas at 90 cents per 1000 feet from the fourth to the sixth year after the commencement of the distribution of natural gas, and thereafter, "at a price

not exceeding the average of the rates (adjusted for similar manufacturing conditions) charged for artificial gas in the ten cities of the United States which had a consumption of artificial gas during the previous calendar year, most nearly equal to the annual consumption of artificial gas in the city of Baltimore." In case the company should mix natural and artificial gas, it would mix its rates accordingly. Electricity rates also might be revised by the company at any time, either downward or upward, so as to equal "the average of the scheduled rates for the same classes and conditions of service, in the (10) cities of largest population of the United States, exclusive of Baltimore, adjusted to similar manufacturing conditions." "Questions of difference" under this contract between the city and the company would be referred to a board of arbitration consisting of an engineer appointed by each of the parties and a third engineer selected by the first two.

If this ordinance is passed the state legislature will be asked to ratify it by special act. If that is done, rates for gas and electricity in Baltimore will be fixed by contract for a period of twenty years, beyond the power of any readjustment by a public utility commission. The scheme for readjusting rates according to charges in other cities is about the most delusive and impossible proposition that could be devised. The company does not propose to build the pipe line and bring the gas to Baltimore. That is to be done by an independent corporation which will have to get a franchise from the state for the purpose. The Baltimore company will control only the distribution system, so far as natural gas is concerned. Yet it frankly asks the city to fix an irrevocable schedule of rates which will yield a sufficient profit to retire within twenty years the entire investment of approximately $15,000,000 required for the construction of the pipe line and the necessary changes in the distributing system. It is obvious that the rates which the local company is to pay the pipe line company for gas delivered at the Baltimore city line may be fixed by contract between the companies so as to prevent the earning of any bigger profits by the local company than the latter may desire. The men back of the natural gas proposition say they have a reasonable confidence that the natural gas supply will last twenty years. Under the

proposed ordinance, all they got after the end of the twenty years over and above operating expenses would be clear profit.

269. Extensions of service—Artificial gas franchises in Indianapolis.—The experience of Indianapolis with gas franchises is considerably more extensive and enlightening than that of most cities. Originally the city was supplied with artificial gas. Thereafter, during the years when the Indiana gas fields were in their prime, natural gas was introduced and its use became practically universal. Still later the supply of natural gas gave out and manufactured gas was again used exclusively.

A franchise contract for the supply of artificial gas seems to have been granted as early as 1866.[1] Ten years later the city gave a competing franchise to certain individuals who were required to incorporate a company for the purpose of supplying the entire city and its inhabitants with gas "to the extent and as fully and completely as is now or may hereafter be done by the Indianapolis Gas Light and Coke Company."[2] It was stipulated that two-thirds of the directors of the new company should be residents of the city and that the company should give a bond in the sum of $25,000 that it would furnish gas for a period of at least ten years "distinctly and apart from any other gas company," and that it would not sell out to, or consolidate with the existing company. Failure to comply with the provisions of the franchise would result in the forfeiture of this bond and would enable the city council, in its discretion, to forfeit the franchise itself. The company was to commence work within sixty days, and to have at least ten miles of pipe laid by October 1, 1877. It was provided that the company should make extensions for the purpose of supplying would-be consumers in any case where such persons would guarantee "as many as fifteen burners upon any square or in any building or buildings, or any square adjacent to mains already laid," but not more than three miles of mains could be required in any one year under this provision. Moreover, the company was required to extend its mains along any street contiguous to where its mains had already been laid within ninety days after having been ordered to do so by resolution of the common council.

[1] *Laws and Ordinances*, City of Indianapolis, 1904, *op. cit.*, p. 472. [2] *Ibid.*, p. 469.

The company was also required upon application in writing to lay all necessary service pipes in or across any street, alley, gutter or sidewalk. It was further stipulated, either by the original ordinance or by an amendment adopted in the following year, that nothing in this franchise should be construed as binding the city to use any of the gas made by this company in the street lamps, public buildings or offices. The maximum price of gas both to the city and to private consumers was fixed at $2 per 1000 cubic feet, exclusive of the Government tax. The city was not to be liable in any way for royalty or other charges by reason of any patent upon gas manufactured and furnished by the company. The city warrants were to be accepted by the company at par in payment for gas used for municipal purposes. The gas furnished was to be "free from all non-inflammable, poisonous qualities, and in all other respects of the highest standard purity, and not less than sixteen candle illuminating power." Gas was to be supplied promptly and in sufficient quantities to all paying consumers and to all persons applying for it on streets where the company's mains had been extended.

Meters were to be furnished and maintained by the company free, and no charge was to be made for furnishing or laying service pipes or for tapping the main. For making connections between its service pipes and the pipes of any person applying for gas at the street line, and for setting meters, the company was to charge only the actual cost of the work. It was provided that all gas sold by the company should be accurately measured at the company's expense and that the company should furnish all facilities in its possession to any agent appointed by the common council "to test the accuracy of meters or the purity of gas and illuminating properties". Failure to observe the conditions of the ordinance was to be sufficient cause for its repeal by the common council, but such failure was to be determined by judicial decision. The company was required to give three days' notice to the city civil engineer before opening any street for the purpose of laying its pipes, and was also required to repair the streets which had been broken up by it within a reasonable time and in a manner acceptable to that officer. It was stipulated that the gas pipes should not interfere with the drainage or water supply of the city, and in

case of necessity the company should move its pipes at its own expense.

In 1885, a ten-year lighting contract was entered into by the city of Indianapolis with the Indianapolis Gas Light and Coke Company whose original franchise had been granted about twenty years earlier.[1] It was recited that in consideration of the changes to be made in the original contract by the acceptance of this ordinance, "it is agreed by said city, that if she continues to light her public streets and grounds with gas, it shall be done with the gas of said company, during the term of ten years from March 1, 1885." It was provided, however, that the city should be at liberty to adopt some other mode of public lighting, and in that case would not be obliged to use the company's gas. The maximum price of gas both to the city and to private consumers was fixed in this contract at $1.80. Most of the provisions of this contract were similar to those contained in the franchise of 1876 which has already been described. There was a new provision, however, to the effect that "if any discovery or improvement shall be made in the preparation of gas from coal or other material, either solid or liquid, by which the cost of obtaining the same shall be materially diminished, and the same shall be adopted in other principal cities of the country, then, and in such case, the company aforesaid shall introduce and use such discovery or improvement in said city of Indianapolis, and shall make such reduction in the price of gas sold as shall be proportionate to the saving by such discovery or improvement." The arrangement in regard to extensions was also new. It provided that whenever property owners "embracing a space of 510 feet, contiguous to the mains of said company" should signify by petition to the city authorities their desire to use gas, if this petition were approved by the council and board of aldermen, the company was to proceed to lay down the necessary mains and service pipes to meet the demand, on condition that the citizens along the street should obligate themselves to take fifteen or more burners for each space of 510 feet. The extensions were to be made within sixty days of the approval of the petition at any period between March 1 and November 1. Public

[1] *Laws and Ordinances, op. cit.*, p. 472.

grounds of the city, county or state were excepted from this rule in regard to extensions.

On July 5, 1899, the contract under which artificial gas has since been furnished to the city of Indianapolis was ratified.[1] This contract was made for the purpose of settling certain litigation which had arisen over the ordinance passed by the city two years earlier to regulate the consumption and distribution of gas and fix the rates to be charged for it. Under the terms of this contract the city was to repeal the ordinance referred to, and the company was to be entitled to receive during the next ten years the following rates:

Until the total amount of artificial gas sold by the company within the city limits should reach 300,000,000 cubic feet per annum, $1 per 1,000.
Thereafter, until the amount sold reached 350,000,000 cubic feet per annum, 95 cents.
Thereafter, during the remainder of the ten-year period, 90 cents.

