

MUNICIPAL DEPARTMENT

PUBLIC BATHS.

The town of Brookline, Mass., says Domestic Engineering, voted last week to enter upon a class of civic work which will in the future be looked upon as essential to the development of all well regulated municipalities—that is the construction of a public bath house. The one that the town of Brookline proposes to build is to be a brick structure, centrally located, containing bath tubs, rain baths and swimming tanks, thus providing for the cleanliness and health of the people, and at the same time affording means of recreation, and through teachers, instruction in swimming. As the town of Brookline does not border on the sea, or on a lake or pond, or even a brook that can be made available for this purpose, the water supply has to be procured from the street mains, and, if need be, heated to the proper temperature. For the present the swimming tank will be kept open but for six months out of the year, when the temperature can be easily maintained at the height needed for comfortable bathing; but we dare say that, as the town grows larger and the demands upon the bath house increase in number, it will be found desirable to maintain the swimming tank ready for use throughout the entire year.

Bathing houses of this description are considered necessary adjuncts in the English and Scotch cities. The city of Manchester, for example, has eight of these establishments, which are open daily all the year round, including $3\frac{1}{2}$ hours of Sunday during the warm season. The effort of the corporation in Manchester is to make these baths partly self-supporting, and, as a rule, they succeed in getting in fees about half of what is paid out in wages and for insurance, coal, gas, water, repairs and supplies. This income is secured by a small charge which is made for the use of these facilities. The official list of prices in Manchester is as follows:

First-class plunge, 4d; second-class plunge, 2d, except Wednesday, and on Wednesday, 1d; special warm baths, 8d, first-class warm bath, 4d, second class warm bath, 2d, except Wednesday, and on Wednesday, 1d; Turkish bath, 1s; Turkish baths on Thursday, for ladies only, 1s, vapor baths, first class, 8d; vapor baths, second-class, 6d.

There are parts of some of the bath buildings that are intended specially for women, and where this division is not made days are set apart when women are to have the entire use of these establishments. For persons under 15 years of age a first-class plunge is 2d, a second-class plunge 1d, each, though these tickets are only available up to 2 o'clock p.m. of each week day. These baths may, by arrangement, be used for 1d by school

children, bathing on Monday and Thursday mornings, on Tuesday and Friday mornings for $\frac{1}{2}$ d, and on Friday afternoon from 4:00 to 6:00, and Saturday morning from 9:00 to 12:00 at the $\frac{1}{2}$ d rate. The same days, times and rules apply to girls as to boys. Penny tickets in lots of not less than 250 are issued to girls' classes at the schools, admitting the members to the women's first-class plunge baths at such times as may be previously arranged with the superintendents of these baths, these to be used in numbers not less than twelve, the bathers to be accompanied by some adult person duly appointed to take charge of them. Yearly season tickets are issued to members of swimming clubs at a charge of 7s 6d each, such tickets to be used only on two specific days of the week. Members of swimming clubs not holding season tickets are admitted to the first-class plunge baths at a charge of 2d each on such evenings.

It is not probable that such an extensive bath system can be immediately introduced into this country, and as the scale of wages received for personal services is higher with us than it is in England, it is also probable that in certain departments of a bathing system, where manual labor counts for considerable, as, for example, in the Turkish bath, the scale of charges would need to be higher than that established at Manchester. But if our English cousins, who have carried the work of municipal development to a higher degree than we have in this country, consider that the establishment of baths is just as essential as the laying out of parks, we shall soon come to their way of thinking in this matter. The result of the action taken by Brookline will be watched by other municipalities with a great deal of interest.

SOME CONSIDERATIONS WHICH AFFECT THE ECONOMY OF HIGH- DUTY PUMPING ENGINES.

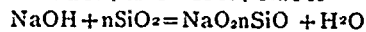
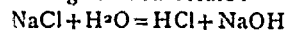
If a pumping engine is to run 24 hours a day, it is of much more importance that it should be economical in fuel than if the time of running is limited to a few hours, and a much larger amount of money can profitably be invested in securing the economical type of engine. In many of the smaller water-works stations the capacity of the engine selected is sufficiently great, so that in the first place provision may be made for future increase of supply, and in the second place that the necessary amount of pumping may be performed by working the engine only a few hours each day. These practical considerations must have the first place whether the type of engine selected is economical in fuel or wasteful; but the bearing which they have on the ultimate economy of the engine may be, and often is, lost sight of. In a case of this kind the interest on the money invested in an expensive though economical plant will very soon be sufficient to balance any saving of money due to the increased fuel economy, especially if account be also taken of the depreciation and repairs.

Take, for example, the case of a 2,000-gallon pumping engine where the cost

of fuel is \$5 per ton. If we suppose the water is pumped against a head of 265 ft., and the number of hours of work is six each day, the difference in the economy of fuel produced by a 60,000,000-gallon duty, which can be realized by an ordinary compound duplex condensing pump, and a duty of 90,000,000, which can be attained by some form of high-duty pump, would be, in round numbers, \$500 per year, and this is sufficient to pay an interest and depreciation charge at the rate of $12\frac{1}{2}$ per cent. on only \$4,000. Should the cost of the more economical engine exceed that of the low-duty engine to the extent of \$4,000, there would be no real economy secured unless the number of hours of pumping each day exceeded six. If the committees who are empowered to purchase pumping engines would consider this question in its true light it would not infrequently happen that the selection of an engine would fall to the less economical machine.

GLAZING OF SEWER-PIPE.

All sewer-pipes are glazed with salt, which is put into the fire holes and volatilizes, the vapors spreading through the kiln and uniting with the silica on the surface of the pipe to form a glazed coat. The following reaction occurs:



Glazing requires from one to two hours. Some manufacturers add manganese to the salt to produce a glaze of the required color. The chief sewer-pipe manufacturing region is in the Ohio valley, which produces the greatest quantity of pipe in the whole country.

In speaking of water waste Fire and Water gives the following official figures from experiments in Bangor, Me., showing how fast water will run through a pipe: With a pressure of 100 pounds there will run through an orifice an eighth of an inch in diameter 270 gallons per hour; through a quarter-inch aperture, 1,080 gallons an hour; through a half-inch, 4,320 gallons per hour, through a three-quarter-inch, 11,160, and through an inch, 17,000. This would be using water pretty fast, and illustrates how much water would run to waste in the course of a cold night if a tap were left running wide open.

The contractors for the Orangeville, Ont., waterworks, have struck a big under-surface freshet near the head of the conduit pipe. It was found necessary to arrange for a reservoir, and in excavating for that purpose to a depth of 13 feet a gravel bed was struck, from which flowed a regular underground river. The excavation is only 29 by 50, yet it is equal to a supply of 440,000 gallons daily, quite three times as much as the town needs. The ridge whence the Orangeville flow proceeds is about the highest point in this part of the province, the town being situated over 1,100 feet above Toronto.

Municipal Officers, Contractors and others are requested to mention the CONTRACT RECORD when corresponding with advertisers.