

Contract or Day Labor.

There are two general plans by which a town may construct public works, viz., by contract or by day labor. In a majority of instances, probably a very large one, the contract method is adopted, but in quite a number the work is done under the general charge of the engineer or a special agent or committee who purchases material, employs labor, and looks after the work generally. If the work can be conducted without "fear or favor" by a good manager, experienced in this line of work, the latter method will probably be the more economical and give the more satisfactory results. Unfortunately, these conditions exist in few cities or towns, and the contract method is usually the cheaper one, and frequently gives better results than construction by home labor under foremen too often unskilled in municipal work. There may be cases where, even with and in spite of the existence of the above objections, construction directly by the town is preferable. For instance, the work may be of an uncertain nature, its details difficult to foresee and set forth in a contract; or it may be unusually hazardous, causing contractors to add 100 or even 200 per cent. to the estimated cost to balance the risk, which risk the town might think it better to assume itself. In some instances villages have undertaken work as a means of giving employment in unusually hard times to citizens, who would thus be enabled to pay part of their wages back to the treasury in taxes, and also relieve the poorhouse of a large number of possible inmates.

It may be sometimes advisable for the town to purchase the materials and contract for the labor of construction. In this way the quality of the materials is under the immediate control of the town. In the matter of cost there is usually very little difference one way or the other. It is an excellent plan for the town to furnish cement, sand, stone and pipe, and see that there is no unnecessary waste of these. There is then no temptation for the contractor to use defective materials nor too little.

Systems of waterworks and sewerage have been built by letting the contract for excavation to one party, and that for pipe-laying and brick-work, etc., to others, the material being purchased by the town. This is almost sure to work unfavorably and give rise to the greatest confusion, of responsibility if not of work.

Make It Pay.

When it is said that municipal ownership is a failure it only means that it failed under bad management. Orea, a little town in Sweden, owns and operates a nursery, which is said to yield a revenue of \$150,000 to the municipality—a sum sufficient to pay all its expenses, including free schools and a free system of telephone communication.

Gas for Light and Power.

Two kinds of gas are generally distributed for light, heat and power purposes. The older kind of gas, and the more commonly produced in small towns, is derived entirely from coal heated in retorts, nearly to the point of white heat. Gases distilled from coal in this way contains about one-fourth of the coal's total heating power. One ton of coal yields about 10,000 cubic feet of gas. Each ton yields beside the gas from 1200 to 1300 pounds of coke, 140 pounds of tar and 220 pounds of ammonia liquor. About 300 pounds of coke are required to heat retorts for the reduction of one ton of coal to gas, coke, tar and ammoniac liquor, leaving a net product of about 1000 pounds of coke per ton of coal used. This coke has a heating capacity per pound nearly equal to that of coal.

The other kind of gas referred to, water-gas, is made by forcing steam through a bed of incandescent fuel, the resultant gas being treated with hydrocarbonate vapors, which latter are usually obtained from petroleum. These vapors may be added until the water-gas has a power of illumination equal to or superior to the best coal gas. The water-gas process derives no valuable product from the coal except gas.

A gas-burner which consumes five cubic feet of gas per hour, is usually considered as giving about the same light as a 16-candle power incandescent electric lamp. Viewed from a fuel standpoint the place of gas in public supply is that of a heating agent. For purposes of power production gas has proven a more satisfactory agent than electricity, for while electricity requires the consumption of about 2.88 pounds of coal per horse power hour, at the motor shaft, gas engines only require about 1.96 of coal for an equal amount of energy. Most steam power plants under fifty horse power capacity, use as much as five and even ten pounds of coal per delivered horse power hour. Larger engines of course may reduce this to three and one-half pounds and even less.

Other factors than fuel, however, enter into the consideration of a most economical method of procuring power, labor, attendance and cost of plant in each case forming a large item. The fact that electric motors can be operated with a minimum of attendance makes it in many cases the cheapest power to employ. The cost of electricity may be much reduced, too, by obtaining it from water power.

Municipal Telephones.

Chicago is to have a municipal telephone system—an innovation in America. Its immediate use is to be confined to the police and fire department, but its projectors say that eventually it will serve as the nucleus of a great metropolitan system that is expected to become a rival to the old and new telephone companies.

Rates sufficiently low to make the telephone a cheap convenience are predicted by those who see a great future in the municipal plant. The infant telephone system is to be launched at once, when City Electrician Ellicott advertises for bids on 1,500 instruments. Later he will ask for prices on enough insulated wire to make the necessary connections. The conduits have been completed, so that with the purchase of the apparatus no delay will be met in installing the system.

An Assessment Commission.

Premier Ross announced to the legislature at its session just closed that he would appoint a commission composed of experts to consider carefully the question of municipal assessment. It is understood that this commission will examine the assessment laws of the other provinces and the neighboring republic. This is a move in the right direction. There are many anomalies in our present assessment law. It is now a law of shreds and patches, difficult to interpret and is not equitable in its application. Every member of the house seems to think The Assessment Act is a fair subject to experiment upon, and in the absence of anything else to do, starts in to put another patch on The Assessment Act.

The changing conditions in a new country, of course, call for changes in our laws to meet them, but hastily considered amendments to such an important law should be avoided. It is to be hoped that this commission will be able to construct an act that will be equitable, effectual and easily understood and applied.—*Essex Record.*

A Municipality Which Declines to Pay Its Way.

The extraordinary state of affairs in the municipality of Lambton (Sydney), Eng., is engaging attention of the courts. The Corporation has got into bad ways, and has declined to make a lighting rate in order to pay off some of its debts. As the three aldermen refused to act, the Supreme Court appointed three new aldermen. The government nominees were looked upon with so great disfavor that they in turn refused to levy the rate, and were accordingly imprisoned for contempt of court. It appears that the borough owes something like £12,000 to a bank for money spent in local improvements, of which the borough got all the benefit, but now refused to pay a shilling of the debt. The Chief Justice is of the opinion that there are no means available under the Municipalities Act to terminate so scandalous a state of affairs.

Judge McDougall, who investigated the charge made against Toronto firemen of interfering in municipal elections, thinks that the fire brigade should no longer be appointed by the City Council, but should be under the control of a board of commissioners similar to the board of police commissioners.