

tuminous coals, from which the volatile portions have been driven off, in the form of gas, by heat. It is measurably pure carbon, and of so porous a structure as to readily admit the passage of the atmospheric air through the mass.

The philosophy of blowing a fire is simply forcing a larger relative amount of oxygen into connection with the carbon than the ordinary draft would furnish. It acts, also, in a mechanical way, by driving off the products of combustion, the principal of which, carbonic acid gas, is as inimical to a clear fire as to animal life.

The proper management of a fire then, consists in furnishing oxygen in quantities sufficient to burn all the carbon. A good draft is necessary, and the coal should be fed upon the fire in small quantities. If a dense, black smoke is the result of replenishing the fire, some of the most valuable parts of the carbon are carried, unconsumed, up the chimney and entirely lost. The fire should be kept always bright, and it will, to a great extent, consume its own gases before they can escape. As in anthracite, so in bituminous coal, the remains of the fire are valuable. The unconsumed coal is more or less coked and will more readily ignite than the green coal. None of this should be wasted. * * * * *

It should always be remembered that the pure white or yellow flame is that which yields the heat. Dark smoke and blue gases are not the results sought for in burning fuel.—*Scientific American.*

HEALTH REPORT, CITY OF TORONTO, 1866.

We offer no apology for occupying space in the Journal with the Report of the Local Board of Health for this city, including the very valuable Report of Dr. Tempest, one of the Medical Health Officers to the Board. If there are, as Dr. Tempest says, strong reasons for believing that the cholera will visit us "in earnest next warm weather, and perhaps this winter to some extent," we cannot do better than to urge upon the citizens of this and other Canadian towns, the desirability of continuing, with even increased diligence, the sanitary precautions so laudably inaugurated, and, judging from this Report on the health of the city, with such encouraging success.

Sanitary Laws are but little understood by the general public, or even by our Municipal authorities; we therefore deem it our duty to place on record, in the pages of this Journal, any valuable papers or documents coming under our notice tending to show the extreme importance of these laws—especially to the working classes, whose physical and moral well-being, and even life itself, depend so much on their observance:—

Board of Health Report.

In the early part of the present year, the question of the public health of the city, in view, especially, of the expected advent of cholera, attracted a good deal of attention. At a meeting of medical men, called at that time, amongst other suggestions

and recommendations, was one for the appointing of a Medical Health Officer for the city. The Health By-law, No. 431, passed 27th April last, empowers the Council, on the recommendation of the Board of Health, to make such appointment; but while your Board hesitated to recommend that step, the proclamation of the Governor-General was issued, declaring to be in force, the Act 22 Vic., cap. 38, Con. Stat. Can., respecting the preservation of the public health; and the regulations of the Central Board of Health, requiring the appointment of such Medical Health Officer in all towns and cities having 8,000 of a population. The proclamation was issued on the 4th of May, to continue in force for six months or longer, as might be directed by the same authority. Acting under such authority the Local Board appointed Drs. Tempest and Rowell to be Medical Health Officers, and the duties of the office were at once commenced. The amount appropriated by the Council for the purposes of the Board was \$5,000, which amount could not be expected to be final, as the estimate presented on the 9th July, asked for \$5,865, exclusive of the sum required for street-cleaning, making drains and culverts, &c., which was estimated at \$2,000, of which the Board have spent only \$372 21, and under the item of medicines and food for the poor, hospital fees, and for destroying clothing, the expenditure was but \$69 70. A good deal of economy has been practised, and the only item in which the expenditure exceeds the estimate is that of scow-building and service, where the estimate of \$1,000 will be exceeded by \$66 30. It should be borne in mind, however, that the scows are in the best of order, and valued at \$522. The total expenditure of your Board already disbursed amounts to \$5,084, and a further appropriation of \$2,000 is required to carry on the winter operations that are urgently called for. Your Board further beg to report that the services of the Medical Health Officers, east and west, as well as the Health Inspector east, so far as the Board is concerned, ceased on the 6th instant.

N. DICKEY, *Chairman.*

Board Room, Nov. 17th, 1866.

DR. TEMPEST'S REPORT TO THE LOCAL BOARD OF HEALTH.

Appointed by you on the 12th May, to be Medical Health Officer for the city, and subsequently my duties under your orders being confined chiefly to the eastern half of the city, your Board has been, from time to time, furnished with such statements as the exigencies of the time required. But in now submitting a final report, it will be well to generalize and to indicate what is required in the future, rather than to go over former details. At that time it was conceded on all hands that the city needed a great deal of cleansing, public and private, but the machinery employed for such purpose was very imperfect.

Street and Lane Cleaning.

The Board of Health had just commenced a system of scavenging by means of carts, seven in number, one for each ward, the material which they collected being taken to the foot of Caroline street from the east half of the city, and from thence by scows to the goal farm on the Don, where it was unloaded by the prisoners, and used to man-