

# **HEALTHY HOUSES**

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Healthy houses by Fleeming Jenkin

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**FLEEMING JENKIN**

**HEALTHY  
HOUSES**



# HEALTHY HOUSES

BY

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WITH ILLUSTRATIVE PLATES.



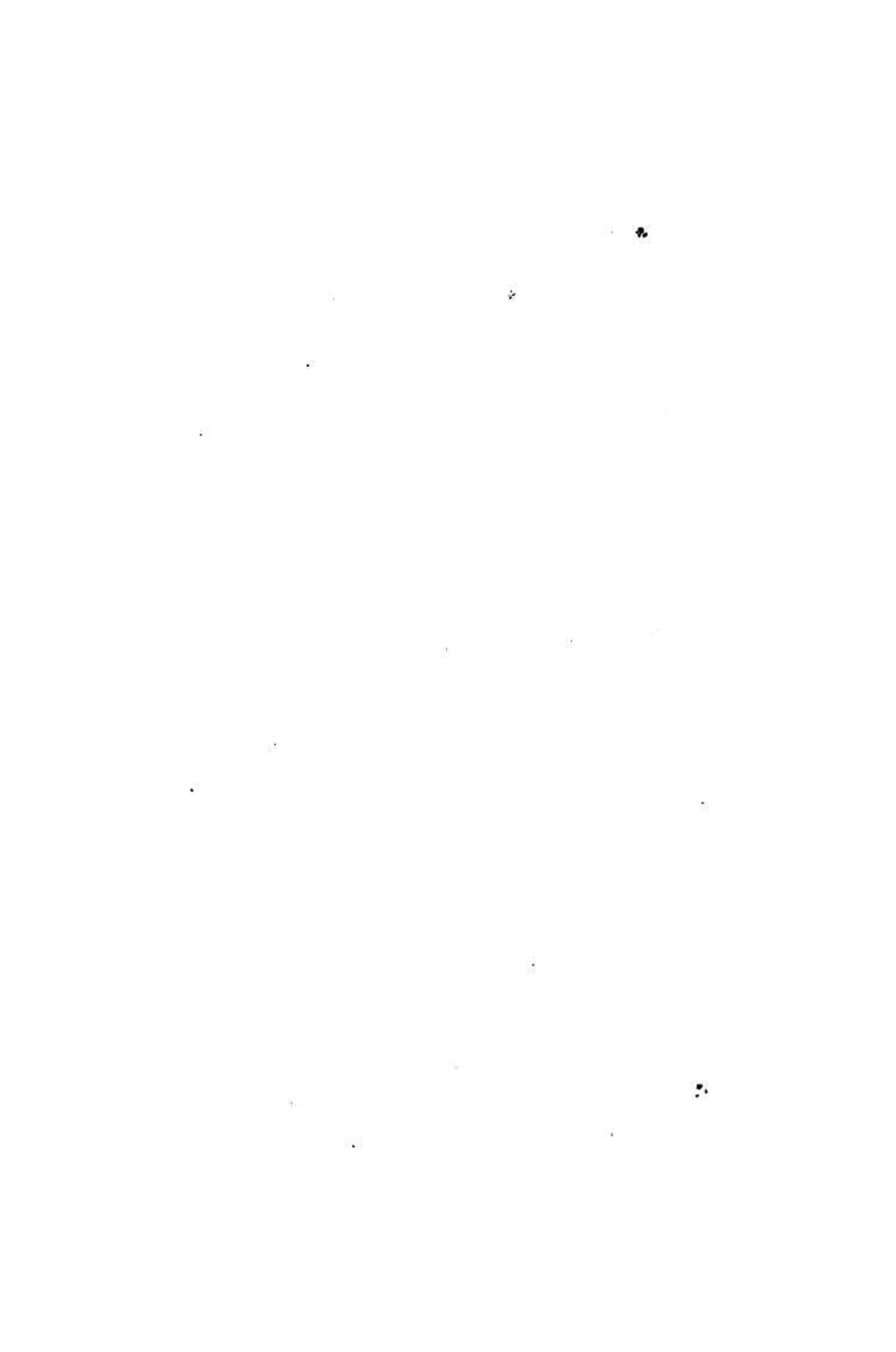
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## P R E F A C E.

THE three Lectures now published were delivered in Edinburgh early in the present year. Two of these were addressed to the members of the Philosophical Institution, and the third to the Medico-Chirurgical Society. The Lectures were spoken, not read, and the present version omits reference to several experiments which were employed to explain the principles laid down, but which would not, in a mere description, make the statements more intelligible. The Sanitary Protection Association is now established and in full work, whereas in the actual lectures my idea was publicly described for the first time, and was, of course, suggested with the hope, now happily realised, that the conception should be put to a practical test.

