

CONVENTION DELEGATES KEPT BUSY TODAY

GETTING READY FOR BIG DAY OF THE CONVENTION

All Three Associations in Convention, Will be in Session Here Tomorrow Morning.

READY FOR EXCURSION

All Delegates Here Will be in on Boat Trip—Will Hold Meetings on the Boat.

Getting everybody in line for the boat excursion to Burlington tomorrow afternoon, the closing day of the Electric Light association and Contractors association conventions, and the opening day of the street railway convention, was the business that occupied the time of the delegates at the close of the afternoon sessions today.

Business session rushed. Business in today's sessions was rushed through as rapidly as possible and on account of the limited amount of time and the large amount of business to be transacted, much of it was cut as short as possible. It was necessary to shorten some of the discussions, but not so much as to affect their value.

Want City Regulation. Floyd A. Wallace, vice president, discussed proposed state legislation affecting the contractors and the meeting decided to seek at the next session of the general assembly a law giving cities the power to pass ordinances regulating and directing electrical work. It is believed this matter will be favorably acted upon by the assembly.

Joint Meeting on Steamboat. The association will hold a joint meeting with the other two associations tomorrow morning after which all members will embark on the G. W. Hill for the excursion to Burlington.

Women Guests Entertained. A very charming afternoon tea was given in the main dining room of the Hotel Iowa yesterday afternoon for the visiting ladies. The table from which tea was served, had for a centerpiece a basket of pink and white carnations. Tea and coffee, chicken sandwiches, lettuce sandwiches, or orange ice, assorted cakes and pink and white mints were served. Those who assisted were Mrs. C. W. Kellogg, Mrs. J. P. Ingle, Mrs. N. T. Wilcox, Mrs. J. H. Bissell, Mrs. R. B. Bolster, Mrs. William Kennedy, Mrs. H. A. Turner, Mrs. W. G. Blood, Mrs. C. F. McFarland, Mrs. Myrtle Baker, Mrs. Beverly B. Holbe and Mrs. A. Hollingsworth. Mrs. Davis, of El Paso, Tex., and Miss Williams of St. Louis, who are house guests of Mrs. Kellogg, were at the tea.

At Country Club Today. This afternoon at the close of an ambitious ride over the city, the ladies who are visitors at the convention, were entertained in the recep-

tion room of the Country Club house. Acting as hostesses were Mrs. C. W. Kellogg, Mrs. J. P. Ingle, Mrs. N. T. Wilcox, Mrs. Eugene Maxwell and Mrs. J. H. Bissell. Mrs. Davis and Miss Williams were also guests at the club house.

Entertainments Last Night. The entertainment program last night consisted of a banquet tendered by commercial representatives present and an illustrated lecture on the "Keokuk Dam Development," by Dr. G. Walter Barr, of Highland Park college, Des Moines.

The banquet was attended by practically every delegate present at the convention. Wives of the visiting delegates, as well as the wives of the local men connected with the associations were present. The banquet was held in the Masonic temple. Several hundred were present.

Banquet Big Success. The banquet was an immense success, from every standpoint. The dinner served was excellent and was enjoyed to the utmost. The hearty thanks of the guests were voted to the commercial representatives who were hosts.

Following was the menu served: Crab Cocktail, Olives, Pickles, Celery, Radishes, Bouillon, Chicken, Giblet Gravy, Green Lima Beans, Creamed Cauliflower, Mashed Potatoes, Roman Punch, Electric Salad, Rolls, Ice Cream, Mints, Coffee, Cake, Salted Nuts.

Lecture by Barr. Dr. Barr's illustrated lecture on the development of the dam, followed the banquet. The talk proved to be one of the most interesting features offered thus far during the convention. The slides thrown on the screen illustrated the various steps in the gigantic undertaking that has made the name Keokuk world famous.

Preparations for the Jovian rejuvenation were started early today and from all advance indications, the meeting of the secret society of the electrical men will be one of the greatest in the history of the organization.

There was nothing but praise for Keokuk and the Keokuk hosts from convention delegates today. Everything is moving without a hitch and everyone is being cared for in the best possible manner.

The power house is still proving of interest to the delegates and the visitors. Guides furnished by the power company are on hand to conduct the visitors through the big plant. The government lock is also proving of interest to those who are visiting the power plant.

department get away for the run to the fifth street bridge. Last year when the waveling men and Eagles were here, the delegate had to be content with visiting the stations and seeing the horses put through their exhibition paces. Yesterday they saw the real thing.