It was provided that the reduction in price should take effect as to all gas supplied for illuminating purposes after the last day of any semi-annual period in which it was found that consumption of artificial gas had so increased as to entitle the city to such reduction. The company was required to file semi-annually a sworn report containing a full and true statement of the number of cubic feet of artificial gas manufactured and sold by it and the number of meters in use by consumers in the city during the six months preceding any such report. It was provided that "in case the board of public works should at any time be convinced, either from information received by its members, or otherwise, that any such report so filed is erroneous in any particular, said board shall have the right, through its members or through any person it may designate, to examine all the books of said company showing anything concerning the amount of artificial gas manufactured and sold as aforesaid". In case of disagreement between the company and the city as a result of any such examination, the question at issue was to be submitted "to the arbitrament of two competent and disinterested persons non-residents of said city", one to be appointed by each party. If these two should fail to agree they were to choose a third arbitrator, and in case they could not agree upon the choice, then the third arbitrator was to

[1] *Laws and Ordinances*, *op. cit.*, p. 476.

be appointed by the person who at the time was the judge of the circuit court of Marion County. The decision of the majority of the arbitrators was to be final and conclusive and the price to be charged for gas was to be fixed, accordingly. The gas furnished was to be "merchantable illuminating gas free from non-inflammable or poisonous qualities, in all respects of the highest standard of purity, and of not less than eighteen candle-light power". This standard was expressly defined as requiring that a lava-tipped, Bunson-Argand burner consuming five feet of gas per hour at a pressure of not more than two-tenths of an inch should give a light as measured by photometric apparatus in ordinary use of not less than eighteen sperm candles, each consuming 120 grains of sperm per hour. It was also provided that the gas should not contain more than twenty grains of sulphur and two and one-half grains of ammonia per 100 cubic feet. It was provided that the gas should be delivered at the consumer's burner at such pressure in the mains as should be "consistent with the proper distribution of the gas throughout the entire system of mains in the city," and the degree of pressure was to be at all times subject to the control of the board of public works. All the company's appliances and apparatus were to be subject to inspection at any time by the proper officer designated by the board.

Elaborate provisions were made for the extension of service. Whenever a petition should be presented to the board of public works signed by the owners or occupants of property within the territory of the city asking for an extension and the petitioners bound themselves to take fifteen or more burners and use them for gas for each 500 feet of pipe extension asked for, not including any public grounds of the city, county, state or Federal Government, the board should give the company written notice requiring it to appear by its representatives at a fixed time not less than five days after service of the notice to show cause why the petition should not be granted. It was expressly provided that the minimum consumption required should not be for each individual stretch of 500 feet, but should be an average for each 500 feet of the entire extension. The notice to the company was to contain an accurate description of the streets and alleys

along which the extension was asked and the territory whose inhabitants it was proposed to have supplied with gas. The board was to give the company a full hearing upon the question as to whether the petition had been signed by the requisite number of persons and as to whether the extension could reasonably be required. If the company did not appear, the board could act upon such evidence and information as it might receive from any source. If after the hearing it appeared that the petition complied with the conditions already stated and that the extension was reasonable, an order was to be made fixing the time within which the company must make the extension desired. It was provided, however, that this period should in all cases be of sufficient length to allow the company "by the exercise of reasonable diligence" to make the extensions within the time allowed. If the company refused to make the extension as required, it was to forfeit as liquidated damages the sum of $50 for each day of delay beyond the time fixed. The company was not to be compelled, however, to lay any pipes or mains during the winter months, that is to say, between November 1 and April 1.

It was stipulated that the company should not use any meter whose measurement was more than two per cent fast or three per cent slow. The board of public works reserved the right to inspect and test the company's meters at any time. In case of complaint in regard to the quality of the gas, or the accuracy of the meters, the board "being satisfied that such complaint is well founded, shall have the right to employ experts to investigate the quality of such gas and to inspect and test any such meters", and the company agreed to pay the reasonable value of the service of any such experts.

It was expressly agreed that if the company failed to live up to its contract, its rights under the contract should cease. It was also agreed that nothing in the contract should require the city to continue to use gas for public lighting during the whole or any part of the ten-year period. It was stipulated, however, that as long as the city used gas for street lamps, the cost to the city per post should not be greater than was being charged at the time of this contract. The company was bound by the usual provisions relating to the restoration of streets disturbed by it, and the indemnification of the city against damage suits resulting from the company's activities.

270. General franchises for the supply of natural gas, subject to acceptance by any person or corporation—Indianapolis.—On June 27, 1887, the city of Indianapolis passed an ordinance authorizing any company organized under the laws of Indiana, or any firm, company or individual whose principal offices were situated in Indianapolis, to "lay, extend and maintain mains, branches, pipes and conduits through the streets, avenues, lanes, alleys and public grounds of said city" for the purpose of supplying the city and its inhabitants with natural gas.[1] This grant, however, was subject to certain conditions. Any person or company desiring to act under it was required as a preliminary step to execute a bond in the penal sum of $50,000 to guarantee that other gas and water pipes and public and private sewers would not be interfered with; that the streets would be properly restored after excavation and be kept in repair for one year, or in case they were being maintained under the contractor's bond, then for the full period covered by such bond; that all dirt and rubbish resulting from such excavations in the streets would be cleaned up without delay; that the city would be reimbursed for all expense incurred by it in restoring pavements or clearing away rubbish resulting from the operations of the grantee; that the city should be indemnified aganst damages resulting from work under the franchise, and finally that work should be commenced under the ordinance within sixty days after its acceptance and 25 miles of mains should be laid within the corporate limits of the city within one year. The mayor was authorized to require a renewal of this bond whenever in his judgment it had become insufficient by reason of the death or insolvency of any of the sureties.

It was also provided that the gas pipes should be laid wherever practicable in the alleys, and that nothing should be done under this ordinance until the grantee had filed with the city civil engineer a general plan showing all the streets to be opened, the proposed location of mains and the highest pressure intended to be carried on the line "with precautions for safety". This plan was to be subject to the approval of the common council and board of aldermen, and if ap-

[1] *Laws and Ordinances, op. cit.*, p. 591.

proved was to remain in the engineer's office as a public record. The grantee was required to change the location of its mains whenever necessary for the accommodation of the public sewers. It was provided that street work should be completed with all reasonable dispatch. All pipes, mains and apparatus were to be of the most approved design and quality, and the pipes were to be of standard weight and be so laid as to prevent the escape of gas, and so as to make the use of gas safe. Service pipes were to be laid to the property line of the consumer. In case the city civil engineer discovered at any time that the grantee was doing its work "in a careless, dilatory, incompetent or unskilful manner", he was to notify the grantee, and unless the matter was immediately remedied, report it to the common council and board of aldermen to whom power was reserved to pass any ordinance or resolution necessary to remedy the defect.

In order to provide against the escape of gas from pipes passing into cellars, sewers and buildings, the grantee was required, whenever deemed necessary by the city engineer and the common council and board of aldermen, to provide a system of escape pipes "sufficient to carry off any and all gas which may leak or escape through defective joints, service pipe connections, or defects in the mains". It was stipulated that gauges showing the amount of pressure on all natural gas lines should be erected by the grantees at their own expense and should be located at points designated by the city authorities, and should be open at all times to public inspection.

An elaborate schedule of flat rates for cooking and heating was enacted. The monthly charge for each cooking stove ranged from 50 cents to $1.25 in the summer and from 75 cents to $1.50 in the winter, according to the kind of stove. The annual charge ranged from $6 to $15. The rates for heating residences, offices, stores, halls and other buildings were arranged according to the diameters of the firepots used. The charge for either a base burner or an upright stove with a firepot no more than 18 inches in diameter was to be 75 cents per month in the winter and 50 cents per month in the summer. For a residence furnace having a firepot not more than 22 inches in diameter the monthly charge was to be $3 and the annual charge $20. The rates

increased up to $8 a month, or $65 a year, for a furnace with a firepot more than 40 inches in diameter. The rate for each grate or open front heating stove was $10 per annum. Special rates were fixed for cooking stoves in restaurants and hotels.

