

tion is the only proper treatment for making sewage inoffensive to the senses or to health. Oxidation is due to an organized ferment; that is, to the work of living organisms. These bacteria find their food in the organic matter contained in sewage. They multiply in and consume it before it can putrefy, if it can be submitted to their action under favorable conditions.

This is taken as the key to the whole situation. In conformity to this view it is laid down as a first, though difficult, condition that sewage proper should be kept separate from storm water and the deposits swept from the surface of the streets. This is a marked departure from the usual rule, but is indicated as essential to perfect success. With this accomplished, the sewage may be made completely harmless by filtering it through successive layers of gravel, sand and loam; so that not only is there no annoyance to those living in the immediate neighborhood of the sewer outlet, but the resulting fluid drawn off from the bottom of the filter is as sweet and pure and free from living organisms as the best water supply can be.

Under the manner of treatment outlined a comparatively small area of land, of the proper kind, will take care of the refuse of a great city, at small expense and with a perfection of sanitation that no other known method approaches. The system requires that organic wastes be discharged at the sewer outlet in fresh condition, before putrefaction has set in. They are then conveyed immediately to the land selected for sewage disposal. The liquid first passes over and through a mass of broken stone, then over a fan-shaped surface of denser material, and then through still another earth filter. All this, of course, is in the open air, on a hillside. The matter is applied three times a day, and then the soil is allowed to rest two days, for the complete oxidation of the organic matter. Then it can be used again, and even improves with age. The tests made showed that four acres is adequate to take care of 200,000 gallons of sewage a day, or sufficient for 1,600 to 4,000 population, according to the perfection of the arrangements. The experiments in France, Germany and the United States uniformly appear to show that by this method the offensive organic portion of the sewage is completely destroyed. The results of the test and long experience in France are thus stated:

At Gennevilliers, where irrigation and filtration are combined and where the soil is gravelly, the sewage of Paris is made purer than the best drinking water of that city. Prosperity has been brought into that district, which was originally a poor one. Land that was formerly of trifling value now sells at \$2,000 or more per acre, and its rental value has been quadrupled. The population has increased by one-half, and general prosperity has taken the place of comparative penury. The health of the people is excellent, and even in 1882, when there was a cruel epidemic of typhoid fever in Paris, there was none here. The general mortality of Gennevilliers in 1865 was thirty-five per thousand. In 1876 it was twenty-five, and in 1881 only twenty-two. Measures have now been taken to extend the same system over other lands sufficient for the purification of the entire flow of the sewers of Paris, saved dur-

ing floods of the Seine, when there is no objection to its direct discharge therein.

In view of the fact that land described as desirable for the purpose is abundantly available in this locality, the suggestion that the system be carefully studied even to the extent of limited experiment does not seem amiss. The method seems to be as applicable to single houses as to a collection, and its utilization might lead to the banishment of the disease-breeding cesspool which is so prevalent. The system seems to be thoroughly scientific, and follows nature's own method and suggestion in the disposal of waste products. Its utility appears to be so well established as to lead to the conviction that it will be the system employed in all careful work for the future, and that the problem for disposing of sewage may be regarded as effectually solved.

THE CITY'S FINANCES.

It is a matter of congratulation to the city that its credit stands so high as indicated by the bids offered for the new issue of bonds. To pay a premium for the city's paper under the conditions which exist at present shows marked confidence on the part of capitalists in the ability of the municipality to meet its obligations as they fall due. In such a situation it should be the first care of the administration to see to it that the city's credit, either present or prospective, is not subjected to any process of impairment by reason of extravagance or of unnecessarily heavy burdens upon the taxpayers who ultimately have to furnish the cash.

The majority of the present City Council were elected on a reform platform. The verdict at the polls last November was notice from the people that they had had enough of reckless extravagance and misuse of municipal funds. The city then had reached the point of financial collapse under the powers it possessed, so relief was secured by extending its borrowing capacity; this proceeding being an exhibition of confidence that the new administration would not abuse its trust as the previous one had done and at the end of its term leave the city in a hopelessly insolvent condition. At the same time the sentiment of the voters was that public improvements be carried on with reasonable diligence, as the good of the citizens might require.

Less than five months has elapsed since the new administration took hold of affairs, and the manner of how these are being conducted is beginning to show for itself. The figures and arguments presented in the City Council at last evening's session will arouse in the minds of the taxpayers some perplexing questions, and if matters go on as they are it looks as though property owners will become convinced that things are becoming no better mighty fast. Take for instance the city and county building. The committee reports that there might be made there a temporary saving of \$20,000 as to improvements that were intended. This means that if the Council had not sent a special committee to look into this business there would have been \$20,000 spent on that

building for which there was no necessity at the present time.

It is urged that to stop work on the city and county building to save money would not be judicious in the present condition of the labor market. That is true; and it is equally a fact that there is no necessity for the municipality plunging deeply in debt to rush the building to completion in a few months when it might be consistently extended over a longer period. The same suggestion applies to the sewer work. But it is not the part that gives employment to local workmen that calls for serious objection. That which sends the money away when we need it so badly at home is the specially odious feature. In the City Council committee report, the item of \$20,000 was stated to be only that which would "be sent from the Territory, without any monetary benefit to the people." Then from the list of other expenses a small one may be selected by way of illustration of needless extravagance. That is the furniture item. The contract for the city's portion is \$28,000, every dollar of which goes out of the Territory when there is absolutely no need of it. One-tenth of this sum would have sufficed for present needs, and the remainder, with an amount larger still from the county, could have been disbursed for needed labor by home workmen. It is stated that this contract was made without the knowledge of some of the members of the Council, who would have opposed it had they known thereof.

It is a question whether all of the \$800,000 bond issue is to be sold at the present time, or whether three-fourths of the amount would suffice. As a reason for selling all it is urged that because of the reduced assessment this year if the sale is allowed to go over the full amount cannot be legally disposed of. The argument is not correct, but if it were its only force would be that the city must go into debt merely because it has the power to do so now, even though the indebtedness entails upon the taxpayers double or treble their present burden for the future. For, as a matter of fact, although the assessment has been reduced a little the rate of tax must be raised this year; and if the city borrows all it can taxes must be further heavily increased for years to come. Under the issue of bonds as at present proposed the interest alone will reach over \$125,000, or five-eighths of the city revenue. The balance remaining is insufficient to run the city for three months out of the year. The expenses for the other three-fourths of the time must come from an additional load upon the taxpayers. Is the present administration ready to assume the responsibility of throwing this great burden upon property owners and to meet the storm that will follow?

There is no desire to take a pessimistic view of the situation, but merely to present a few cold facts, with the reminder to the municipal fathers that the taxpayers have some rights in the premises that should be respected. Some of the members of the present Council labor earnestly for a judicious handling of municipal finances. It is to be hoped that a majority will be found in this position, though influences to secure an opposite result evidently are at work.