

thousand and one other roads are free and safe. With the increase of domestic comforts and conveniences the dangers to health from sewer gas have increased *pari passu*, and your practical experiences as surveyors and sanitary inspectors will bear me out in asserting that, as a rule, the mansion is in greater danger from sewer gas than the cottage, and that the greater the mansion the greater the danger.

With regard to sewage, out of sight, out of mind, has been too much the rule. So long as, by the mere lifting a handle, the disagreeable but necessary product of eating and drinking have been removed from sight, we have been satisfied, forgetful altogether of any secondary consequences. What necessarily follows, inevitable decomposition, has been quite overlooked, and all the plainest and simplest laws of pneumatics and hydrostatics ignored. We have turned the solids out of doors (not always quite that), and, being out of sight, have failed to realise the fact that each time we have done so we have taken their predecessors back again into our dwelling in a ten times more insidious and harmful form. We have been sending solids out and taking them back as gases, to be breathed and lived upon. We must have drains—we must also take water-closets as accepted facts, and such being the case, what is now required is to combine safety with convenience and even luxury. Can this be done? I answer emphatically yes! and I know you will forgive my saying that it can best be done by aid of the system and appliances I have the honour to-day of calling your attention to, I need not tell you skilled gentlemen that as drains are generally constructed the house must be the receptacle of much of the sewer gas generated in them. I need not point out how the water-closet is one entrance, the housemaid's slop pipe another, and the kitchen and skullery sinks others. In short that every entrance to a drain or to a sewer is also an exit for sewer gas, accelerated by the natural suction of the rarified atmosphere of the house and its rooms.

Attempts, legion in number, have been made to combat these evils by trapping, but in nine cases out of ten the remedy has been worse than the disease, and in the tenth case useless. The traps themselves have been ineffectual, as well as from their very nature cesspools or gas generators. The mischief caused by imperfect trapping has far exceeded that caused by sewer gas itself. It has been as though trap-makers thought that safety consisted in complication; at last the tyranny, so to speak, of the trappists proved too strong for further endurance, and a dead set was made at all but the simplest of traps. One set of reformers certainly effected an improvement in diminishing the number of traps and removing them to the outside of the house, this certainly was a slight improvement, but only a slight one, and the form of traps used by these gentlemen was peculiarly liable, on the slightest provocation, to be untrapped. This school of reformers endeavoured to break the pressure by carrying the drain pipes to the roof, and somehow or