Opportunity to make the trip to Warsaw and Hamilton is afforded by the Keokuk Electric company, with special cars which leave for the two cities across the river at 4:10 each afternoon.

The request of the Industrial association to make a display of flags has met with success. There were a number of emblems displayed today. The Sixth street area station, which is on artificially decorated in the American colors. The Elks club is displaying flags, and many of the business houses have unfurled their colors.

Many compliments are being paid Keokuk for the white way lighting system, by the visitors. The street looked particularly attractive last night with nearly all the signs in operation.

Of course it is not real polite to brag about yourself, but then it's permissible to pat oneself on the back once in a while. The delegates are all pleased with the brand of Keokuk hospitality which is being shown them. They are all much taken with the entertainment which has been provided and credit should be given to the local men who planned for this feature.

The registration of visitors continued all day today. There were about three hundred signed up in the booth at the hotel early this afternoon. Many more are expected to arrive here tonight for the opening of the street and interurban railway convention tomorrow.

The men in charge of the convention are delighted with the number of delegates present and with the treatment everyone is receiving.

Here's one for Keokuk hospitality: Several convention delegates walking down the street this morning in a slight rain, asked a local man passing them, for the use of his umbrella for a few moments. The L. M. told them to take it and keep it. "Don't bother about bringing it back," he said.

Maybe that's the way he got it.

Visitors Register

- Charles Homer, Cedar Rapids.
- E. W. Lewis, Cedar Rapids.
- Chas. T. Clark, St. Louis.
- R. E. Phipps, West Branch.
- Robert Myers, Davenport.
- C. W. Mossman, Davenport.
- F. H. Guenther, Muscatine.
- M. H. Schreiber, Bradford.
- N. Crawford, Clinton.
- N. T. Wilcox, Keokuk.
- C. A. Sears, Keokuk.
- P. R. Williams, Keokuk.
- Harold J. Wilson, Burlington.
- Mrs. Bolster, Keokuk.
- Myra Dodd, Charles City.
- Mrs. Wilcox, Keokuk.
- Mrs. Kellogg, Keokuk.
- Mrs. Ingle, Keokuk.
- L. H. Knapp, Keokuk.
- V. O. Stafford, Keokuk.
- G. W. Carlson, Keokuk.
- A. W. Kinne, Cleveland, Ohio.
- E. B. Hillman, Quincy.
- C. C. Buffum, Keokuk.
- J. V. Montgomery, Keokuk.
- A. R. Jackson, Okauchosa.
- J. H. Bissell, Keokuk.
- Wm. Loeb, Pittsburg, Pa.
- Frank Slooff, Boone.
- W. E. Byerts, Des Moines.
- A. C. Anderson, Keokuk.
- J. V. Harding, New London.
- F. H. Brooks, Red Oak.
- F. A. Warfield, Peoria.
- M. T. Anderson, Chicago.
- A. J. McDonough, Colfax.
- M. Anderson, Mason City.
- L. A. Hettner, St. Louis.
- W. G. Leuhardt, Chicago.
- W. E. Blake, Burlington.
- F. W. Marvel, Chicago.
- F. S. Dewey, Muscatine.
- F. J. Hanlon, Mason City.
- F. E. Clark, Clinton.
- H. B. Dewell, Clinton.
- A. Frank Paul, Chicago.
- E. L. Scadding, Fort Madison.
- J. E. Callahan, Keokuk.
- H. L. White, Tracer, Iowa.
- J. L. Buchanan, Schenectady, Austin Burt, Waterloo.
- H. W. Nebeltham, Minneapolis.
- Louis Smith, Clinton.
- E. P. Smith, Dubuque.
- W. V. Hoagland, Chicago.
- A. A. Jeffrey, Cedar Rapids.
- F. Van Schlegel, Chicago.
- J. D. Cross, Chicago.
- G. W. Register, Chicago.
- G. B. Gould, Chicago.
- A. S. Morgan, Keokuk.
- A. J. Cole, Omaha.
- C. L. Goldin, Cedar Rapids.
- F. E. Tedford, Gowrie.
- M. F. Gustafson, Boone.
- M. W. Polling, Ottumwa.
- J. P. Polling, Ottumwa.
- Chas. Clark, St. Louis.

Controlled Rates

E. T. Hughes, chief contract agent for the Union Electric company at Dubuque, read the following paper on "Controlled Flat Rates," at this morning's session:

as-much-as-you-can flat rate, they are generally loath to consider any method of selling their product except through some measuring device.

