for this line, is .204, or an area of 41742 circular mills. It is estimated that aluminium wire of equal conductivity should have an area of 68,000 circular mills and a diameter of .260. The weight of aluminium as compared with copper is 3.33. The weight of aluminium of equal conductivity with copper, is 49 per cent. of the weight of copper. As to comparative price, assuming a fair price for copper to be 20 cents per lb., 41 cents per lb. for aluminium would give the same cost per mile of line work, inasmuch as the weight of the aluminium would be only 49 per cent. of the weight of the copper. It is understood that the manufacturers of aluminium are watching very closely the copper market and are advancing or lowering the price of their material in such a way as to be able to offer an inducement to purchasers, while not letting go more profit than is absolutely necessary. Owing to its greater cross-section, due to lesser conductivity, the cost of insulating aluminium wire is almost double that of copper wire. Thus there is little or no advantage in price, except where bare wires can be used. This fact will greatly restrict the use of the new material. The only transmission line thus far constructed with aluminum wire is that of the Snoqualmie Falls Power Co., Seattle, W. T. This line, including branches, is 74 miles in length, and was completed in the autumn of last year, but has not yet been put in operation, so that no practical working results are obtainable.

BY THE WAY.

Mr. Carter, an old time Canadian operator tells an interesting story of his work with Edison 25 years ago. The two were working at Stratford, where Edison was station telegraph operator. There was a mistake in some order, and a collision was narrowly averted, Edison in consequence, had to face the superintendent at the old Union Station, Toronto, who rated him roundly for his "criminal carelessness." It was more than the young genius could stand, and, quietly exclaiming that he had had enough, Edison slipped on his coat and then severed his connection with the company. A short time ago Mr. Carter visited Edison at Jersey City, and the two laughed over the Stratford episode.

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This is the way municipal control of the electric light and telephone has worked out at Crawfordsville, Ind., as recorded in the Indianapolis News of March 15th: "More rottenness is being unearthed by the investigating committee of the city council. Last week it developed that a number of city employees were supplied with telephones for which the city paid, and last night it came out that a number of others are supplied with free service by the management of the city electric light plant. All those connected with the plant are said to be using the light without price, whereas the management began to refuse pay applicants on the service some time ago, on the ground that the plant was already loaded to its carrying capacity. It now develops that every employee of the plant has his house wired and is using all lights desired. The exposure has caused a breeze of indignation, and the superintendent has been ordered to cut off all deadhead service at once."

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In the early '80's, when electricity was indeed in its infancy, Mr. J. J. Wright, the present manager of the Toronto Electric Light Co., started into the business on a very modest scale in Toronto. He rented a small machine shop off Yonge street, and there made his own apparatus. No attempt was made to light the streets, but a number of the stores were served with arc lights. In the day time the promoter of the new enterprise was busily engaged in stringing wires, trimming lamps and soliciting customers, and at night he took charge of the operation of the plant and the construction of dynamos and other apparatus. He even tried his hand at making carbons in the hope of reducing their cost, the price then being nine or ten cents apiece. In the following extract from a letter written to a friend Mr. Wright describes in characteristic language the modus operandi of carbon making as practiced by himself: "The first carbons I ever made or used were round in the shape of a wheel and I rammed the stuff in a cast iron mould and then made the mould red hot something after the manner of the Chinaman who when he wanted roast pork burnt down his house to cook the pig. You make me smile when you ask me the resistance of the first carbon I used. In those days I was 'unacquainted with the nature of an ohm' so to speak, and considered myself pretty lucky if I could get a current to go through my carbons on any terms. I wasn't fastidious. I didn't require to know system, candle power and strength of current in use' and whether *coppered or plain—not much—I was perfectly satisfied* when I could make a carbon that wasn't an insulator, and did not worry myself into a decline because two of them did not last an equal time on the same current to a fraction of a second. The first carbons I remember as practical carbons were Brush. They were square, but I have no data respecting them. Since then, I have used every kind, round, square, soft, hard, some with a hole through the center and some with a core, but I never knew what fun was till I started in to make carbons in Canada. I didn't have the first idea what they were made of and had to work it all out for myself. Carbons were costing me from 9 to 10 cents each in those days and it was an inducement. If I was to tell you the different kinds of stuff I put in carbons, you would die standing up. You would not have time to fall down. I got very fair results from gas carbon and molasses, but dropped the molasses and took to tar. The carbons were all right but would blaze somewhat. At last I got to making fair to middling carbons, but they were of the now-you-see-'em-and-now-you-don't kind. One lot would go all right, and then the next night my lamps would not start up, and after forcing the current round for a time, I would go round and find all the fine wire shunts burnt to a cinder. Another time they would get red hot all the way up to the holders and they would burn to a beautiful point. After a while I got to making them all right, and had pretty fair success, but the reduction in price knocked me out. I could buy cheaper than make, but if it were profitable to rake up such matters, I could a tale unfold in regard to what I know about carbons 'that would make your knotted and combined locks to part and each particular hair to stand on end like quills upon the fretful porcupine,' but of what avail? it would be of no use, so I have only to repeat what I said at the start, that for accurate data I am not there, but for experience, largely comic but quite often the reverse, I believe I could fill a book."

Charles J. Pippin, night watchman, at the parliament buildings Toronto, has been appointed engineer at the Deaf and Dumb Institute, Bellville.