It was provided that if the grantee should in any case reduce the price of gas below this schedule, it should thereafter be prohibited from increasing its reduced schedule for a period of three years, but after that, an increase could be made with the consent of the common council and board of aldermen. It was provided that "not to exceed one-half of the schedule rates shall be charged for grates and stoves used for heating in cases where boilers or furnaces are used for heating." Any consumer would have the option to have gas furnished by meter measurement instead of at schedule rates, and in that case the price was not to exceed 10 cents per 1000 cubic feet. Gas might be cut off from any consumer who remained in default for ten days in the payment of his gas bill for the preceding month, but the grantees were required to furnish gas again to any such consumer on request, after his bills had been paid.

It was provided that for manufacturing purposes and for other consumers and purposes not enumerated in the schedule, natural gas should be furnished at the option of the consumer according to one of three plans. He might take it at 50 per cent of the cost of Indiana steam coal at $2 per ton, or he might take it by special agreement. It was provided, however, that in case of special agreement the same rate was to be given to everyone, whether a large or a small consumer, and that no preference was to be shown in any way. If any consumer was not satisfied with either of the foregoing plans, he could take gas by meter measurement at a price not to exceed seven cents per 1000 cubic feet. It was expressly provided that consumers might use natural gas for both heating and illuminating purposes. The city also reserved the right to revise and refix the schedule of rates at any time after the expiration of ten years. It was stipulated that the rates fixed for domestic purposes should be based upon a pressure of four ounces per square inch at the point of consumption. The city reserved the right after five years to require any company or individual furnishing gas

under the provisions of this ordinance to pay a tax of three cents per foot of mains laid within the city limits.

The grantee was required to furnish gas to all applicants for any purpose along its mains, and to extend its mains in any street contiguous to where its mains were already laid, within sixty days after being ordered to do so by resolution of the common council and the board of aldermen. This latter requirement was conditioned, however, upon extensions being petitioned for by owners or occupants of real estate along the line, and it was provided that ten per cent of the petitioners should agree to become consumers of gas, and that the common council and board of aldermen should consider that the "proposed extension is reasonable and ought to be made." No grantee was to exercise the right to lay pipes within the city limits until it had a line of mains laid from some gas-producing region to the city line of sufficient dimensions to comply with the intent of the ordinance. Any person or company desiring to take advantage of this ordinance was required to file a written acceptance with the City Clerk, which in the case of a company was to be signed by the President and Secretary and to be accompanied by a certified copy of a resolution duly passed by the company's board of directors authorizing acceptance. It was stipulated that nothing in this ordinance should prevent the city from giving special permission to manufacturing concerns having a natural gas well either within or without the city to lay private pipe lines from the well to its maufacturing establishment. It was also stipulated that the city, upon giving six months' notice, should have the right to purchase the entire plant of any company or individual accepting the provisions of the ordinance at any time after the expiration of ten years from the date of its passage. In case of purchase, the price was to be ascertained by arbitration and paid by the city within six months thereafter.

It is recorded that five different companies accepted this ordinance.[1] In the following year, 1888, the city passed another general ordinance to regulate the laying and testing of natural gas mains, service pipes and house connections.[2] All mains intended as feeders for the supply of gas to the distributing system were defined as high pressure mains. All

[1] *Laws and Ordinances, op. cit.*, p. 602. [2] *Ibid.*, same reference.

pipes intended to carry gas for the supply of domestic consumption were defined as low pressure mains. Supply pipes leading from the mains to the property line were defined as service pipes. Pipes leading from the property line into buildings to the place of consumption were defined as house connections. All pipes were to be laid so that their tops would be at a depth of not less than three feet below the surface of the street. High pressure mains were to be subjected to a test of eighty pounds air pressure per square inch, before being accepted, but the ordinary pressure of gas permitted in such mains was limited to twenty pounds per square inch. Low pressure mains and service pipes were to be tested with ten pounds pressure, although a pressure of only eight ounces of gas was to be permitted. All tests were to be made under the direction of the city civil engineer prior to the turning on of the gas. Service pipes for domestic consumption were not to be connected with high pressure mains "except in specific cases remote from low pressure mains." In such cases gas was to be supplied to consumers only after the pressure had been reduced by an automatic regulator to the maximum permitted in low pressure mains.

Another natural gas ordinance was passed on July 13, 1891, for the purpose of authorizing the laying of pipes to supply "inhabitants of unsupplied and outlying districts".[1] Under the terms of this ordinance any person or company accepting it was required to furnish natural gas for fuel and illuminating purposes to any person "contributing to the expense of laying pipe lines to convey such gas to the city of Indianapolis, so long as the supply lasts in the territory reached by its mains." The gas was to be supplied to the persons paying the expense of its conveyance in proportion to the amount paid. The payment of all subscriptions and the supply of gas in accordance with them were to be regulated by written contracts between the parties. In all such cases gas was to be furnished at cost. All companies and individuals supplying gas under this ordinance were required to publish in two daily newspapers of the city semi-annual sworn statements of their affairs. It was provided that any person or company accepting the provisions of this ordinance should be compelled to receive any subscription for stock to

[1] *Laws and Ordinances, op. cit.*, p. 605.

such corporation or subscriptions for money to such company, firm or individual made by any person living along the streets occupied by the pipe lines.

In addition to these general ordinances, special franchises were granted in 1892 and 1893 to the Manufacturers' Natural Gas Company and the United States Encaustic Tile Works Natural Gas Company for the laying of pipes for private use.[1] In the case of the Manufacturers' company, the corporation had been organized by a number of manufacturing establishments for the express purpose of securing a supply of natural gas.

271. Low rates; limited profit; ultimate municipal ownership — Indianapolis.—One of the companies accepting the general natural gas ordinance of 1887 described in the preceding section was the Consumers' Gas Trust Company. This company was organized for a period of fifty years with a capital stock of $500,000 divided into shares with a par value of $25 each.[2] The business of the company was managed by a board of nine directors who after the first year were elected annually by a board of five trustees named in the articles of incorporation. The entire capital stock of the corporation was placed under the control of this board of trustees, all of whom were to be stockholders of the company. The trustees were to have "full, complete, exclusive and irrevocable power," during the continuance of the corporation to hold the stock and vote it as fully and completely as if they were the owners of it, and to elect the directors from year to year. It was provided that the capital stock should be voted as a unit and that in case of disagreement among the trustees, the majority should cast the vote of the board. The trustees were to be a self-perpetuating body. In case of a vacancy, however, and the failure of the remaining members of the board to fill it, the circuit court of Marion County upon application of any stockholder, was to appoint a trustee to fill the vacancy. Furthermore, any member of the board of trustees could be removed by the court upon the showing that he was the employee or holder of any of the capital stock of any other company organized for the purpose of manufacturing or delivering artificial or natural gas to con-

[1] *Laws and Ordinances*, *op. cit.*, pp. 611, 616.

[2] See *Articles of Incorporation* of the Consumers' Gas Trust Co., of Indianapolis, published with the company's By-Laws in leaflet form.

sumers in Indianapolis or its vicinity. A trustee might also be removed for any corrupt practice or any misconduct which the court deemed detrimental to the interests of the company. His removal from the city would in itself vacate the office of any trustee. Subscribers to the company's capital stock were to receive certificates of the amount of stock owned by them held in trust by the trustees. All subscribers were entitled to a maximum dividend of eight per cent which might be paid in money or applied in payment of any indebtedness of the subscriber as a consumer of gas. It was provided that whenever the certificate holders should have received by dividends or otherwise from the company an amount equal to the par value of their stock with interest at eight per cent, and after all the indebtedness of the company had been paid, then it should be the duty of the directors to reduce the price of gas so that it should be supplied to consumers at cost. Money could be borrowed by the directors for the purpose of developing the supply of gas and for the construction of pipe lines, and certificates of indebtedness be issued therefor bearing interest at not to exceed eight per cent and payable at the option of the company after one year in the proportion of not more than one-fifth each year.