There is, however, one class of business which the majority of central stations do not get. This is the small residence lighting customer, the working man, living in a small home and having a limited income. He constitutes the major population of most cities, and may be made a very valuable asset to the lighting company if his business can be secured upon a satisfactory and profitable basis.

The controlled flat rate affords a means of handling this class of business in a very satisfactory manner, and keeping in mind our experience in Dubuque, Iowa, where we have offered this form of service for the past sixteen months, I will explain the operation and results that may be obtained by its use.

Is Circuit Breaker.

The flat rate limiter is nothing more than a circuit breaker adjustable to a predetermined demand load and so arranged that should the customer endeavor to use current in excess of this limit, the circuit is broken until the excess load is removed, when the circuit is again closed. The mechanism is so simple that practically no trouble is experienced and only occasional inspection is necessary to assure proper operation. This eliminates the expense of meter reading and no expensive repair parts are necessary as with the meter. Neither is there the constant loss of current as through the metered service which amounts in some cases to almost as much as the current consumed by the customer.

The instrument is installed in the building in the same manner as a meter. In fact, a meter may be put in its place at any time at no additional expense other than the time required to change the instruments.

In order that the controlled flat rate shall produce proper results, it is desirable that some restrictions be incorporated in the customer's contract governing the service. The rate is designed primarily for lighting and does not permit the use of appliances, but it is well to have this incorporated in the customer's contract and have it understood so that there may be no disappointment.

We also found it advisable to specify the lamp to be used in connection with the flat rate, and established a rule requiring each and every socket to be equipped with a twenty-five watt Mazda lamp; the fact that the customer must purchase renewals, tends to make him more careful as to the length of time the lights are burned; besides giving an equal distribution of light throughout the house. This rule eliminates the complaint that one customer is getting more light than another.

One Year Contracts.

As the rate to be charged must be arrived at by the law of averages, contracts should be drawn for a period of at least one year. This feature discourages the use of this service by transients, besides making it possible to take advantage of the light and dark months of the year. For the flat rate service a charge of one cent per watt of maximum demand is generally made, with a minimum monthly charge of \$1.00. It will be found that the majority of contracts will be for the minimum as that permits the turning on of as many as four, twenty-five watt lamps at a time, which is ordinarily sufficient for the class of customer for whom this service is designed. The average burning for this class of residence service is three hours per night, or ninety hours per month, so that should the entire four lights be burned every night throughout the month the return would amount to about eleven cents per kilowatt hour; a very fair rate. Experience shows, however, that this is not the rule. The customer is rarely saving in every way and rarely takes advantage of the opportunity to use a greater number of lights than he actually needs.

From results obtained by placing meters on the line with the controller we have found that in a number of cases we were earning at the rate of twenty cents per kilowatt hour, and our worst case showed nine cents per kilowatt, hour. Disregarding these figures we find that in all cases our customers are perfectly satisfied. The monthly bill is always the same, no fluctuation to disturb the customer's financial arrangements. He arranges his finances to care for this as he does his grocery bill and other expense items, and as the bills are payable in advance there are practically no unpaid, or delinquent accounts. The saving in clerical expense is also quite an item.

Possibilities in Ads.

To those of you who are interested in advertising, the possibilities to be found in the controlled flat rate will at once appeal. Think of the effect you get when you guarantee the amount of each monthly bill! An advertisement light the home with electric light for three and one-third cents per day, is bound to attract attention. Think of the impetus an announcement of this sort lends to an aggressive housewiring campaign! It can't help but get results.

Our records show that during the twelve months of 1914, slightly more than eleven hundred new names were put on our consumers' ledger. Of this number approximately one-third, or to be exact 390 were controlled flat rate customers originally; sixty of this number bought fixtures, or other appliances, before the year was out and had a meter installed. Others are changing right along. These figures show what a valuable aid this rate is in educating the customer to the advantages of electricity, for it knows that the great majority of these

could not be interested in the ordinary metered service. Our campaign was quite elaborate, considerable money was spent in advertising and salaries, and yet at the end of the year our cost per customer was far below the average.

I have no doubt but that a strenuous heating device campaign would change 90 per cent of these customers to the metered service, but what is the use? They are perfectly satisfied and it is very improbable that any increase in revenue would result. The expense of service would be increased in all departments and greater transformer capacity would be required. It doesn't take much capacity for 100 watt demand and the customer would not be as well satisfied.

