

social ladder? In an Irish market, the writer of these lines once objected to purchasing certain carrots because they were covered with the soil from which they had been extracted. "Dirt, yer hanner," said the salesman, "that's what keeps 'em fresh."—"You seem to think so yourself," was the instinctive reply. "Deed, yer hanner, and what ud we be washing for?" was the rejoinder. Wide experience comes to the conclusion that, in the case of a very large majority of the working classes, such ideas as that of the daily use of the bath, for example, are regarded either with detestation or with ridicule. A man who advocates proper ablution or proper ventilation, or any well-considered preservative of health, is regarded as either a nuisance or a fool. And even if people do not love dirt for its own sake, they love unventilated houses for the sake of warmth, and, as they think, of economy. Their noses are blunted by the constant presence of odours compared to which a trifling faint smell of sewer-gas would be a bouquet. That a smell, good or bad, should indicate the approach of death, they do not and will not believe. Help the sanitary reformer they will not; resist him tooth and nail they will. As matter of cost, as matter of custom, as matter of taste, as matter of skill,—invincible is the dislike to his interference.

To whom, then, can we look for aid? To the engineer? As far, no doubt, as the design and execution of the works necessary for that essential requisite of health, urban drainage, is concerned, it is no doubt a matter of engineering. We must bear in mind, however, that the subject is one of extreme delicacy, and cost. It is one in which opposite and inconsistent requisites have been, and often still are, loudly demanded. The subject, although it has been made matter of assiduous study by many earnest professional men, has never been so formally handed over to the investigation and the execution of engineers, as a profession, as to allow of the general determination of those primary principles and normal rules which the great difficulty of the inquiry pre-eminently requires. It is not, however, so much in that portion of the subject that relates to the sweetness and safety of the dwelling-house (which is the matter now under consideration), that doubts will be found to arise, as in the more distant portion of the work, where it becomes necessary to deal with accumulated sewage. Even as to this, though our progress is slow, yet there is a regular advance. The present year has enabled us to lay before our readers more than one instance of good work done in the direction of collecting facts as to positive and useful experience, and considerably limiting the field of doubt, by indicating the direction in which we have to look for further improvement. Thus, the idea that a large revenue can be obtained from sewage, as to which the wildest expectations have formerly been raised, is now almost entirely exploded. The sense of the danger that augments with collection, and that augments with delay, is becoming dominant with the engineer as well as with the physician. The plans, of which the name is legion, for making fringes by putting expensive chemical ingredients into collected sewage, in order to "fortify" or raise the agricultural value of the product, have one by one been tried, at unrestricted expense, and found wanting; as might, perhaps, have been anticipated if the conditions of the problem had been fairly and fully stated in the first instance. In some important questions, no doubt, the best solution may be yet in suspense. But these difficulties are annually becoming less; and, as we before remarked, it is in his character of rate-payer, not in that of occupier, that they principally affect the householder.

At the same time, it must be remembered that the engineer cannot act until he is duly called in. He cannot originate action. He is not responsible for the public health, or for instructing the public as to the conditions of health. Those conditions, indeed, should be either well known to him, or should be the subject of constant study. But that is the case precisely in the same way in which the doctrines of hydraulics, of the dynamic equivalent of heat, or any other branch of mechanical science, has to be known to him. If a public lecturer, or if educating private pupils, it is the business and duty of the professional man so far to become a teacher on these subjects. Otherwise he will best keep his shot for his own use, for discussion with his brother professional men. If his position and occupation be such as to lend weight to his abstract opinions, he cannot afford his time to ventilate them. If not, he possibly will not much advance the case he has at heart by appearing as a missionary. Thus whatever amount of good service we may expect, and rightly expect, from the civil engineer, we should only look in vain to that profession to enforce on the public intelligence and on the public conscience the lessons that are so seriously needed.

