

Sanitary.

HOW TO POISON A HOUSE.

The following, which we extract from the *New York Times*, agrees so well with our own ideas on the subject, that we cannot refrain from publishing it:—

"Many remarkable and sudden outbreaks of disease and cases of sudden death have occurred during the past few years in houses in New York, where every sanitary circumstance seemed favorable. The favorite child of a wealthy family has been suddenly carried off by diphtheria, where the house was on the hill with the drainage apparently excellent, and the rooms were never crowded or overheated. Another, living in the most airy and elevated portion of the city, has suddenly been seized with that most mysterious and terrible of the 'foul air diseases,' spinal meningitis, and, under every care and precaution which wealth could supply, has died in great agony. Here a family, living in what might be called a palatial house, has been attacked with typhoid, and the children or other members have struggled for months with death. Virulent fevers have broken out in the finest houses, and some of the handsomest quarters of the city have not been exempt from pestilential diseases. Malaria has been everywhere, and Fifth avenue has felt it as well as the streets made over old water pools. It should be remembered, too, in a sanitary point of view, that the best parts of New York ought to be utterly exempt from these foul-air diseases. There is nothing 'providential' in the sense of mystery in these sudden deaths of the children of the rich. They are as much the effect of law as would be the drowning of these same children, if they had been put under the water. Modern science can as certainly reduce the death-rate from foul-air diseases as it can elevate the land or keep down the water on the banks of a given lake. A skillful modern prison and sanitary inspector has said that if he discovered a case of small-pox or diphtheria in his wards, he should at once charge himself with defect of administration.

"The best parts of a city cannot, of course, escape the diffusion of poisonous gases from the worst parts. Moreover, nuisances like our gas works and bone factories contribute their poison for miles on every wind. But each house in New York has a private and individual machine for diffusing the germs of diphtheria or the seeds of scarlet fever, sore throat, cholera infantum and typhoid. Almost every bed-room in the richest quarters of the city has a private connection with the sewer, in which are the infecta of typhoid patients, or the fermenting and disorganizing animal and vegetable matter, which either produce the seeds of disease, or furnish the fertile soil for these seeds to ripen in. The especial means of infection in many diseases is by sewer products. In the Croton water-bowl there is, of course, a drain-pipe connected with the main drain of the house. Ordinarily the water-traps keep the gases back. But some night, when the sleeper is most unprotected against such influences, and the vital energy is at the lowest, a flood from the sea or rain fills the sewers, or a strong wind blows through them. The gases are forced violently back. The water in the trap-bend forms no obstacle. They rush up through the chamber water-pipes, and diffuse themselves through the apartment. Had we a supernatural power of sight, we should undoubtedly see on such a night a cloud of microscopic sporules of scarlet fever, or currents of diphtheria germs, or showers of typhoid seeds scattering themselves through the house, and entering the systems of the unhappy sleepers. Such as are vigorous would throw them off, but with the weak and the young the seeds would take root, spring up and bear fearful fruit. The next day there would be a 'providential' case of malignant fever in the house, and in a few weeks a life would be extinguished, whose loss many coming years could not cause to be forgotten.

"The only prevention against such escapes of gases is to banish all water drains from the bedrooms, and to put escape ventilation pipes on the traps. We must return to the old bowl and pitcher. The pipes should all end in the bath-room; all water be drawn from there, and this room ventilated so as to permit no contamination of the house. The little extra trouble would be well repaid by the safeguard to life. Such an arrangement excludes all chamber bath-rooms. But safety is the first thing, convenience afterward."

THE SANITARY CONDITION OF TENEMENT HOUSES.

It is a very sweeping assertion to say, yet I do say without the least hesitation, and fully understanding all that it implies, that every tenement house in New York or elsewhere which was

built so long as five years ago ought to have its whole drainage system entirely removed and replaced by the very best work of which the modern art of plumbing is capable, arranged according to the very best plan which modern sanitary knowledge can devise. I date back five years as a saving clause. It is possible, but it certainly is not probable, that a few of the more modern tenement houses may be properly drained. The objection will naturally be raised that to compel the owners of these houses to undertake such costly work would be a hardship, if not an actual invasion of their private rights. The objection is of no value. Capitalists of the class under consideration depend for their income upon the necessities of ignorant, heedless, and helpless people,—of men, women, and children who hold their lives daily subject to the most imminent danger.

A great outcry is raised against the bad sewers of the older parts of all our cities, and they are bad enough to justify the outcry. At the same time, the houses connected with them get their bad effect only at arm's length, and they need not get it at all. As at present arranged, there is no doubt that they do receive an injurious amount of sewer gas from them. At the same time, there is just as little doubt that their own private drains, soil-pipes, and waste-pipes are active and constant producers of equally deleterious gases, sufficient to account for the unhealthy condition which is so often ascribed exclusively to the sewer in the street.

It would be a comparatively small matter so to disconnect every house from the sewer that it need be in no danger of an invasion of its gases. If only this were needed to remove the drain diseases which we know to be so rife, our problem would be a very simple one. Unfortunately what is needed is very much more serious than this, and must be very much more costly.

The health officers of every city know, or it is their duty to learn, and they may learn very easily, the relations existing between defective drains and waste-pipes and the ill-health of those who live in houses containing them. This knowledge must qualify them to pass a decree of absolute condemnation against every one of these wrongly arranged and badly constructed appliances. Trashy soil-pipes, imperfectly jointed, unventilated, unflushed, and inadequately supported, as they exist in so many of our tenement houses; corroded waste-pipes, half choked with foul accumulations and sagging in their course; traps so shallow, so badly placed, and so badly arranged that they are traps only to catch those who trust them, and open-mouthed sink-wastes, pouring their mephitic exhalations into the interior of close and closely-packed houses,—to say nothing of the worst possible water-closets in the worst possible condition,—these are the rule, not the exception, in nearly all our tenement houses. Even where inspection is rigid, and it is probably nowhere more so than in New York city, the standard by which plumbing is measured is by no means that of the best modern work; it is not even that of the "first-class" houses up-town. It should be, and if tenement houses are to be made fit residences for the poor, the overworked, and the careless, it must be something very much higher and better.—Colonel Waring, in the *Plumber*.

A WARNING TO PLUMBERS AND THEIR PATRONS.

Diphtheria, scarlet fever and pneumonia have been particularly active in certain parts of New York and Brooklyn during the past year, and the cause is criminal carelessness, official stupidity, and extraordinary recklessness on the part of property owners, and of builders and plumbers. Although the life of a person in ordinary circumstances is of as much value as the life of a millionaire, it is quite natural that the latter, dying in a costly mansion where money has been lavished on devices for protection and comfort, should attract the greater attention, especially if it were a reasonable inference that sewer-gas was in any degree a predisposing cause. Fortunately the death of the late Mr. Rockwell, in Brooklyn, was brought to notice of the authorities, and the result of an official investigation is most surprising.

When Mr. Rockwell's family began to die, and one after the other was carried to Greenwood, public attention was attracted to the several possible causes of this extraordinary fatality, but no one dreamed that the death-trap was the trap in the millionaire's costly but worse than useless plumbing.

The Sanitary Superintendent of Brooklyn examined the pipes and general plumbing, assisted by an expert. Among other things they found that some of the main lines of soil-pipe that are continued to the roof do double duty—carrying off the sewer-gas and acting as rain leaders. One of the pipes receives the water from 1,200 square feet, and during heavy rains is so filled with water as to empty every trap connected with it. The water-closet in the