

ent trying the experiment of an exhaust fan placed on top of the chimney. If it will work at the top of the chimney, why not have it at the bottom, and save the trouble of carrying the power up so high and having to send oil up to the bearings? The chief difficulties in using an exhaust fan for promotion of a draught are the high temperature of the gases passing through the fan and the necessity for getting rid of the gases. If the fan could be got to run notwithstanding the high temperature of its bearings it might be a good plan to make the discharge go down into the sewers. Enough deadly gas might be sent down and hot enough to kill all the typhoid fever and diphtheria that are said to dwell in the sewer.

As we were going to press with our last issue we were the recipients of a letter from the Brantford Electric Light Company complaining of an editorial in a previous issue of the NEWS commenting on the low prices, etc., obtained in a near-by city on the renewal of their electric lighting contract. As we did not mention any names in connection with the article complained of nor indulge in any personalities whatever, we must decline entering any further into the matter, further than to say that we had no wish to tread on anybody's toes, but only to point out to our readers the necessity of using their utmost endeavors at all times to give their patrons the best of service, and thereby secure at least fair prices for that which they have for sale.

THE Council of Toronto Junction, having had enough experience with municipal electric lighting, have sold their plant, together with a nineteen years' franchise, to the Toronto Incandescent Electric Light Co. for the sum of \$26,900, on condition that the purchasers will operate the plant in Toronto Junction during the term of the franchise. The City Council of London, Ont., seeming to be influenced by the experience of a smaller town, is about to insist upon the privilege of purchasing in the dearest market a stock of experience of its own. A by-law will therefore be submitted for the approval of the ratepayers to authorize the appropriation of \$60,000 for the purchase of an electric light plant. Possibly, as in the case of Brantford, the citizens will knock the scheme in the head. There is likewise the possibility, if not the probability, that this announced intention of the Council is simply designed to be used as a lever with which to bring pressure to bear to induce the Company, which is at present furnishing light to the city to lower its prices. In any case, we hope to see the scheme fail.

THE cold weather compels attention to the heating apparatus. Now the landlord complains of the large amount of coal required at the boiler, while the tenants complain of the small amount of heat at the radiator. The best designed and most perfectly constructed apparatus will not heat the building unless it be attended to. Coal is put in the furnace to be burned, but when it is put on top of the bridge wall or on the dead plate just inside the furnace door its burning will not do much good. The making of fire under a steam heating boiler requires experience and skill. The method of employing the man who will shovel the most coal for the least money is a mistaken one. It gives satisfaction to none of those concerned, unless the coal dealer. It will pay owners of steam heating plants to employ competent men and pay them according to results. As a rule it will be found cheaper to keep a large building warm all night as well as all day, than to let it cool down at night, and a skillful fireman can arrange his fire so that for six or eight hours after he has left it the boiler will still make vapor enough to keep the radiator warm.

THIS is the agreement which the city of Kingston requires any company to sign in return for the privilege of supplying an electric street car service:—"The company to pay to the city annually, the sum of \$200 per mile for single track and \$300 per mile for double track, for rent and keeping roadbed in repair, also the following percentages on gross receipts, viz.: When the total gross receipts reach \$15,000 per annum three per cent. on the total gross receipts till they reach \$20,000 per annum, and when they reach \$20,000 per annum four per cent. on the total gross receipts till they reach \$30,000 per annum, and when they reach \$30,000 per annum and upwards, six per cent. on the total gross receipts." An alderman after a perusal of these conditions

is said to have remarked that no one outside an asylum could be found willing to make an offer on such a basis. The present street car company claim to have the right under their charter to a perpetual use of the streets and refuse to change to electricity unless this right is recognized. On the other hand the city authorities contend that the law provides that a charter for electric street cars cannot extend beyond twenty years unless special legislation is obtained, in which case the period may be extended for another ten years only. No doubt a demand on the part of the citizens to be given the advantages of electric transit will before long force a settlement of the existing difficulties.

THE novel sight of a brigade of axe men engaged in chopping down poles erected by the Street Railway Company has lately been witnessed on the streets of Toronto. The City Engineer's action in ordering this to be done seems justifiable. The agreement which the Street Railway Company entered into with the city provides that the character of the construction and equipment of the system shall be subject to the approval of the City Engineer. The Company has lately acted as though its intention was to evade as far as possible compliance with this agreement. It has erected poles which would disgrace the streets of a backwoods village, and has accentuated their native ugliness by painting them a variety of colors. In many cases a brilliant red is the prevailing hue. Is it a matter of any wonder that the citizens of so respectable a city should object to the Company "painting the town red"? There seems to be manifest in the Company's dealings with the city as well as with private corporations and individuals a disregard for the rights of others as well as its own promises. To get possession of what it wants now under promise of remedying in the future what is below the standard, seems to be the policy pursued. Whatever the other party to the contract may do, the Company appears to have always in mind the fact that "possession is nine points of the law." If the company intends to continue to own and operate the road, it is making a huge mistake by antagonizing public favor, and even if, as is asserted, its intention is to dispose of the franchise, the fact of its being at loggerheads with everybody must tend to lower the value of the privilege in the eyes of intending purchasers. We refer to this matter because such conduct is calculated to increase the prejudice against which promoters of electric railways have had to contend, and thus to retard further development.

ONE important point in the operation of incandescent electric light from a central station, and which is a vital one when the cost of operating is taken into consideration, is that due care and diligence should be exercised at all times to see that the lamps on the circuit are never allowed to be strained with higher voltage than they are made to carry. We feel sure that we are right when we make the assertion that an increase of 5 per cent. in the voltage maintained for say 100 hours in the life of a lamp will shorten its life fully 25 per cent., which means that the lamp account is 25 per cent. more than it would have been had the lights been kept at or below their normal voltage. We are aware that it is sometimes a difficult matter to so arrange things that this can be done, but there can be no question that it will pay well to see that it is so arranged. This is a matter that is perhaps more difficult to adjust on alternating methods of supply than on straight current machines, as they are generally compound wound, and take care of variations in load with only an occasional hand adjustment, which is necessary almost continually in the general run of alternating dynamos at present in use in this country, while the load is fluctuating either in one or the other direction. There are alternating dynamos being manufactured for which the claim is made that they are self regulators in every sense of the word, but their use in Canada has been very limited owing to the fact that it was necessary to import them and pay heavy duties, bringing the price to such a pitch that it almost prohibited their use here. In this connection we are credibly informed that this state of affairs is about ended, and that at least two of the large manufacturing electrical companies in the Dominion are at present getting out plans and patterns for self-regulating alternating dynamos with compound windings, in the use of which potential wires and compensating devices will be things of the past.