This company furnished natural gas to Indianapolis for several years until the supply gave out about 1904. At that time all but about ten per cent of the outstanding stock certificates had been redeemed.[1] A year or two later a new company was organized under the name of the Citizens' Gas Company of Indianapolis for the purpose of taking over the mains of the old Consumers' Gas Trust Company, manufacturing gas and supplying it at 60 cents per 1000 cubic feet. The city transferred to certain individuals who afterwards organized this company the option which had been reserved in the natural gas ordinance of 1887 to purchase the property at any time at an appraised valuation. A new franchise was granted to these individuals on August 30, 1905, and was transferred by them on May 24, 1906, to the new company.[2] Under the terms of this franchise, the grantees were authorized to lay their pipes in the streets of the city for the purpose of distributing and supplying gas for fuel, heating and light-

[1] Letter from J. C. Moore, Esq., of Indianopolis, May 25, 1908.
[2] See *Citizens Gas Company of Indianapolis; Franchise, Articles of Incorporation and By-Laws*, a leaflet.

ing. The grantees were required to organize a corporation with a capital stock of $1,000,000 divided into shares of $25 each. Stock was not to be increased unless provisions were made for selling new stock at public auction upon thirty days' notice of the time and place of sale, to be published in three Indianapolis newspapers having the largest city circulation. At such sale the stock was to be "sold at the best price obtainable," and any premiums secured were to go to the surplus capital of the company and to bear no dividends. The company was to publish in two Indianapolis newspapers semi-annual public statements of its affairs in detail, including an account of its assets and liabilities, its disbursements and receipts. The city controller was to have the right to investigate its books at any time "for the purpose of examining into the correctness of said report, or for other purpose," and the city civil engineer was to have the right to examine the company's plant and property at any time. There was to be a board of five trustees having the same powers and duties as the trustees in the old Consumers' Gas Trust Company. One of the original trustees, however, was to be nominated by the mayor. Vacancies in the board were to be made and filled in the same way as under the old company's charter, except that the successor of the trustee nominated by the mayor was also to be nominated by the mayor. Subscribers to the capital stock of the new company, however, were to be entitled to cumulative dividends of not to exceed ten per cent per annum. The earnings of the company were to be used in the following ways:

1. For the payment of matured debts and operating expenses.
2. For the payment semi-annually of the ten per cent dividends, and any unpaid accrued dividends.
3. For such extensions and betterments as might be ordered by the Board of Public Works.

Finally, any excess after meeting these charges was to be devoted to the redemption in whole or in part of the outstanding stock certificates. Of course, dividends were to be stopped on stock that had been redeemed. As soon as the stockholders had received by dividends or otherwise an amount equal to the face value of their stock with interest at the rate of ten per cent per annum, the trustees and directors of the company were to convey the gas plant and property belonging to the company to the city to be owned and

operated or leased by it, and all the rights of the stockholders, officers, directors and trustees were to be deemed extinguished. The affairs of the company were to be managed by a board of directors of nine members, the same as in the old company.

The franchise was granted for a period of twenty-five years, and it was stipulated that at the expiration of that time all the rights of the company to occupy the city's streets should terminate and cease. If it happened at that time that the company's stock certificates had not been retired, upon receiving six months' notice from the city the company's board of directors was to mortgage the property for a sum sufficient to redeem the still outstanding stock certificates, and thereupon convey the plant to the city subject to the obligations of such mortgage. It was provided, however, that this mortgage should not bear interest at a rate exceeding six per cent, and that the mortgage should be payable on or before ten years from the date of execution.

It was further provided that the grantees should secure, acquire or construct and put in operation a fuel gas plant with not less than 100 miles of mains in the streets of the city within eighteen months of the date of the sale of the Consumers' Gas Trust Company's mains, then pending. At any time after the date of such sale, the grantees might be required to file a bond in the sum of $25,000 to guarantee that they would fulfill this condition. The grantees were also to execute a $25,000 bond to indemnify the city against damages. Before commencing operations in any street the grantees were to furnish the board of public works with a plan showing the streets to be opened and the proposed location of the pipes, with general specifications as to the size and kind of pipes to be used. They were also within sixty days after laying any mains to file a full and complete map showing their position and size. All work was to be done under permits from the city and trenches were to "be dug and pipes laid and the trenches or ditches closed within the shortest possible time within which the same can be done with skilfulness and dispatch." The construction and repair work in the streets was to be done under the supervision of city inspectors and was to be paid for by the grantees. Service pipes were to be placed at such points as should meet

the approval of the property owners, but in cases where service pipes were already laid in connection with the existing system of mains, no relocation was to be required of the company. Service pipes to the property line, and curb boxes were to be installed at the expense of the grantees. All necessary meters and safety devices were to be furnished free of charge to the consumers. It was provided, however, that a deposit of not more than $5 might be required with each meter, this sum to be returned upon surrender of the meter to the company in good condition. Pipes were to be relaid to suit any change of grade in the streets. Materials used by the company were to be of the best quality and the company's mains were required to be at all times of "sufficient size to render adequate service". The mains were not to interfere with the sewer or water or other pipes already laid and were to be readjusted whenever necessary to accommodate the laying of sewer or water pipes in the future. The company was to comply with all ordinances and regulations concerning work in the streets. The gas furnished was to have a heat value of at least 600 British Thermal Units per cubic foot, and the price charged to consumers was never to exceed 60 cents per 1,000 feet, under penalty of the forfeiture of the franchise. Provision was made for the restoration of the streets by the company and for the deposit of a penalty fund of $500 to be drawn upon in case the city had to do the work which should have been done by the company.

The grantees bound the company to extend its various lines and mains so that all the inhabitants of the city could be supplied with gas for fuel and lighting purposes when they reasonably required it. In order to secure the extensions it was necessary that a petition be filed with the board of public works signed by the property owners in the territory affected and that the owners or occupants of at least three houses already erected should bind themselves to make five or more stove or grate connections, or use fifteen or more burners, for each 500 feet of space over which the extensions were to be made. Upon receiving such petition, the board of public works was to set a day for a public hearing and might thereafter issue an order requiring the company to build the desired extensions. In case of its refusal, it was

to be subject to a forfeit of $50 a day from the expiration of the period fixed by the board of public works for the completion of the extension. The laying of mains was not to be required, however, between November 1 and April 1, and an extension was not to be ordered by the board of public works unless the earnings of the company would permit the making of extensions after the payment of a ten per cent annual dividend upon the subscribers' stock certificates. After the expiration of three years, however, extensions not exceeding in the aggregate 10,000 feet in any one year might be ordered without regard to the previous payment of dividends. In any case where the extensions petitioned for could not be made under the preceding provisions, the property holders were authorized to file a petition accompanied by an agreement to take at par for cash an amount of capital stock in the company sufficient to cover the cost of the material and labor required for the extension, together with the agreement of the owners or occupants to take gas to the same extent as required under the other procedure. On the filing of such petition with the board of public works, a day was to be set for a public hearing and the board was to determine whether or not the petition was properly signed, and met the other requirements. The cost of the proposed extension was for the purpose of this determination to be according to the estimate of the city civil engineer. There was to be no appeal from the board's determination. If the board ordered an extension then the company was to offer the necessary additional capital stock for sale, and in case the stock was not sold above par, it was to be taken by the petitioners at its face value.

