

# MUNICIPAL DEPARTMENT

## MUNICIPAL ELECTRIC LIGHTING.

No. III.

By GEORGE WHITE-FRASER, A. AM. INST. ELEC. ENG.

THE choice of electrical and steam machinery should be made with reference (a) to its electrical and mechanical excellence, and (b) to its commercial excellence—its price. As regards the power qualification, it is quite safe to say that only thoroughly educated electrical and mechanical specialists are competent to judge between machine and machine, and the unprofessional person who takes upon himself to judge which is the better out of two specimens, is about as likely to be right as a chimney sweep is to be a judge of horseflesh. The development of the electrical science, however, has reached such a high point that, as a matter of fact, there really is not a great deal of difference between the various first-class makes of machinery, in point of technical excellence. There are to-day at least six quite distinct "systems" of electrical machinery and apparatus sold in Canada, between which a really impartial choice on purely electrical grounds, excluding all differences in price, could not be made; and the installation of any one of the six or seven, would give just as good results as would be obtained with any other one. The agents of the various manufacturing companies will, naturally, each one claim the undoubted superiority for his own system, and will be able to point out differences between his and another make, which he will refer to as attaining higher efficiency, and so on. First one will come along, and then another, and then a third, and each of them will praise his own and depreciate his rival's make, and the end will be that the purchaser is completely mixed up, and probably places himself unreservedly into the hands of that agent who possessed the highest eloquence, and the greatest personal magnetism, whether he represents one of the best makes or some new untried system. Now, this way of doing business is fair to nobody. The purchaser is very unlikely to know anything about electricity, therefore he is not a judge on electrical matters, and should not take the responsibility of a decision. The agent is certainly not a disinterested person, and so long as he sells his machinery his duty to his employers is done. The more machinery he sells, the more money he makes himself, and he certainly has not got that interest in keeping down the investment that the purchaser has who pays the money. It is not fair to the various manufacturing companies, because the exclusion of all other makes of machinery on the interested advice of a man whose income is derived from the commissions on the sale of one particular make, preclude all possibility of their

competing for the business on one common basis. It is not fair to the purchaser himself, because, by accepting a particular system on an agent's representation, he eliminates that competition that he should desire, and refuses to avail himself of the rivalry in the open market, whereby the price to himself would be lowered.

Now, it being simply a fact that there is no *best* electrical system, but several equally good from the technical standpoint, it follows that the system is best for the purchaser, that he can get *cheapest*, and the only way to find out which is cheapest is to invite tenders from all makes, instead of taking machinery because the man who sells it says it is the best. In inviting tenders in the open market, manufacturers should be placed on exactly the same footing, as to the size and quantity, &c., of goods required. Specifications should be very carefully made out by the purchaser's engineer, and all tenders required to conform strictly to them. When several proposals are made on one clear specification, then they can be referred to the same standard for comparison, and the decision takes consideration only of their financial clause, which must be more satisfactory to the average business man. It is a mistake to ask manufacturers to tender on their own specifications, i.e., to judge for themselves as to what is required, and tender for that. This method throws upon the purchaser, who probably is quite ignorant of technical matters, the responsibility of analyzing several proposals, made on quite different bases, embodying the ideas of several distinct engineers, and of reducing all this electrical and mechanical complexity to the only standard he can understand—that of price. Now, he is not competent to do this, so he does as before, just washes his hands of the whole worry, and gives the contract to that agent who has talked loudest and longest, or else blindly accepts the lowest tender, regardless of what is in it. This also is fair to no one. He is likely to get a second-rate make, because the more reputable companies, by doing better work, necessarily incur greater expense than the less solid concerns, and it is very unfair to reject a first class make of machinery, simply because some other company, by allowing less margin in their specification, bring their price a little lower. It is just as unfair and unwise, as it is to reject B's machinery and to select A's, because A says his own is good, and that B's is N. G. Hear what B has to say in the matter. The fair way, the most business-like way, and the best way, is for the purchaser to have specifications drawn up by a competent engineer, and to invite competition on that basis in the open market, choosing the tender with reference to its figure.

Mr. W. B. Dougherty has been appointed City Clerk of St. Thomas.

Mr Charles McMillan has been appointed City Clerk of Calgary, N. W. T.

The City Council of Victoria, B. C., will shortly appoint a city electrician. The salary will be about \$1,500 a year.

## SEWAGE DISPOSAL IN ONTARIO.

By R. W. THOMSON, B.A.Sc.

THE subject of sewage disposal is becoming of such universal interest that a short sketch of the influences at work and the results accomplished in this direction in our own province, may not be out of place here.

For years sanitarians in different parts of the the civilized world, more particularly in Europe and America, have been wrestling with the problem of "sewage disposal," as applied to the requirements of their particular country.

In a new country, where population is sparse, and the accumulated wealth is not sufficient to warrant expenditure in the extravagances and refinements, or even the conveniences, of life, the question of sewage disposal is not forced upon the the people; but as soon as the population has reached a point of development into towns and cities, so soon do the ordinary laws of health demand artificial means for the removal of the offensive products of civilization from the immediate vicinity of such town or city, and in such a way that its disposal shall not interfere with the rights or privileges of any other place, or even any individual.

In the case of seaport cities, the easiest and most economical method is, doubtless, to run the sewage directly to the water, trusting to the diluting and purifying power of this to render it harmless. Even in the case of inland cities situated on lakes or other large bodies of water, this method is often the most expedient, if not the most sanitary. However, so eminent an authority as Col. Waring, writing on subject, says: "So firmly do I believe it to be wrong to wash the organic wastes of our lives into the sea that I should hesitate even to recommend such a course, were it not for the greater wrong of keeping them in a putrescible form in the vicinity of dwellings."\*

In the cases mentioned the greatest sufferer from any nuisance that might arise, such as the fouling of its water front or the contamination of its water supply, would be the community itself, and so long as these unsanitary conditions did not become sufficiently marked as to be prejudicial to the health of the community, no exception should be taken to this method of disposal. But these are not the conditions that obtain in the majority of towns and cities in Ontario, which are situated on a river or other small stream, the pollution of which means the contamination of the water supply of, or the creating of a nuisance to, other places down the stream. This condition involves the question of the consideration of the rights of others, and to such an extent that we would expect to find legislation bearing on the matter. As long ago as 1888, the authority before quoted, writing in this connection, said: "The indications are clear that legislative control of this matter cannot long be delayed, and there is no more intricate or interesting problem now presented to the sanitarian than the correct solution of this great question of the future."

(To be Continued.)

\*"Sewerage and Land Drainage," by Waring.