repaired when necessary. The various pipes should not be boxed up, as is at present the custom. It frequently takes much longer to get at the pipes than it does to repair them. Where it is necessary that they be enclosed it should be with boards secured with buttons, or hinged, so that the occupant of a dwelling could in a few moments make an examination of the various pipes. Where the soil and drain pipes connect just inside the wall of the house, it should be done in such a manner that by unscrewing a plug or cap (see sketch on page 3) access may be had to the drain for the insertion of a rod for cleaning-out purposes. I am aware the foregoing plan of work is not new, but where it has been carried out it was not so much in consequence of the advantages of the plan—it was rather the result of accident than design. The advantages of the foregoing plan are, first, an ample fall for the pipes can always be had; second, the junction of waste pipes and drain, always a weak point, is above the floor and easy of access; third, should a chokage occur in drain or pipes they are easy of access, and it will not require the presence of several workmen in the house for a lengthened period of time, with the consequent trouble and expense, in order to find out a trifling defect; fourth, a leakage of either sewer gas or water will reveal itself more readily and its position be more easily ascertained; fifth, should it be necessary to open the drain it can be done outside the house; sixth, there will be less liability of derangement of pipes, as the waste pipes are made of a more durable material than the tile drains; that is, a material so constructed and put in that they are less liable to get out of order than the ordinary drain pipes, and they are usually fitted by skilled workmen, while the drains are generally laid by labor of a poor class.

I now come to my fifth head, which is, never to put a trap in the private drain if it can be avoided. My reason for laying down this rule is not because a trap so placed is a bad thing in itself, as that its being so placed is liable to cause evil effects that are less liable to occur if a trap is not put in. One of the principal evils likely to be caused by the presence of a trap is the choking of the drain and obstruction of ventilation, the trap being so constructed that it catches and retains all matter that is of a greater gravity than water, and consequently it is only a question of time when the trap will be filled up and the drain choked thereby. Where it is necessary that a trap be put in, it should always be placed where it can be seen and be easily cleaned, and there should always be provided an instrument for cleaning it. The cover of the trap should be made to fit so that no foul gases can escape, and on the cover should be in large, plain letters, in metal or other durable material, the words, "Trap, clean twice a year," as many persons in whose houses traps are placed are quite ignorant of the fact, and when aware of their existence do not know that they require any special attention. During the two years that have elapsed since I penned the foregoing remarks on traps, having, *of course, special reference to the plan and practice generally pursued in this city*, I have given the question close study and observation, and have no reason at present to change my views on the subject. I make this explanation, as I am aware traps are recommended by eminent authorities in our midst, as well as by sanitarians in foreign parts. If our system of laying private drains were changed, and the traps fitted in them in such a manner that their chokage should be immediately made known, by the various fixtures ceasing to work, as is the case when a chokage occurs in any of the traps situated under sinks, basins, &c., they might not be so objectionable: but as long as our drains are buried under the floors, out of sight and inaccessible, I say most emphatically, and after large experience and careful consideration, we are better without them.

I understand it is in contemplation to pass a by-law compelling the introduction of traps in all private drains. Should such a law be passed, the traps should be placed outside the houses, preferably on the street, and they should be in charge of the city authorities, whose duty it should be to keep them clean, and, at the same time a law should be made forbidding the burying of tile drains in the ground under floors, as is the universal custom at present. Should this be done, and the soil and waste pipes be kept above the floors as I recommend, one of my greatest objections to traps would be removed, but the important question of ventilating the private sewer would still remain, as the plan adopted in cities situate in milder climates is not suitable here. Given honest materials properly fitted, and the chances of injury from the omitting of traps in private drains is very small.

Chapter II.

Drainage.

By drainage I mean the carrying away of the water that accumulates in the earth, and where such accumulations are large, such as in swamps or low-lying lands, we invariably find disease prevails to a greater or less extent. In fact there are a number of complaints that are peculiar to such localities. That these complaints are caused by the accumulation of water is proved by the fact that removing such surplus water renders the localities, previously unhealthy, salubrious and fit to live in.

Now, in our city there are certain low-lying districts that were originally swamps or marshes, and notwithstanding that these localities have in many cases been effectually drained in the usual acceptance of the term (that is, they have had sewers put in), they are notoriously the unhealthy districts of our city, as the statistics of our health association will prove. Now, what is the reason of this? These localities have the usual allowance of sewers, yet they are more unhealthy than other districts a little removed from them. Is it not that the provision for draining the soil is not adequate? And although the original swamps are not to be seen, having been built over, still they actually exist, no provision having been made for their eradication, and consequently the parties so unfortunate as to be living over them have their vitality lowered