The third Lecture, addressed to the Medico-Chirurgical Society, has already been printed by them. It explains, in greater detail, the mode in which the Association is being worked. It is hoped that the reader will excuse a few repetitions which will be met

with in the text, and which arose from the fact that the lectures were delivered to different audiences.

The reader is also warned that these Lectures are not intended to present a complete treatise on any branch of Sanitation, but merely to explain, in a popular way, a few leading principles, and to describe the object and working of the Sanitary Protection Association.

FLEEMING JENKIN.



## LECTURE I.

### HEALTHY HOUSES.

HEALTHY houses!—each year brings a crop of pamphlets, patents, reports, and letters on this subject, but year after year old houses remain much as they were, and new houses are built with new as well as old defects. Still, some progress is being made. Many engineers, architects, and medical men are now competent to give sound advice. Towns are one by one making better regulations as to building, and science pronounces more and more distinctly what the conditions of health are and how they may be secured.

The tardiness which the public shows in applying these sound principles is by some attributed to apathy, and by others to ignorance. We find some writers, like Mr. Pridgin Teale of Leeds, doing their best to stir us to action by stories of death and disease due to neglect of the simplest precautions; and indeed writers of this class need never be grieved for lack of matter. Others, such as Mr. Eassie, write sanitary primers to instruct the ignorant public, believing that many people would, if they knew how, willingly make their houses healthy. The authors of these tracts are doing useful work. Still, with the best will in the world, we cannot always be thinking about drains, nor can every householder qualify himself for the functions of house-surveyor and medical officer of health; so the practice of the father of a family usually is to

let things alone until, under the alarm of an epidemic or of illness in his house, he decides that the drains must be looked into, and thereupon sends for a skilled or unskilled adviser, usually some local tradesman. Now, the local tradesman is not always competent to give sound advice. He is even sometimes very ignorant, and his workmen are sometimes careless, so that after calling in the plumber a man may always feel certain that he will have a considerable bill to pay, but can never feel certain that he has got his money's worth in safety.

Matters are somewhat mended when a sanitary engineer of repute is consulted, but the bill will be much larger. This gentleman feels bound to make the arrangements in the house quite perfect, so every old water-closet comes out to make way for the newest patent; every crooked pipe and drain is made straight; sheaves of ventilating pipes from drains shoot up on all sides; baths, wash-hand basins, cisterns, must all be displaced and replaced somewhere else in new forms and new materials. Holes are knocked in the walls and floors are taken up for shafts, openings, and pipes admitting air to the rooms. Hot-water pipes meander round the hall, and a furnace is built for them in the cellar. Old-fashioned grates are removed, and patent devices puffing hot air into the room appear in their stead. Manholes, gratings, traps, louvres, cowls, extractors, influx-valves, efflux-valves, all patented, multiply beyond count, and the process of putting all the old things out and the new things in so guts the house that joiners, plasterers, and paperers have a good time. When all is done the householder may think himself happy if on his return he does not find the arrangements such as to make him sigh for his old-fashioned comfortable danger.

Handing a good-sized family mansion over to a modern sanitary engineer not unfrequently means spending a couple of thousand pounds, and a man will subject himself and other people to considerable risk rather than spend two thousand pounds. Of course the writer does not mean to say that all

local tradesmen are incompetent, or that all sanitary engineers make extravagant recommendations. On the contrary, both classes of men have done and do good service, but distrust of them is widespread, and is not wholly unjustifiable. This distrust is increased by the fact that so many of our advisers are patentees. Sanitary appliances are all patented, and the most clamorous of our would-be leaders have but one cuckoo cry—"Come buy, come buy." When woes are remediless it is best to say nothing about them, and the writer, unless he had a cure to suggest, would never have enlarged on the disease. What has now been said is simply meant to show that conservatism in drains has a certain, not justification, but excuse. If you know that you will have to spend much money, and feel very uncertain as to the worth of what you will get, you are to be *excused* if you stop as you were; you are not *justified*, because, no doubt, it is your duty to make yourself so thoroughly conversant with this important subject as to be able at least to select competent advisers, and see that their advice is properly carried out. This is our duty, but it is to be feared we shall not do it without some pressure or assistance from others.

Let us consider very briefly what are the conditions of health in a house. They all depend on cleanliness; pure air, clean water, rapid removal of all refuse, perfect exclusion of all foul matters arising outside the house. But all dirt is not equally dangerous; some dirt is simply dirty, and thereby injurious to some extent; other dirt contains the germs of disease, and is not so much injurious as poisonous. Nothing perfectly clean can contain a germ of disease, and although this perfect cleanliness is an unattainable ideal, still it is an ideal after which we must strive. Our chief efforts must however be directed against those forms of dirt which are found by experience to contain disease-germs most frequently, and to propagate them most freely. We may assume that disease germs do not arise spontaneously. The assumption will lead to no conclusion which is dangerous, and explains much that