It is another thing with the medical man. The medical profession is the natural guardian of the public health. It is so *ex officio*. But it is more than that. A large acquaintance with many of the

brightest ornaments of the medical profession, in and out of the British isles, leads to the certain conviction that the preservation of the health, not only of his patients, but of his neighbours, townsmen, countrymen, is a motive that presses on the life of the doctor with unslumbering force. No offence need be taken by the members of any other class and calling if we attribute to our physicians and cultivated men of medical science and practice a degree of active and disinterested beneficence to which it is hard to find a parallel elsewhere. And it is to this that the appeal must now be made. It is this willing horse that we have to spur. We must call on our physicians and family doctors to do some violence to their professional or personal delicacy of feeling in the interest of the common weal. There is little doubt that, as a rule, the higher are the intellectual and professional qualifications of the physician, the less he is disposed to volunteer advice. When he is consulted, he must, no doubt, probe the case of his patient to the bottom. And so he does; and in exact proportion, as far as our own experience extends, to the real value of the time of a physician, measured by quarters of an hour, is his apparent utter disregard to the lapse of time while he is investigating the symptoms, or listening to the complaints of a patient. But here the limit is drawn. Into the circumstances and habits of that patient, unless as they bear directly on the very point of his complaint, the physician shuns to pry. At times, indeed,—all honour to them for the same,—men of large practice will put some delicate or circuitous questions as to the ability of a patient to pay golden fees without inconvenience; but solely with the view of remitting or reducing such fees in case of need. But if a man goes to consult a physician, say as to the state of his heart, the physician will not be likely to question him as to the condition of his scullery or his sink.

We very much fear that we shall have more and more royal, noble, and even medical victims to typhoid infection, unless the profession somewhat change their hand in this matter. It will be remembered that we are now more especially referring to the condition of connections with the sewers, and the escape into a house, or the water used to drink,—as at Marlborough House, the War Office, and the Admiralty Offices,—of that subtle and deadly gas which bears the germs of this disease, or, at least, sets up the abnormal action which ultimately takes that form. It is to be expected, no doubt, that if called in to a typhoid case, the doctor will make some inquiry; just as, if he were called in to a case of consumption, he would inquire as to the dry or wet condition of the subsoil, and the state of the ventilation. But we mean something more than this. What we wish to become the universal practice is, that when a medical man is consulted on any occasion, at his own house, or on visiting a patient, whatever be the illness, whatever the symptoms, he should make minute and searching inquiry as to the possible escape of sewer-gas, or the contamination of water; and, if he visit the patient, should not only inquire, but see for himself, what the state of things is. If one or two of the most eminent men would set the example, it would be universally followed. Those men who failed to take the trouble would by-and-by be stigmatised as heedless and unreliable practitioners. We freely admit that there would, at first, be much that would be disagreeable in the change of practice. The doctor must make up his mind to be stared at; to lose so much time in the course of the day; even to affront and, perhaps, lose patients. But what we have before said is enough to show how thoroughly we are convinced that these drawbacks would be freely borne by the majority of the profession, if once convinced that it was an unavoidable professional duty to make such searching inquiries. Nor do we for one moment doubt that in the additional success that would attend the practice of any man who adopted this course, there would very soon be found a compensation for all the discomfort. Many things that were really obscure to the physician himself would become clear to him if he made a point of overhauling the places in which his patients lived. Why do the children of such a family so often want the doctor? Why have they hoarseness, sore throats, catarrhs, want of appetite, red eyes, or a hundred other things? In the luxurious and well-appointed drawing-room to which the little things are brought down, when the doctor's carriage stops at the hall-door, the why may be very puzzling to the doctor himself. He knows, of course, what palliatives or restoratives to give, and he gives them. He prescribes, it may be, a wise course of regimen. He cures the little one for that week, and ten days after he is called in again.

But if, instead of a state visit to the drawing-room, the physician insists on seeing his patient, so to speak, *in situ*, how different will be the case. "I cannot allow Sir X. Z. to go into the nursery when it is in such confusion," says the fond mother. That is not Sir X. Z.'s view of the case. The more confusion the better, so that it results from the children making horses of