Any meter measuring more than two per cent fast or slow was to be considered inaccurate and was not to be used. The board of public works was to have authority to inspect and test the meters as well as the other apparatus and property of the company and also to test the quality of the gas and its calorific and illuminating value. Unsafe apparatus or imperfect meters were to be immediately replaced upon the order of the board. In case the company operating the franchise should at any time become insolvent and its property ordered sold, the city reserved the right to purchase it by the payment of the company's *bona fide* indebtedness and

any unpaid balance on the outstanding stock certificates. At the expiration of the grant, in case of purchase by the city, the property might be taken over subject to mortgage as already outlined, or the city might at its option pay off the outstanding stock certificates and take the property free of debt.

In a statement issued by the Citizens Gas Company of Indianapolis on October 15, 1908, accompanying an offer of the last block of its authorized capital stock for sale, the secretary of the company estimated the probable daily revenues of the enterprise at the amount of $2,321, of which not less than $1,286 was to be from the sale of the by-products, coke, tar and ammonia. It was announced that the company then had 3,286 shareholders, most of whom would be consumers of the company's gas and coke. It was expected at the time this statement was issued that the entire plant would be completed and in operation by August 1, 1909.

272. The city's distributing system for natural gas leased on failure of supply—Toledo.—Two natural gas franchises were passed by the city council of Toledo on the same date, September 6, 1886.[1] Each of these franchises provided that the grantee should have the right to occupy the streets for the purpose of constructing and operating "lines of gas mains and branch pipes with the necessary feeders and service pipes, drips and other devices" necessary for successful operation in the delivery of natural or produced gas for heating and power purposes. The grantees were required to get a written permit from the city civil engineer before excavating any street, and it was expressly provided that no excavation should be made for the purpose of laying pipes in Summit Street between certain points unless specific permission by resolution of the common council should be first granted. The grantees were authorized, however, to cross Summit Street with their pipes by tunneling. The usual regulations were imposed relating to street work, repair of pavements, interference with other sub-surface structures, and the protection of the city from damages. In each of these franchises there was included one rather unusual provision, namely, that the grantees should lay down their mains

[1] *Special Ordinances, op. cit.*, p. 48, to Northwestern Ohio Natural Gas Co.; and p. 57, to Toledo Natural Gas Co.

and service pipes, if required to do so by ordinance, at the time when any street or alley was to be paved or otherwise improved. The grantees were required to make connections with their mains and lay service pipes for consumers adjacent to their lines in cases where, in the opinion of the common council, the amount of gas to be consumed would justify the laying of the pipes and the making of the connections. Service pipes were to be laid to the curb-line without expense to the consumers. These franchises were to be forfeitable at the option of the common council unless the grantees furnished a reasonable supply of gas by October 1, 1887. It was provided that "the right to further regulate the furnishing of said natural gas to consumers shall be subject to such terms and conditions as said common council and said company or corporation may hereafter determine upon." One of the franchises contained the additional stipulation that the grantee should within thirty days after the passage of the ordinance deliver to the city an agreement, in form to be approved by the city solicitor, accepting the ordinance and undertaking to perform its terms and requirements, and "to furnish gas to all persons requiring it in the city of Toledo (so far as said company may be able), without preference or favoritism, on equal terms and at reasonable prices, reference being had to the cost of producing and delivering the same and the prices for like supplies in other cities."

The city had granted a franchise for artificial gas to the Toledo Gas Light and Coke Company as early as 1854.[1] It was provided in this original franchise that "the quality of gas furnished the city shall not be inferior to that furnished to the cities of Detroit, Chicago or Buffalo," and that the price of "good gas" to private consumers should not exceed $3.50 per 1,000 feet, and the price to the city for street lighting should be $1.75 per 1,000. By the terms of a later agreement with the same company in 1866, the price of gas for public lighting was to be $2.25 during the ensuing period of ten years, and for private lighting during the first five years the price was to be $3.50, and for the second five years $3.[2] These prices were to include the United States Revenue tax of 24 cents per 1,000 cubic feet, but in case the revenue tax was increased the company was authorized to add the

[1] *Special Ordinances, op. cit.*, p. 67. [2] *Ibid.*, p. 71.

excess to its rates, and in case the tax was decreased, the amount of decrease was to be deducted from the rates. A five per cent discount was to be allowed to private consumers for cash payments made within five days from the rendition of bills. Meters were to be furnished rent free except when the quantity of gas consumed was less than 2,500 cubic feet per annum, and in such cases the meter charge was not to be more than $3 a year. The company agreed to extend its mains wherever required to do so by the city, but such requirement was not to be made unless the consumption of gas by private consumers along the lines of the extension would equal the consumption of "twelve average private dwelling house consumers" for every half mile of pipe.

The city itself went into the business of distributing natural gas, but after awhile it was unable to secure a further supply, and by ordinance passed August 19, 1901, it leased its plant to the Toledo Gas Light and Coke Company for a period of twenty years.[1] This ordinance recited that the city's natural gas plant included approximately 93 miles of iron supply pipes and approximately 6,000 service taps, with other appurtenances. The company was authorized to maintain and operate the plant, to make extensions and additions to it and to take up the existing pipes and replace them in other locations as it might deem best. It was understood, however, that all such changes were to be made in such a way as not to injure or impair the usefulness of the plant, but were to be designed to render the plant "more efficient for supplying the citizens of Toledo and the consumers of gas in said city with better facilities." At the termination of the lease, the company was to turn over the plant to the city, subject to alterations and changes that had been made, in as good condition as it received it, "reasonable wear and tear, depreciation by electrolysis and corrosion due to natural causes and inevitable accidents excepted." The company agreed to pay the city an annual rental of $6,500 for the use of the plant. The service pipes were to be laid at the company's expense and to belong to the company. Owners of property upon which service pipes were laid were required to execute a proper form of release consenting that the pipes should remain the property of the company. Meter connec-

[1] *Special Ordinances, op. cit.*, p. 80.

tions were to be furnished by the company at its own expense. The gas supplied for illuminating purposes was to be of not less than 18 candlepower. Wherever the amount of gas consumed in any one month amounted to less than 200 feet the company was not to be required to render a bill for the amount consumed, but in lieu of such bill was permitted to make a service charge of 25 cents. In case gas bills should remain unpaid for ten days after presentation, the company was authorized to charge an additional 15 cents per 1,000 feet.

In case the company should fail to pay its rental promptly from time to time, or fail to perform any of the other conditions of the contract, at the option of the city the lease was to be terminated. In case the company should take up any portion of the city's pipes or service connections, or replace them in any other location, the facts were to be reported to the city civil engineer both before and after such changes were made.

273. Franchise exclusive on certain conditions—Erie, Pa.—The Erie Gas Light Company received a charter and franchise by a special act of the Pennsylvania legislature passed March 5, 1852.[1] It was stipulated in this franchise that if the company should erect gas buildings, lay down and construct gas pipes and other appurtenances and proceed to furnish the inhabitants of the city with light from the gas manufactured by the company "at a price not exceeding the average rate charged by other cities, boroughs or towns, upon the shore of Lake Erie, whether in the State of New York, Ohio or Pennsylvania, wherever gases are manufactured by private incorporated companies," then the privileges granted by the act should be "exclusive but not otherwise." In 1867 the company's franchise was extended to include certain suburban territory lying within one mile of the city limits.

