

that freedom will be withdrawn—not that I feel that you of your own inclination would go astray, but you might fall into the hands of those who might attempt to lead you astray. I again repeat, I wish you may have a very profitable and pleasant session, and that your deliberations will result in great good and in great profit to yourselves and to the advancement of the science to which you are devoted. (Applause).

The President: I will call upon our ex-President, Mr. Yule, to express the thanks of the Association to His Honor, Mayor Teetzel, for his kindly welcome.

Mr. Yule: I have much pleasure, Mr. Mayor, in tendering you the thanks of this Association for your hearty welcome, and I can guarantee the good behavior of all the members of our Association. I do not think it will be necessary for you to give any private intimation to the Chief of Police to see that we all get home in good time. We thank you most heartily for your kindly welcome, and we will do our best to enjoy ourselves while in the city of Hamilton.

President Browne addressed the convention as follows:

#### PRESIDENT'S ADDRESS.

GENTLEMEN:—Although in the declaration by the Constitution and By-laws of the general order of business to be followed, no place or time has been allotted nor provision made for such a procedure, yet it appears by the programme of events that the Committee have appointed that the convention, like the eight preceding it, shall begin with a President's address.

I would prefer to be governed by the prescribed formula of the Constitution, but as tradition and unwritten law frequently exert more control than written law, I must endeavor to emulate the good example given by my predecessors even if unable to hope to do more than emphasize by contrast the paucity of the suggestions which I may offer.

I will not undertake to occupy much of your time, because the committee have provided for our consideration a goodly array of good things. You will receive and hear read the reports of the several committees, and also that of the worthy Secretary-Treasurer recounting the condition and progress of the Association during the past year; and you will hear and discuss several very excellent papers when you find opportunity between the various events of hospitality provided in such prodigality by the local committee.

You will be particularly gratified by the report of the Committee on Legislation, through whose efforts was achieved the passage at the last session by the Ontario Legislature of an eminently just enactment having to do with the relations between municipalities and electric companies. The report of that committee will be accompanied by a copy of the enactment referred to, from which you will find that both municipalities and existing electric lighting interests are protected from unwise and hasty investment on the one hand, and from constantly impending danger of threatened annihilation of existing investments on the other hand.

The ninth convention of this Association is very appropriately held in the city where its first convention took place. Nowhere else could the extraordinary and rapid progress of electrical development be more emphatically demonstrated, nor the contrast with conditions existing only seven years ago be so sharply defined, than in this city of Hamilton. For here is tangible evidence in active daily operation of the furthest advancement of the electrical art of to-day, in the distribution of the potential energy of Lake Erie throughout the city, dispelling its darkness and operating the machinery of its manufacturers.

At the first convention of this Association, held in this city only seven years ago, the probability of such a practical, commercially successful demonstration was considered to be in the far and remote future, as appears from the record of that convention. The transmission of energy a distance of thirty odd miles, as is the case here in Hamilton, was looked at doubtfully both from a physical and commercial standpoint. To-day no doubt exists as to the physical capability of transmitting and manipulating electric currents of high potentials long distances, for the varied uses of light, power, heating, chemistry and metallurgy.

The question no longer is, "Can we apply the electric current to this and to that purpose?" but "What new fields of enterprise can it enter and develop?"

This transformation in Hamilton took place shortly after the conclusion of the convention last year in Montreal. Since that time also has been put into operation a plant at Rossland, British Columbia, transmitting about the same amount of power the same distance as here. Many of you last year visited the works at Chambly, then under construction for the transmission of current to Montreal, and it is my pleasure to announce that the electric current has been transmitted from the power house on the Richelieu river, and the waters of Lake Champlain transformed into electric energy, flow throughout the city of Montreal. Such enterprises are so much the accepted fact and indicate successful physical accomplishment so thoroughly that many other similar enterprises, covering even greater distances, are being seriously considered by conservative capitalists, keen to perceive the great commercial advantages that will accrue from the developments made in this field of electric science.

Arising from the increased uses of water powers for the generation of electric energy, and the successful application of such energy to commercial motive power uses, a condition is beginning to assume shape with every indication of increasing, which may modify existing manufacturing conditions and perhaps change habits and methods of living. Its general adoption will result in the cheapening of motive power for manufacturers as well as reduce their costs otherwise, and also cheapen electric current for lighting.

I refer to the limitation of the use of electric current for manufacturers' motive power to the hours of daylight, or perhaps more properly speaking, to the time outside of those hours when the need of illumination makes the greatest demand upon the electric plant. A considerable

objection to undertaking to seek motive power business has been the necessity of increased capital for plant in excess of lighting requirements to take care of the load which would exist during the hours when the motive power load and the lighting load would be called for simultaneously.