It would naturally be expected that a great many of the present customers would apply for this rate, but such is not the case, and those who do will be satisfied with a frank explanation of its merits and limitations. Only four of our customers insisted on being transferred to the flat rate from metered service, and this was done upon the payment of \$2.50 to cover the expense of the change. In each of these cases it kept our lines customers we would otherwise have lost on account of high bills. Their salvation was due to the economy the little instrument forced them to observe.

Avoid Technicalities.

As with this service a class of people is encountered to whom electricity has always seemed beyond their reach, many unusual questions will be asked and much care must be exercised in the replies. Technical expressions must be avoided, and all statements made by the salesman must be truthful and easily understandable, as any ambiguity will create a doubt in the customer's mind hard to overcome. The customers secured on the controlled flat rate lose no time in acquainting their friends and neighbors of the fact that they now have electric light in their homes, thus creating a friendly rivalry that reaches even to the men in better circumstances, ultimately resulting in more business.

Power Development

Edward Soukup, superintendent of the Commercial department of the Iowa Railway and Light company of Cedar Rapids had for his paper the subject of "Power Development Methods for Iowa Central Stations." The following extracts are from his paper:

The advantages to be derived by central stations in building up power load have been so impressed upon us during the past few years that it is often interesting to pause and review our efforts and success in this direction. The problem before most Iowa central stations has probably been to find a sufficient number of prospects to devote their efforts to, this being particularly true of the smaller towns. Iowa is primarily an agricultural state and the industrial field is very limited. In fact manufacturing on a large scale is found only in a few of the larger cities. These conditions naturally work against the power salesman and confine his attention largely to the small non-manufacturing user, and to the development of the heating device business. In most cases this combination of lighting load, small power load and heating load has been successfully promoted, making twenty-four hour operation possible on a profitable basis.

A good gauge of the success of power developing efforts is the daily load curve. By comparing the curves at regular intervals a very good idea of the progress made can be had. This has been the subject of much discussion in the technical papers and some remarkable results have been shown along this line. A few years ago the average daily load curve taken in winter showed very small load during the day with a dip at noon, a rapid rise at 5:00 p. m. to a peak at midnight, then gradually falling off until after midnight, when practically no load was shown. Now, a good curve shows a healthy load all day, with slight dip at noon and but little night peak, making an almost straight line, dropping off during the night. The principal effect of this filling out the valley of the curve is a marked economy in the production of power, enabling us to generate at a rate low enough to undertake supply of power profitably to the largest power consumers. At the same time the original investment is spread out over a larger area and the fixed charges per unit of output are reduced. These in fact are the objects to be attained in the campaign for power business and once this relation between power sales and operating costs is understood it becomes apparent why so much energy and effort has been devoted to this purpose. To attain this result every central station should pursue an active policy to build up power load among all classes of consumers.

Reliability of Service.

Before any real measure of success in building of power load can be obtained the reliability of the service furnished must be assured and the confidence of the public built up. It must first be demonstrated that reasonably continuous service can be kept up—people are apt to judge you by the lighting service you give, and no opportunity should be lost in making it evident that your lighting service is reliable. If your lights go out occasionally, due to neglect, the manufacturer will rightly believe that your power service will also be neglected, and he will hesitate, even though your price is favorable. Also the community must have confidence in the men back of the enterprise and in its representatives, confident that they possess the disposition and the means to take proper care of the requirements of the public. I believe that most of

Tomorrow's Program

IOWA SECTION N. E. L. A. Morning.

Convenes promptly at 9:30 a. m. Grand opera house. "Outdoor Transmission Substation Construction" including fifty descriptive lantern slides in this connection. Herbert W. Young, president Delta-Star Electric Co., Chicago, Ill.

Open discussion on paper. "Safety First." Lecture of the National Electric Light association with illustrated slides and moving picture films, including the celebrated series, "The Lineman."

Afternoon. Enroute on steamer G. W. Hill. Boat leaves dock promptly at 2 p. m. 3:30 p. m. Session: "Question Box." Open discussion. Rufus E. Lee, chairman. Report of special committees. Report of nominating committees. Selection of officers. Selection of location for 1916 convention. Appointment of standing committee. Adjournment of convention.

ELECTRICAL CONTRACTORS.

8:30 a. m.—Meeting, board of directors and executive committee. 9:30 a. m.—Joint meeting with the two other associations, at Grand opera house. Paper—"Outdoor Transmission Sub-Station Construction"—(including fifty descriptive lantern slides)—Herbert W. Young, Chicago, Ill. Open discussion on paper. Paper—"Safety First" Lecture with illustrated slides and moving picture films, including celebrated series, "The Lineman."