By a general act of the Pennsylvania legislature passed April 29, 1874, any gas company was authorized to supply heat, light and fuel to the territory named in its articles of association, which were never to cover more than a single county, and was given the power of eminent domain for the purpose of acquiring property necessary for its plant or for its lines of distribution.[2] It was required, however, to secure

[1] *Digest of Laws, Ordinances and Rules, City of Erie, op. cit.*, Part 2, p. 22.
[2] *Ibid.*, Part 1, p. 91.

the consent of the local authorities before entering upon any city street or borough street. As amended later, this act provided that the franchises and privileges of a corporation for the manufacture of gas for light only should be exclusive within the district covered by the company's charter, and that no other company should be incorporated for the manufacture of gas to supply light only until the first company had realized from its earnings and divided among its stockholders during a period of five years a dividend equal to eight per cent per annum on its capital stock.

On March 8, 1885, the city of Erie by an ordinance gave a franchise to the Pennsylvania Gas Company to supply natural gas for domestic and manufacturing purposes to public and private buildings in the city.[1] It was stipulated that all manufactories and public and private buildings along the line of the company's pipes should be furnished with gas at a uniform price for the same service. In case the company consolidated with any other fuel gas company in the city it was to forfeit its franchise, and at the request of city councils it was immediately to remove its pipes from the streets. The company agreed to furnish gas to the city and to public schools and charitable institutions at 25 per cent less than the lowest rates to private consumers. Gas so furnished was to be for fuel. The company was not required, however, to make the connections, and it was only required to furnish gas to buildings and institutions along the lines of its pipes. It was stipulated that the company should not charge a higher rate for the same service than was charged in Cleveland or Buffalo.

274. Price of gas to be readjusted to new inventions and improvements — Salt Lake City.—The first gas franchise granted by Salt Lake City seems to have been ordained by the city council on March 8, 1872.[2] Under this ordinance the grantees were to furnish gas within one year and the price of gas to private consumers was not to exceed $4 per 1,000 feet during the life of the franchise, which was for a term of twenty years. The price of gas furnished to the city was not to exceed "the lowest average price at which gas shall or may be furnished to the private citizens as afore-

[1] *Digest of Laws*, etc., *op. cit.*, Part 2, p. 208.
[2] *Ordinances*, p. 342.

said." It was also provided that the quality of gas so furnished "shall be as good as is or may be furnished to any other city in any of the territories of the United States, or in the Pacific States." The city council was authorized to subject the gas from time to time to a test to determine its quality. The proposed location of the gas works was to be submitted to the city council for its approval.

By an ordinance passed August 30, 1889, the city council granted to the Salt Lake City Gas Company a twenty-five year franchise on condition that gas should be furnished to private consumers at a maximum price of $3 per 1,000 and to the city at $2.50.[1] Street lamps with six-feet burners were to be furnished, maintained and supplied with gas at a maximum rate of $35 per annum for each lamp. The quality of illuminating gas furnished by the company was to be not less than 16 candlepower, and the company's pipes were to be extended and gas distributed "on any and all streets in the city as fast as there may be any reasonable demand for the same on such streets."

A twenty-year franchise for supplying natural gas was granted by the city on January 12, 1892, to the American Natural Gas Company.[1] This gas was to be used "for heat and fuel only". Rates were not to exceed 40 cents per 1,000 feet, and the city council reserved the right at any time after four years to reduce this maximum price to 30 cents. It was provided that the franchise should be null and void if the company failed to lay mains from its gas wells to the city limits within one year; or failed to lay "at least five miles of main pipe not less than five and five-eighths inches in diameter" in the streets of the city within eighteen months; or at any time after eighteen months was unable for a continuous period of sixty days to "furnish a sufficient quantity of natural gas to supply at least five hundred average families therewith for culinary and heating purposes."

Six months later, on July 12, 1892, the council passed over the mayor's veto another gas franchise.[2] This one gave to the New American Gas and Fuel Company the right to supply both natural and manufactured fuel gas "for heat and fuel only." The maximum rate fixed in this ordinance was 30 cents per 1,000 feet. It was stipulated that no more

[1] *Ordinances, op. cit.*, p. 345. [2] *Ibid.*, p. 354.

than one main pipe should be laid in any one street "without the expressed consent of the city council." The company was to use "only the best and most approved system and quality of pipe for their mains and services," subject to the approval of the city engineer. The council reserved the right to levy upon the company in addition to ordinary property taxes "an annual royalty or tax not exceeding one cent per thousand cubic feet upon all sales by said company, within the limits of said city, of fuel gas, either natural or manufactured." Although no reference is made in this grant to the acquisition by this company of any specific franchises granted prior to this time, it is stipulated that this grant shall not be operative unless the company files its acceptance and also "a specific relinquishment of all other or former grants, franchises or privileges now held or claimed by it." In order to clinch the matter it was added that "this franchise, if accepted by said company, shall operate as a revocation of all other grants, franchises or privileges now held or claimed by said company".

By an ordinance passed May 20, 1893, the Salt Lake and Ogden Gas and Electric Light Company was given a blanket franchise for the distribution of gas, electricity and steam.[1] The price of manufactured gas used for illuminating purposes was limited to $2.20 per 1,000 feet; the price of water gas, and of manufactured gas used for fuel purposes, to $1.50; and the price of natural gas, to 50 cents. It was stipulated, however, that any consumer should be liable under any of these charges to pay the company a minimum of one dollar a month for service. The city and all hospitals and institutions used for charitable or religious purposes were to enjoy a discount of ten per cent from these rates. In this case also the company was required to relinquish all prior franchise rights upon the acceptance of the ordinance.

On November 22, 1894, the city granted another franchise to the New American Gas and Fuel Company authorizing the company for a period of twenty years to operate pipe lines for distributing both natural and manufactured gas "for sale to consumers generally".[2] Rates for natural gas were not to exceed 50 cents per 1,000 feet for the first two years, and after that time the price could be reduced by the

[1] *Ordinances, op. cit.*, p. 357. [2] *Ibid.*, p. 371.

city council to 30 cents. For manufactured gas, rates were limited to a maximum of $1.25. The company was expressly required to lay its pipe lines on both sides of the streets where gas was used and not to cross the streets with its service pipes except by permission of the city council. This ordinance was to be void unless the company should within five months lay a pipe line not less than six inches in diameter from its gas wells to East Temple Street in the city.

Not satisfied with granting all the gas franchises which I have described, Salt Lake City, on September 7, 1905, passed an ordinance giving to George A. Snow and William Darst a fifty-year right to construct, maintain and operate gas works and to use the streets for the distribution of manufactured gas for fuel and illuminating purposes.[1] The rate for fuel gas was limited to 85 cents and the rate for illuminating gas to $1.35, with a discount of ten cents on the latter for prompt payment. A minimum monthly charge of one dollar for each consumer was permitted, however. After the expiration of the first three years, the grantees were to pay the city one per cent of their gross receipts for the succeeding ten years; one and one-half per cent for the next ten years, and two per cent thereafter. In any case, however, these payments were not to be less than $1,000 a year. It was stipulated that the gas furnished should "equal in efficiency the general standard of efficiency of gas used for like purposes in the cities of New York, Chicago and Philadelphia". The grantees also agreed that their mains, service pipes, apparatus and system should be "up to the approved standard used in the United States." They were required to accept the ordinance, if at all, within sixty days after its approval; to commence work within six months after acceptance; to have twenty miles of mains laid within two years and to lay ten additional miles each year for the two years thereafter. Gas was to be delivered within three years from the date of acceptance of the ordinance. It was provided, however, that "no delay occasioned by act of God, the elements, strikes, lockouts, or inability to procure with reasonable diligence the delivery of machinery, pipes, apparatus and supplies" should be counted as a part of the time within

[1] Typewritten copy of this franchise was furnished to the author by the City Recorder of Salt Lake City.

