

thing go and get out of the fellow's clutches at once; but a little reflection showed him the folly of such a course. A wife's influence was brought to bear upon him too, for Mrs. Warren had considered of late, and had laid out a course for the future.

"We will be more economical, John," she said; "and if we only get rid again, I shall not be sorry that we have received this lesson. If we only put our beer money by it will be something."

"Turn teetotalers!" said John, scornfully. "Why not?" returned his wife; "what good has beer ever done you or me? The only quarrel we ever had was when you returned in a fuddled state from the 'Red Lion.' Look, too, at the money you have spent since you went to and fro about this unfortunate debt."

"Only a few shillings," urged John. "What would those shillings be to us now?" said Mrs. Warren: "quite sufficient to help us through the trouble of next week. And as a rule, look what we spend—your beer and mine comes to eight shillings per week; and how much is that in a year?"

John took a pencil and worked it out—a grand total of over twenty pounds.

"Twice the money we have borrowed," said Mrs. Warren.

"And just about the sum we shall have to pay," returned John, grimly. "Ah, Meg, if we had only thought of this before!"

How many like John have uttered this cry, "If they had thought! Why will not men think? Thousands are in the position of John Warren, and most of them go from bad to worse, and fall into utter ruin like Dick Newman.

John, however, was spared the worst—he pulled up just on the verge of the precipice, and the strike coming to an end, he went to work again full of his resolution to rid himself of the debt with that vile extortioner, Mr. Joshua Holding. Mrs. Warren united her efforts with his—each made a little sacrifice, and the steps they took were as follows:

John gave up his beer—his wife, of course, doing the same.

Mrs. Warren also made another sacrifice. She gave up a notion she had entertained of buying a new summer dress, and made the old one, with a little plain trimming, do for the season, and every penny they could scrape together went towards the debt.

It was astonishing how rapidly it diminished, and long before the forty weeks had expired John was ahead in his payment, so bent was he upon getting rid of the burden as soon as possible. This did not please Mr. Holding, who preferred playing with his fish upon the line, and he became positively rude to John at last; but John did not care—he was out of his power, and when the last instalment was paid he walked down the staircase of the "Red Lion," happier than he had ever been in his life before.

That night John sat down and made a fresh calculation, which showed to him that two-thirds of the money paid to settle his debt would in the ordinary course of his life, have been spent for beer. There was no mistake about it; he went over the figures again and again, and the result was always the same.

"I used to hear these things, Meg," he said to his wife, "and always laughed at them; but a man can't get over figures when they show him such facts as these. No more beer, Meg, and there will be no more debt."

"I am sure of it," said his wife.

If John had any doubts about it then, he has none now, for many years have rolled over his head since, and temperance has placed him in a very comfortable position. Twice since then has he passed through a strike without feeling the pressure of want or borrowing a penny of any man, and his conduct has so far established his character with his employer that he has been made a foreman, and receives far higher wages than he hoped for. His home is indeed a happy one—a striking contrast to the homes of hundreds around him.

This little story is written as a warning. The Poor Man's Friend Society, with Mr. Holding, the entire executive power, is no myth, but exists and flourishes after its fashion to this hour. The conduct of Mr. Holding is illegal, the interest he demands is outrageous, and many of the claims he advances would be at once ignored in a court of law; but working men are too busy as a rule to study the law, and they yield to Mr. Holding when he puts the pressure on. Hundreds have been ruined by this man and others like him, and hundreds are still struggling in the snare set by these awful fowlers. These extortioners exist on the need of others. If a rich man wants money, he can mortgage his property and get it at a reasonable rate; but with a poor man it is different; he has nothing but his little home, and it is difficult for him to raise money. Then the small money-lending vulture pounces down upon him, drains him week by week of small sums, realizing at times as much as four hundred per cent., and too often finishes the wretched affair by sending his victim to the workhouse.

Reader, think of the troubles of John Warren, and the ruin of Dick Newman; and if you are going in the direction of Mr. Holding, or are in his clutches, be wise in time, pull up as John did, and ask God to be your friend and helper in every time of need.



SOIL-DAMPNESS AS A CAUSE OF DISEASE.

BY J. W. PINKHAM, M. D.

There seems no longer to be any doubt that one of our most dreaded and fatal diseases is caused by soil-dampness. If a damp soil be not the cause, it is certainly one of the conditions most favorable to the development of pulmonary consumption. Two things have unquestionably been proved in this connection; first, that consumption is most prevalent on damp soils, and secondly, that the removal of this dampness by efficient sub-soil drainage causes a rapid diminution in the death-rate from consumption in localities where this improvement has been made. Let us look at some of the facts which have led to these conclusions.

In 1862 Dr. Bowditch, of Boston, the pioneer in these investigations, obtained statements from the resident physicians of 183 towns in Massachusetts, which led him to consider it as highly probable, though not absolutely proved, that soil-dampness held a causative relation to pulmonary consumption. He foreshadowed "the existence of a law having for its central idea that dampness of the soil in any locality is intimately connected, and probably as cause and effect, with the prevalence of consumption in that town or locality."