STREET RAILWAY AND INTERURBAN.

Morning Session, 10 a. m. Call to order. Address of welcome—Mayor Moorhead of Keokuk. Response—Mr. F. J. Hanlon, Mason City. Address of the president. Reading of the minutes. Report of secretary-treasurer. Paper—Arrangement of schedules with a View to Providing Service during the Evening Peak. L. L. Sloss, superintendent of transportation, Des Moines City Railway Co., Des Moines, Iowa. Paper—Measures for the Welfare of Employees, Maurice A. Welsh, chief special agent, Waterloo, Cedar Falls and Northern Railway, Waterloo, Iowa. Paper—Safety First, F. K. George, director of safety, United Light and Railway Company, Grand Rapids, Michigan. Appointment of committee on nominations. Appointment of convention committees. New business.

the trouble which has developed between the operators of central stations and the municipalities has been due to the lack of appreciation of the requirements of each side and the loss of public confidence. In the campaign for power consumers, a reputation for good service will be found invaluable and it is worth every effort to cultivate the confidence of the public by giving real and efficient service. In preparing a campaign for power business it is advisable to make a list both of power consumers already connected and—of prospective consumers, and to analyze the power requirements of each one. To keep in touch with consumers already connected indicates an interest in their affairs which is usually appreciated by the customer and is really the most efficient method of holding on to the business already obtained. It also prepares the way for increases of load by the customer when his business grows to a point where additional power is needed. I believe that half the time of the power salesman can be profitably spent with the consumers already connected, and that their requirements should be looked after first. This is recognized as true in other lines, by traveling salesmen in particular—they always look after their regular established connections first. Another advantage of keeping in touch with the customer is that when properly looked after, he will always be a booster for your service.

How to Get Custom. The list of prospective consumers should be carefully canvassed and the favorable ones listed on an active list, to which special attention should be given. In such cases where the prospect is using a large amount of power generated by his own equipment an elaborate study of conditions should be made and a report presented showing the conclusion arrived at. Permission should be secured to make a test of power under operating conditions and to make an analysis of power costs. Ordinarily it is found that most of the machinery is driven through a large amount of belt and shafting from one or two engines, meaning a large friction loss (sometimes running to 50 per cent) of the actual power developed. A steam indicator is connected up and indicator cards taken throughout the run, for a day or two, or a week if necessary, until conditions are pretty well determined. Data is also tabulated regarding the operation of each machine and the output of each is determined as closely as possible. The results of tests are then incorporated in a report in which the actual conditions are laid bare, power operation is expressed in dollars and cents, and power per unit of output is determined. Then a proposal is submitted showing the saving possible with electric drive due to elimination of friction loss and due to lower cost of power per unit. This is put in dollars and cents and in terms of output, which appeals to the owner who then can understand it because it is applied directly to his business. Also in making this report, the investment required should be carefully outlined and the advantages of electric drive pointed out.

Field is Wide Open. The brick and tile industry presents much the same symner load characteristics and from that point of view is desirable. In the construction of buildings electric power is becoming more and more widely used, and of great convenience to the contractor. We find that small motor driven saws installed on the job save many trips to the planing mill. Electric driven floor scrapers and concrete mixers are other examples of the use of electric driven apparatus, used freely.

The small motor business is growing rapidly, although in this line the surface of the field has barely been scratched. This is the ideal field for the small station and it is going to be a big factor in the central station business. We all have had experience with the washing machine motor, vibrator, the sewing machine motor and the electric fan, but there are some others which deserve more attention and which produce more revenue. I wish especially to call attention to the vacuum cleaner, the electric house pump, the exhaust fan or pump, and the automobile battery charging outfit.

Some Other Chances.

Vacuum cleaners are desirable because they are used only during the day time, and because no additional investment is required to furnish service. Ordinarily they are used for a short time every day, particularly during the morning and do not affect the peak load in any way. A small cleaner using, say, 80 watts an hour or so a day will use up two or more kilowatt hours in a month, and a larger cleaner more in proportion. Private water supply systems with automatic electric control are now being pushed by manufacturers and

Cereal Mill Developed. While the manufacturing load opportunities are scarce, it is true that many of those which are available present very desirable characteristics. The cereal mill industry is becoming well developed throughout this region, and grist mills, flour mills, food product manufacturers, and starch fac-