which any act required under the terms of the franchise was to be performed. The grantees were authorized to "require at their reasonable discretion, a guarantee deposit from parties proposing to become consumers, the amount of which said deposit shall be reasonable under the circumstances under which said consumer proposes to use gas." The deposit, with interest at six per cent per annum, was to be returned to the consumer when he stopped using gas. The city agreed that it would not by ordinance or resolution passed during the life of this franchise "make any rules or regulations in regard to the price of gas to be furnished for lighting or heating purposes different from the prices" named in the ordinance. It was provided, however, that "if there shall hereafter be any new inventions, or improvements or condition that will materially reduce the cost of producing or distributing gas for lighting or heating purposes, then and in either event there shall be a reasonable readjustment" of the rates fixed. The question as to whether or not conditions authorizing the readjustment had arisen, as well as the terms of any such readjustment, were in the event of any disagreement between the city and the company to be determined by "two competent and disinterested appraisers," the city and the grantees each selecting one. These appraisers were to select an umpire, and then if they were unable to agree in regard to the matters submitted to them, the umpire was to be called in and the majority of the three would decide the question. In case of the refusal or neglect of the grantees to proceed to arbitration when requested by the city council, the city reserved the right to alter, amend and change the franchise in respect to rates. Free gas sufficient to heat the public library, two fire stations, the city jail, the police station, the old City Hall and the city's half of the city and county building was to be furnished by the grantees, and this obligation was to extend to the buildings not only as they existed at the time, but as they might thereafter be "rebuilt, improved, added to or repaired."

By an ordinance approved February 21, 1906, this franchise was amended in certain particulars. Among other things, the maximum price of gas used for fuel was increased from a flat rate of 85 cents per 1,000 to a sliding rate coming down from $1 per 1,000 for the first 2,000 cubic feet per

month furnished to any one consumer through any one meter, to 80 cents per 1,000 feet for all gas furnished in excess of 22,000 cubic feet per month to one consumer through one meter. The price of gas used for illuminating purposes was also changed from a flat rate to a sliding rate. For the first 2,000 cubic feet per month furnished any one consumer through any one meter the price was to be $1.40 per 1,000, and for all gas in excess of that amount, the price was to be $1.30 per 1,000 feet. After the expiration of twenty-five years all these rates were to be reduced to the extent of ten cents per 1,000 feet. There was also at all times to be allowed the ordinary ten-cent discount for prompt payment. It was provided that unless the grantees filed a new bond or filed the written consent of their original bondsmen to the changes in the franchise, the amendment would be void. It was further stipulated that if the grantees, or a Utah corporation to which the franchise might be assigned, should after having constructed and put in operation the gas plant and distributing system, as contemplated in the franchise, desire to sell their works, the city should have "an option to purchase at a price equivalent to any *bona fide* offer which can be obtained from other parties." This option was to last for ninety days after notice of the offer.

275. Rates reduced with increase of sales — Detroit.— The present franchise of the Detroit Gas Company was approved October 31, 1893.[1] It was a blanket franchise giving the right to supply either manufactured or natural gas for illuminating and fuel purposes. The company was required to supply all applicants, not in arrears for prior bills, owning or occupying premises on streets in which the company's mains were laid. Extensions were to be made, if ordered by the council, on petition of two applicants "averaging two buildings in every 200 feet of main pipe required." It was stipulated that if the company should at any time cease to furnish natural gas, and undertake to supply a cheaper quality of gas for fuel than that furnished for lighting, the price to be charged for such manufactured fuel gas was to be determined by arbitration. Pipes were to be laid between the curb line and the lot line wherever practicable, or preferably in the alleys. All service pipes put in by the com-

[1] Compiled Ordinances, 1904, *op cit.*, p. 407.

pany after the date of its franchise were to be connected only with the main laid in the alley or at the side of the street nearest to the building which was to be supplied. There were the usual provisions to prevent the company from injuring other sub-surface structures and to require the company's street work to be done under the supervision of the city. The paving replaced by the company was to be kept in repair for a period of three years unless the street was repaved or generally repaired at an earlier date. It was especially stipulated that in all cases where the work required the exercise of skill, as in the laying or relaying of pavements or sidewalks, the company should "employ none but skilled workmen, familiar with the execution of such work." The city reserved the option to do the work of restoring the streets itself, if it so desired, at the company's expense. The maximum rates fixed in this ordinance were 33 cents per 1,000 feet for natural gas sold for fuel, with a discount of 3 cents on bills paid at any time during the month following the month for which the bills were rendered; 90 cents per 1,000 feet for manufactured gas sold for fuel purposes from illuminating mains, with a discount of 10 cents for payment within the following month; and $1.40 per 1,000 feet of manufactured gas used for lighting, with a gradual decrease to 95 cents per 1,000 whenever the aggregate quantity supplied by the company was greater than 800,000,000 cubic feet per annum, with a discount of 15 cents per 1,000 for payment within the month following the consumption. It was provided that the city should as soon as practicable be divided by the company into three districts which should be as nearly equal as practicable in the numbers of the company's consumers. Bills were to be rendered to consumers in the first district on or before the 25th day of each month; in the second district, on or before the 5th of each month; and in the third district, on or before the 15th of each month. Discounts were to be allowed to consumers who paid within 15 days after the time fixed for the rendering of bills. Each bill was to state the number of cubic feet of gas used by the consumer during the period covered by the bill, the average illuminating power of the gas, the amount due the company at the rate specified in the ordinance, and the discount to which the consumer would be entitled if the bill were

paid within the specified discount period. For refusal to pay bills the company was authorized to cut off any consumer's supply of gas, but it could not refuse to furnish illuminating gas on account of a consumer's failure to pay bills for natural gas. No meter could be removed by the company from any premises supplied by it without the consumer's consent unless 24 hours' written notice had been given. Meters could be removed only between 8 o'clock in the morning and 2 o'clock in the afternoon. Service pipes were to be maintained by the company to the lot line. Inside the lot line the company was entitled to charge the cost of furnishing and laying service pipes, such cost not to exceed 15 cents per lineal foot. The illuminating gas supplied was to have 18 candlepower and the pressure was to be "proper and reasonable," and at all times subject to the inspection and approval of the board of public works. The board was authorized to remove any of the company's meters at any time for testing purposes, and the company might be required to supply other meters for use during the time of inspection. Any consumer was to have the right to have his meter inspected on the payment of a fee of $1. In case any meter was found to register inaccurately to the injury of the consumer to an extent exceeding two per cent, this fee would be returned to him. If the consumer's meter were found to be correct, however, the fee was to be divided equally between the city and the gas company. The company was required to make semi-annual detailed sworn statements to the city showing the amount of manufactured gas for illuminating purposes sold by it. The company's books were to be open to inspection by the city controller or his representatives for the purpose of verifying these reports. The company was also required to furnish promptly to the board of public works any information asked for by the board in regard to the size, location, condition or depth of any of the company's mains, service pipes or meters.

The franchise was granted for a period of thirty years and the city reserved the right to purchase the entire plant at the expiration of that time at a price to be determined by a board of nine arbitrators, three of whom were to be appointed by the company, three by the mayor of the city, and three by the six thus appointed. In case, however, the

six first appointed were unable to agree upon the remaining three, the latter were to be appointed by the circuit court of Wayne County. The arbitrators, in arriving at a fair price for the plant, were not to take into consideration the value of the franchise, but were to allow a fair value of the property actually used by the company in its business, and to take into consideration as an element of value "the earning capacity of the said property and business, as then established and existing." It was stipulated that the company should file its written acceptance of the ordinance within five days after its approval by the mayor, and that such acceptance should be deemed a relinquishment by the company of any prior franchises or rights claimed by it, so that this ordinance should constitute the company's sole and only authority for maintaining any gas pipes in the streets. The company was forbidden to enter into any combination with any other gas company concerning rates to be charged or to make any division of territory with any other gas company. The company was expressly authorized to use in its business all the pipes, mains, plants and other property which it had theretofore or might thereafter acquire by purchase from other gas companies.

