

liquids we drank. The house, thus arranged was a scene of perpetual *malaise* and ailing. The children were in London during the greater part of the year; but it was absolutely necessary to send them frequently away for change, to the seaside or into the country, where they soon exchanged their pale cheeks for rosy ones. Two deaths occurred among them, in both cases from maladies the origin of which it seemed impossible to trace. In the early part of last year another child suffered from dangerous and prolonged illness; and after that the germs of a disease which only too soon proved fatal were developed in my wife. The conviction was at last forced upon me that we were placed under unwholesome conditions of living; and I set myself to consider how these conditions might be changed. In the very nick of time I had the opportunity of acquiring possession of the Portland lease, so that, in popular phrase, it was "worth my while" to expend money upon improvements. The principal upon which I started was that the house, for the future, should be kept wholly free from superfluous contents, that all dirt-traps, whether mixed or movable, should be abolished, and that all surfaces should be rendered washable. The first thing was to send away cartloads of the varied materials, which have I already described as rubbish, the terms including all carpets, all window curtains, all the muslin blinds which people hang across the lower halves of bedroom windows, all books and pamphlets which were not really required, all anti-macassars and the like, everything that was broken, and everything that was useless. Having thus cleared the ground, I commenced the work of reform. The first thing, of course, was to see carefully to the drainage and water arrangements, to the ventilation of soil-pipes, the condition of cisterns, and so forth; but in these respects there was not much to be done. The next thing was to cover the old floors with thin oak parqueterie, both in living rooms and in bedrooms. This was done for me by Messrs. Howard at a very moderate charge—a fact which I am the more desirous to place on record because for one room I employed another workman and paid a larger sum for bad material and defective workmanship. The pattern is very simple and a more ornamental flooring could be laid at a higher price; but my sole object was to secure cleanliness and the absence of dirt-holding chinks. The parquet surface was not waxed, but French polished, so that it is not slippery. It is dusted or swept every day like the top of a table, and it is washed with a sponge and spirit of turpentine when dirt is deposited upon it. The turpentine not only cleans it effectually, but also affords the benefit of its fragrant and antiseptic odor for some hours after it had been used. Upon the parqueterie floors thus laid and maintained I have a few small Oriental rugs, each of which can be taken up and shaken in one hand. In the living rooms they are dispersed about in bedrooms they are placed as hearth-rugs only. In winter, lest the flooring should be cold to the feet on getting out of bed, I provided each child with warm slippers to be placed at the bedside, but the precaution turned out to be hardly required. In the bath-room, at the suggestion of Messrs. Howard, the parqueterie was of cork, than which nothing could be cleaner or more delightful. I need not enlarge upon the general cleanliness of the floor surfaces, especially under the beds and in corners, which by means of parqueterie may be easily maintained. The parqueterie extends over the landing places of the stairs; but on the stairs themselves carpets seem to be required, both as a matter of appearance and also to prevent noise. They are so arranged that they can be taken up and put down again by a housemaid in a very short period of time. The ends of each piece are fixed just under the nose of the corresponding stair, by rods which pass through rings sewn to the carpet, and which pass also through eyes screwed into the wood. Fortunately, the stairs are broken into short flights, so that each piece of carpet is a short length, and they can at all times be taken up and shaken without any extraneous help being required for the purpose. The next thing was to have every unfixd wardrobe, side board or other piece of heavy furniture placed upon castors, so that it might be easily moved by the house-maids, and the wall and skirting behind it kept free from dirt. At the same time the top of every wardrobe and cupboard was levelled by a cover of thin planking or of stretched canvas covered by brown paper so that all these surfaces could be wiped down frequently and kept perfectly clean. The painted woodwork generally was not only painted, but also varnished; and the wall papers were all varnished with the exception of one, which was painted. A large stable sponge or a wash-leather will cleanse all these surfaces by the aid of a little warm water; and the chief precaution which need be taken for protecting them is to see that no "soda" is allowed to enter the house. My servants use whiting for cleaning greasy plates, and they

know that to be caught with soda would involve immediate dismissal. The muslin blinds for the lower portions of windows have been replaced by blinds of stained glass, which can be taken down and washed in five minutes; and, in bedrooms, I have not seen my way to get rid of roller blinds. In the principal living rooms I have the windows entirely filled by stained glass of soft and harmonious colouring, and in these room blinds are not required. As for window curtains, I have not a single one in the house, and the woodwork of the windows is painted in warm colours and appropriately decorated. My lady friends, who predicted that rooms without curtains would look very "bare," now tell me that they are prepared unreservedly to retract their assertions.

Ventilation is provided for both in sitting-rooms and bedrooms by that old system of vertical tubes communicating directly with the outer air, to which attention was recalled some few years ago by Mr. Tobin. Outside the house the external portions of these tubes are bent vertically downwards for a few inches, a method by which the quantity of air-borne dirt which would otherwise enter through them is very materially diminished. In the dining-room the tubes are brought up through ornamental cylinders of Doulton ware resembling vases, but made for the purpose without bottoms, and placed upon wooden plinths of similar construction. In the bedrooms the surfaces of the tubes are painted the colour of the adjacent woodwork; and in some of the upper rooms I have been content with a simple board, about 5 in. high, covering the lower part of the window opening, and serving to direct the entering air upwards when the sash is raised to a somewhat smaller extent. With this board the bedroom windows may be left open all night, both rain and direct draught being excluded. For books, a convenient depository is afforded by a sort of passage, which connects the front and back rooms of the first, or drawing-room floor. When all these arrangements were completed, and when the house was so organized as to afford the fewest possible resting places for dirt, the time came for seeing that dirt was not permitted to accumulate. For this purpose the servants required a certain amount of education, but, before long, the possibility of maintaining cleanliness stimulated them to perseverance in the endeavour, and the reasonable satisfaction which they were enabled to feel in the results of their work led to increased care and pains in accomplishing it. As a matter of course, some supervision is required to guard against a gradual relapse into uncleanness, but this is not more than every householder must be prepared to bestow. As far as I can control the matter, my house contains absolutely nothing which is not required for actual use or for ornament, and all redundancy is mercilessly sacrificed.

My experiment is not yet one of very old standing; but, so far as it goes, I may sum up the results briefly. There has not been a case of even trivial indisposition in my family since the alterations were completed; and this Easter is the first vacation in which there has been nothing in the appearance of the children to point to the desirableness of sending them out of town. They look as healthy, and I believe they are as healthy, as I have been accustomed to see them on their return from the country. I am more than ever convinced that, over and above the sanitary errors for the discovery of which engineers are properly employed, we convert our homes into pest-houses by a style of furnishing which renders accumulations of filth not only likely, but positively inevitable.

I have said nothing about decoration, because that is a matter of taste, and from the standpoint of hygiene is not material. But cleanliness is not incompatible with beauty; and I venture to think that my house, notwithstanding the absence of curtains from the windows, will bear comparison, as regards being pleasant to the eye, with any other which has been fitted up within similar limits of expenditure. In conclusion, I should like to pay a grateful tribute to Mr. R. W. Edis, from whose Cantor lectures, I derived the suggestions which first led me to think of perfect cleanliness as the highest domestic virtue.

#### PHOTOGRAPHING MUSIC.

An English paper tells of a gentleman, who, on being asked to sing, produced from his pocket a little case, which contained his music, photographed down to the size of note paper. He had duplicate copies of each song, and handed one to the accompanist, singing from the other himself. The expedient saved all the bother of bringing a roll of music, unfolding it, collecting it again, and so forth. Photo-lithography suggests an excellent method of thus reducing the unwieldy size to which music publishers yet cling.