What Dr. Bowditch rendered probable by these investigations, Dr. Buchanan, of England, in his capacity of health inspector, seems to have rendered certain by his. He found that in towns where improvements had been made in this respect, the mortality from consumption had greatly decreased; and that the extent of the diminution corresponded to the extent of the drying of the subsoil.

"In Salisbury, for example, the death-rate from phthisis (consumption) had fallen 49 per cent.; in Ely 47; in Rugby 43; in Banbury 45; and in thirteen other towns the rate of diminution, though not so marked, was nevertheless noteworthy."

The following general conclusions are given by Dr. Buchanan as the result of his enquiry:

"First. Within the counties of Surrey, Kent and Sussex, there is, broadly speaking, less phthisis among populations living on pervious soils than among populations living on impervious soils.

"Second. Within the same counties there is less phthisis among populations living on high-lying pervious soils than among populations living on low-lying pervious soils.

"Third. Within the same counties there is less phthisis among populations living on sloping impervious soils than among populations living on flat impervious soils.

"Fourth. The connection between soil and phthisis has been established by this enquiry, first, by the existence of general agreement in phthisis mortality in districts that have common geological and topographical features of a nature to affect the water-holding quality of the soil; second, by the existence of general disagreement between districts that are differently circumstanced in regard of such features; and third, by the discovery of pretty regular concomitancy in the fluctuations of the two conditions, from much phthisis with much wetness of soil, to little phthisis with little wetness of soil.

"The whole of the foregoing conclusions combine into one: that wetness of soil is a cause of phthisis, to the people living upon it."

Some investigators believe that soil-dampness is the cause of many other diseases. Dr. Bell, in his report on the drainage of Kings Co., N. Y., expresses the opinion that not only consumption, but intermittent and remittent fevers, rheumatic affections, neuralgia, croup, quinsy, diphtheria, pneumonia, pleurisy, bronchitis, cerebro-spinal-meningitis, erysipelas and diarrhoeal diseases owe their origin in a great measure to this cause.

These considerations indicate the importance of living upon a dry soil, and make it obligatory upon any community whose territory is water-logged either wholly or in part, to drain such territory of its surplus water.

By surplus water is meant that which is not held in the soil by capillary attraction; all that water which would run away from a quantity of earth placed in a barrel with holes in the bottom. Such drainage can be easily accomplished. Unglazed tiling with joints carefully protected, laid at a depth of three or four feet, with proper inclination, and at suitable distances, will drain any soil, however wet,

in less than twenty-four hours. To ascertain whether a given locality requires draining, let an excavation be made to the depth of three feet, and if water is found in it twenty-four hours after the heaviest rain, the locality is unfit for human habitation.

The ill-effects of a damp soil are not confined to those immediately living upon it, but extend to a considerable distance; so that every inhabitant, whether his own location be wet or dry, should concern himself in this matter. It is pre-eminently a subject of general interest.

The evils resulting from a water-logged soil rapidly increase with an increasing population, and at the same time the difficulties of drainage become greatly increased when a place becomes thickly settled. In fact it is almost impossible in many cases, after grades are established, and permanent improvements made, to accomplish, even at great expense, what in the early history of a place could be done with very little.

It is also important that the water falling upon the roofs of houses should be promptly conducted away, and not allowed to saturate the soil around the foundations, and find its way into cellars.

Shade trees should be so disposed about dwellings as not to interfere with the rapid drying of the surface of the ground. Where trees and shrubbery are massed together indiscriminately, and cover large areas, they shut out the sun's rays, and offer such obstacles to the circulation of the air as to render them in many cases a source of unhealthfulness; especially is this the case when they are planted in close proximity to dwellings. Trees should be arranged in groups, with ample spaces between; and shrubs, instead of being planted under the trees, should also be arranged in groups by themselves, and should cover but a small proportion of the grounds.

Could those suggestions be acted on, there is no doubt that in many places the lists of mortality would be greatly decreased. It is evident, however, that the thorough drainage of a place must generally be accomplished as a public measure, and cannot be left to individual enterprise alone.

Laws should be passed rendering it obligatory on local authorities to carry into effect such general measures as will render it possible for every one to drain his land, and making it illegal to erect dwellings on water-logged territory. A system of thorough inspection should be instituted in every place, and houses constructed without due regard to sanitary considerations should be advertised as unhealthy.

It is very important for practical sanitary reformers to arouse public interest and create a public opinion. Without doing this, they will be impeded and perhaps thwarted at almost every step of their work by the selfishness of unenlightened private interest. But in the face of a public opinion such as knowledge of the facts is sure to develop, the most bigoted obstructionist will be unable to hold his ground, and most property owners will become active favorers of reform. In many communities it would serve an excellent purpose if a Health Association could be organized, and as many intelligent citizens as possible be induced to join it. Such an association might take as its work the diffusion of knowledge on this class of subjects, both among its own members and in the community at large; the securing of necessary legislation; and active co-operation through its officers with the public authorities in giving effect to such legislation. A great field of usefulness lies in this direction, and in a rapidly growing country like ours no time should be lost in attending to it.—*Christian Union*.