On May 8, 1906, this ordinance was amended, with the consent of the company, so as to provide for the immediate reduction of the price of manufactured gas to the minimum fixed in the original ordinance, with rates to be still lower for large consumers. The maximum rate as provided by this amendment was to be 90 cents per 1,000 cubic feet, with a discount of 10 cents for prompt payment. This rate was to apply to any consumer who used no more than 50,000 cubic feet per month. For consumers using more than this minimum, however, the rate for the second 50,000 cubic feet was to be 80 cents, with the discount; the rate for the second 100,000 cubic feet was to be 70 cents, with the discount; and the rate for all gas consumed in excess of 200,000 cubic feet per month was to be 60 cents, with the discount. A special rate of 70 cents with the usual discount, was made for all gas used for the purpose of operating gas engines. It was expressly provided that the company might lower the rates contained in this sechedule at any time, but if the rates were lowered they could not be raised again to the schedule of the

ordinance without the consent of the common council. It was also provided that the company should not charge any consumer a different rate from that charged to any other consumer and should not in any way, by the granting of rebates or otherwise, discriminate among its consumers, except according to the specific provisions of the ordinance.

Up to the time of this amendment the company, although no longer furnishing natural gas, had maintained two sets of meters for keeping separate account of the gas used for lighting and the gas used for fuel. With the passage of this amendment, however, the company was not to be required any longer to keep a separate account of the gas sold for illuminating purposes.

276. An 85-cent rate ordinance passed over the mayor's veto — Chicago.—On February 14, 1906, the city council of Chicago passed over the veto of Mayor Edward F. Dunne an ordinance regulating the price of gas.[1] This ordinance had been recommended by the council committee on gas, oil and electric light, after two or three months of consideration and the taking of considerable expert testimony. The general assembly of Illinois had, in 1905, passed an act authorizing the city to establish "just and reasonable" maximum rates for gas and electricity. Under the ordinance as recommended by the committee and passed by the council, it was provided that no company supplying gas for illuminating or fuel purposes, should charge during the ensuing five years more than 85 cents per 1,000 cubic feet of gas consumed. This was to be a net price, however, and an additional 10 cents per 1,000 feet might be charged consumers who failed to pay within ten days from the dates of their gas bills. The illuminating gas furnished was to be of not less than 22 candlepower, to be measured at the place of consumption "by the most modern appliances known to science for measuring the candlepower of illuminating gas". The rate for gas furnished to the city was to be 85 cents regardless of the date of payment. A penalty of from $25 to $200 was prescribed for the removal of a gas meter from the premises of any consumer without his consent, if he was willing to pay the established rate for gas. It was provided, however, that meters might be removed for repairs, but in such cases they

[1] *Proceedings of the City Council*, Feb. 14, 1906, p. 2639.

were to be replaced or new meters substituted within 24 hours after removal. Any company manufacturing or distributing gas was authorized to purchase gas from any other similar company, or to sell gas to such company. Any gas company was authorized to lease its property and mains to any other gas company, or to acquire and operate the property of other companies for the purpose of manufacturing and distributing gas. It was provided, however, that no purchase, sale or lease should ever be construed as being an abandonment of any company's ordinance rights, nor as authorizing the assignment of the franchise. It was expressly provided that no purchase or sale contract, agreement or lease authorized by the ordinance should operate to deprive the state, city or other governmental agency of the right to regulate rates after the expiration of the five-year period, and the companies accepting the ordinance agreed that they would not urge any of its provisions, or any purchase, sale or agreement authorized by it for the purpose of fixing any higher price or lower quality of gas than the price or quality which might be fixed at any time after the expiration of the five years. It was provided, however, that none of the companies accepting the ordinance would by such acceptance concede the right of the city to regulate rates.

Under the franchises of two of the existing companies the city had reserved the right to purchase the companies' plants upon certain conditions. It was expressly stipulated in this ordinance that the city's rights in this respect should not be prejudiced by the ordinance under discussion. The two companies referred to, however, were released from the payment of compensation to the city under the terms of their respective ordinances, except that the tax of five per cent of the gross receipts from the sale of natural gas was not to be abrogated. It was stipulated that the amount due from the People's Gas Light and Coke Company, by far the most important gas company of the city, up to the time of the taking effect of this ordinance, being five per cent of its gross revenue from the sale of natural gas, should be paid by crediting it against the sum of more than $1,300,000 due the company from the city for gas furnished for street lighting, and the city was to be released from any payment due the

company. The Ogden Gas Company was to pay the city the amount due under its ordinance, a sum in excess of $117,000. The city's accounts with the Universal Gas Company were to be settled, and each party released from its accrued obligations to the other. Litigation that had been started by the city against two of the companies was to be dismissed. The ordinance was not to be considered as extending the period within which any of the companies were authorized under their franchises to supply gas.

Mayor Dunne objected to this ordinance for several reasons. He thought that the gas companies should not be given 24 hours in which to replace their meters removed for repair, but that they should be required to substitute other meters immediately. He urged that under the section permitting companies to lease each other's property, "the Standard Oil Company or any company organized under the liberal laws of New Jersey, Delaware or any other state would be empowered to take possession of the gas plants now being operated in the city of Chicago and conduct them without limitation as to time in the same manner that domestic corporations of this city could conduct them," and in so doing would acquire the right to have all questions arising between the companies and the city determined exclusively in the Federal courts. "I can discover no good reasons," said the mayor, "why the public utilities of this city as long as they are allowed to remain in the hands of private companies should not be administered by corporations which are subject to the exclusive jurisdiction of the state courts." The mayor also objected to the clause by which the company reserved the right to contest the city's authority to regulate rates after the expiration of the five-year period. "This ordinance", said the Mayor, "is either a contract ordinance which should settle all controversies between the present companies and the city, in which event the companies should be compelled to acknowledge the right of the city to regulate the price and quality of gas, or it is not a contract but a regulating ordinance in which the city should under the law affirm its right to fix the price and quality of gas and compel the companies to accede to its terms without conceding to the companies the right to question its validity."

An ordinance had been passed in the year 1900 fixing the

price of gas at 75 cents. The companies had contested the validity of this ordinance and although the new ordinance provided that the rights of the city and of citizens to recover any excess over the 75-cent rate which they had been unlawfully compelled to pay were not surrendered, in another clause the new ordinance acknowledged the city's indebtedness to the People's Gas Light and Coke Company for upwards of $1,300,000, based upon the company's claim for a rate of $1 per 1,000 from the year 1900 on. The mayor objected to this apparent admission of the invalidity of the 75-cent rate ordinance. Furthermore, the mayor objected to the new ordinance on the ground that the 85-cent rate fixed by it was unfair to the people and excessive.

As already stated, the mayor's objections were overruled and the ordinance was repassed by the council. The vote was 57 to 10.

End of Volume One.

ANNOUNCEMENT.

The second volume of this work will include parts 3 and 4.

Part 3 will contain an analysis and discussion of local transportation franchises including street railways, interurban lines, terminal railroads, subways, elevated lines, freight tunnels, ferries, coach and cab lines, bridges and turnpikes and toll roads.

Part 4 will comprise the chapters discussing taxation and control of municipal franchiss, including the following subjects:

Constitutional and statutory limitations on local franchise grants,

Popular control of franchises through the Initiative and Referendum,

The function of public service commissions,

Municipal franchise bureaus and public utility experts,

Relation of franchises to land values,

Principles of franchise taxation,

Capitalization of franchise utilities,

Appraisal of public utility properties,

Municipal operation or public regulation.

It is expected that Volume Two will be ready within one year after the publication of Volume One.

PARTIAL LIST OF SOURCES USED AND AUTHORITIES CONSULTED IN THE PREPARATION OF VOLUME ONE, ARRANGED FOR THE MOST PART BY CITIES.

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