The idea has been maintained and acted upon that it is profitable for many, if not all manufacturers, to discontinue work as soon as the dark hours begin, for the reason that the cost of manufacturing is increased during such dark hours by the necessity of expense for illumination and by the diminished productive capability of the operatives. Besides avoiding these increased expenses, manufacturers can obtain the use of electric current for power, at a considerable reduction in price outside of the hours in which the greatest demand necessarily occurs for lighting. The cost of motive power to the manufacturer can be thus made much cheaper than he could otherwise produce it.

This additional source of revenue or increased return upon capital investment for plant and lines, will also enable the generator and distributor of electric current to sell such current for lighting profitably, at a less rate than when no revenue is derived from the plant in the day time. Less price for lighting will assist materially in the increased use of electric current for illuminating purposes. Since this idea was first suggested it has grown considerably, and its application is being gradually extended, and it does not seem too much to say that in a few years the hours of manufacturing will be restricted to the hours of daylight, with all the advantages that will result therefrom. While this condition is of the most value to the water power generation of electric current, it is of great value also to steam generation plant, by reason of the increased return upon invested capital which it will provide. The suggestion is well worth thoughtful consideration and furtherance.

In another direction also, the assembling of our convention in this city demonstrates the progress that has been made since the commencement of the career of the Association. At the first convention there were present 57 active and 24 associate members. The total membership of the Association, by the report of the Secretary-Treasurer at the present time, is 241. This increase, continuous and progressive from the first convention, indicates not only lively and hearty appreciation of the advantages to be derived from association for mutual intercourse and improvement of knowledge from interchange of ideas, but also denotes continuous growth of electric interests and the progressive development of new enterprises.

Surveying the entire field of electrical industry in Canada to-day, it may be fairly said that if all are not in thoroughly sound and healthy condition, the greater number of them are prosperous and improving. In the days of the first convention, this could not be so well said, for as many of you, no doubt, remember, conditions were precarious and the probability of success uncertain. Here again I may allude to the result recently accomplished by our Committee on Legislation, which will greatly tend to advance such prosperity. Already it has had the effect of strengthening and fortifying existing enterprises, encouraging owners to endeavor to extend and increase their business, to enlarge and better their plants, because now they feel assurance that their investments are protected and that they cannot be deprived of them ruthlessly and recklessly. This is as it should be, not only from the point of view of the private owners of such enterprises, but from that of the general public and municipal interests.

Notwithstanding that the legislation referred to is so eminently fair, just and equitable, both to municipalities and to private interests, yet it is incumbent upon the members of this Association and upon all those having interest in electrical enterprises, to adopt systematic, prudent means of preventing retrograde action in such legislation which may be aroused and agitated by persons of narrow and restricted views, who may undertake to procure alterations of the legislation referred to. It seems proper to suggest that all present members become actively interested to procure additional members for this Association throughout the Dominion; thereby to strengthen its capability for useful effort so that by unity of action procurable through the efforts of such enlarged organization, not only may the meritorious conditions obtained in this province of Ontario be maintained, but also be extended to the other provinces. To that end it is respectfully urged that every present member endeavor to add to the membership of this Association, thus to fortify and strengthen our committees in the furtherance of their efforts for the proper benefits that should accrue to capital invested in all electric enterprises.

The value of concerted action for mutual information and advantage may be illustrated in another direction by the following.

Many persons interested in electric lighting were solicitous as to the possible invasion of their business by acetylene. For the purpose of assembling authentic information as to the progress, present status and use of acetylene for domestic and commercial illumination, a circular was sent to cities, towns and villages throughout Canada having electric plants, requesting exact statements as to the conditions existing in those localities concerning its use and its interference with electric lighting. Replies were received from 103 localities. The results have been tabulated, and with some extracts from newspapers, will be presented in the proceedings of the convention so that every member will have accessible the fullest and latest information on that subject in convenient form. Here it seems sufficient to say that it may be concluded that no serious menace for the present, at least, need be anticipated therefrom to the electric lighting industry, although undoubtedly useful and profitable fields will be found for the desirable and proper use of acetylene.

The papers which will be presented and read at this convention will treat of matters of the highest practical importance, and I will not undertake to detain you longer from their consideration and discussion. They are of such character as to possess acute interest for all, and I solicit for them thorough and complete discussion to bring out any points not touched upon by the writers. The subjects selected are the results of suggestions received from many members in response to circular communication sent to the members some months since, and, therefore, may be considered to be your own selections.

With reference to these papers, on behalf of the committee having this matter in charge, I wish to say that they are particularly grateful to the writers who have accepted the requests of the committee. It is not always convenient, and probably it may be said, it is never convenient for a busy man especially (and it would seem as if most of us in