EPIDEMICS AND INFECTIO.—We all love our children as we love ourselves; it is, in fact, an instinct rather than a virtue, and if need be we would protect them at the sacrifice of our own lives. But let there be an epidemic in the town where we live, and heroic as our will may be with what discretion do we exercise it? In the first place, we shut the babies up from the free air lest a whiff of the sickness should enter at the window or door, and so we force them to breathe, to a large extent, a vitiated atmosphere that makes them the easier prey if attacked. Then we allow them to play with the cats and the long-haired dogs which have access everywhere, running up everybody's back yard at all hours, and prevented by nothing known from carrying the contagion of any disease in their convenient coats. In the meantime, if a stranger comes to the house, ignorant though we may be of what he is and where he came from, we never think of such a thing as hindering him from petting the children if he pleases. We keep no disinfectant in constant use after we know the epidemic exists; and finally, we let the children have as much as they wish of the companionship of the maids, who, by reason of their crowded church-going, are so very likely to gather the contagion in their garments. Look a moment at that last statement. Disease finds its favorite food in the region of poverty,

bad air, narrow quarters, and in the unhealthy blood made by poor and insufficient diet. It is universally acknowledged that such spots are the hotbed and propagating ground of everything of the sort. The unfortunate people whom the disease thus victimizes, frequently going through the trial without a physician, knowing nothing of fumigation or disinfection, and laughing to scorn what they happen to hear of it, seldom denying themselves the pleasure of free going and coming, can not but be the means of sadly spreading the evil from which they suffer. If there are half a dozen families in a house, and not unfrequently happens, and the sickness be in one of those families, none of the well members of that family would think of staying at home from church, and of course none of the members of the other five families who do not feel themselves to be affected; and what is there, then, to prohibit them from taking out with them and scattering through the congregation the germs of the disease, and the maid from innocently and ignorantly bringing them home in her shawl to the ruin of the child whom she also loves in common with the rest of the house, and whom she would do her utmost to save?—*Harper's Bazar*.

SPRING LANGUIOR.—"About this time," reads the prophetic mother's almanac, "expect languor, headache, complaints of long lessons, and lack of appetite." After a long cold winter the sudden coming of mild spring days, however much desired, brings a feeling of listless weariness, a feeling in which school-children, especially the school-girl, shares more largely than is generally supposed. She is not sick, but "so tired!" she can not be coaxed to give up her school, but the lessons are "hard!" she brings home a pile of books, but opens them in the evening with a weary sigh; she tries to write her composition, but "can not think!" she sits down to practice her music, but what was a pleasure to puzzle out two months ago has become a burden. The unthinking parent or teacher tells her that she does not try, that the lessons are neither harder nor longer than usual, and that if she would only put her mind upon them she would soon conquer them. She tries to try, and succeeds in getting a first-class headache with the lessons; and a weary look, painful to see, settles on her face. The simple truth is that the child is feeling the physical reaction so common to the season, only she is far more susceptible to such influences than her elders are, and her rapid growth probably intensifies her languid weariness. Ordinary duties seem hard to her, and extraordinary ones often are a dangerous strain upon body and mind. It is a pity that it is an almost universal custom to increase school tasks at this season of the year. Examinations and Commencements and public exhibitions of progress are in prospect, and pupils are expected to review everything they have studied during the school year, and finish the allotted course at all hazards. This is a matter for parents to guard. Instead of pressure, lessons should be lightened, more recreation allowed, and fresh air enjoyed *ad libitum*. Especially when oppressed by that nameless but well-understood languor and listlessness the child should not be driven, but helped over the difficult places, and by no means scolded for failures which manifestly result from physical causes. *Bazar*.

AN EXPERIMENT.—At the Congress of German Naturalists in Breslau in 1871, Siemen's system of cremation was for the first time tried in Germany by burning the body of an old woman. The corpse was obtained by Prof. Reclam from the Breslau Hospital, the authorities of which readily granted their permission, the deceased having left no relatives. As soon as the Catholic clergy, who, like the Protestants in Germany, are decidedly averse to cremation, heard of the burning, they delivered a protest to the Government. The Home Minister has now declared the clerical complaint well founded, condemned the conduct of the hospital administration, and laid down the rule "that whenever in the interests of science cremation was permitted, it was nevertheless forbidden to make the experiment on bodies without the consent of the deceased being obtained in his life-time, or the sanction of relations after death." The ashes of the old lady were delivered over to a foreign professor for examination; but the Municipal Council has ordered them to be returned in order that they may be buried in the churchyard belonging to the hospital.

A medical journal published in Belgium gives an instance of lead poisoning caused by hair preparations. A man about fifty years of age was under medical treatment for muscular rheumatism, having lost the use of both arms. The remedies used produced great relief. But a month afterward the patient's fingers were paralyzed, and he suffered from severe colic. The physician made many researches, and at length discovered that for fifteen years the man had been in the habit of using on his hair a preparation of sugar of lead and sulphur! The physician directed him to cease entirely the use of this mixture, and after a course of medical treatment the man wholly recovered.