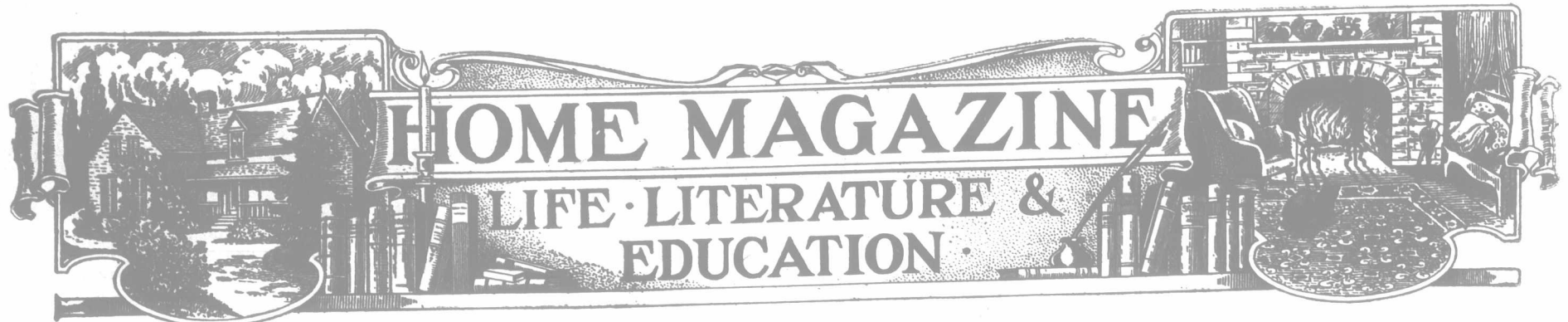




Home Sanitation

By T. A. Tefft.

A farmhouse of the forties, low, narrow in front and extending far back into the yard, stands just under the hill, shaded by a thick foliage of locusts. The windows are fitted with small old-fashioned panes of glass, showing from without the dark closely-drawn shades. The front door and windows are closed in winter to keep out the cold, and in summer to exclude the flies and to keep the room dark and cool. The half-story above discloses small windows which are shaded not only by the locusts and willows but by a picturesque clematis that twines over the surface of the outer wall. The soil about the house is damp and springy. Grass is driven from the doorway for want of sunlight, and mosses thrive upon the roof. Not far from the house, and on higher ground, is the barn, of the same age as the house, with a spacious barnyard, in the center of which, with the ground sloping toward it, is a large watering trough. The cows stand up to their knees in mud. A rim of sod, close up to the fence, is the only safe though circuitous path to the barn. From the big pen between the barn and the house comes the satisfied grunting of the pigs, which is mingled with the gobble of the turkeys and cackling of the hens as they roam over the yard. On the other side of the house is a half pond and half swamp, where the ducks dive their heads in deep and the frogs sing to the micro-organisms a soothing lullaby. At the corner of the house stands the old rain barrel—the joy of the mosquito and an offence to the nostrils during dry weather. Where the eaves did not feed the barrel they have emptied the water over the door yard from the moss-covered roof and the water has percolated the soil until the only product is moss and myrtle.

There is a brook running near, but before it joins the brimming river it a-chatters over stony rills to the pasture land and the edge of the meadow not far from this house of Farmer James. Here, when the cows are in pasture, they satisfy their thirst, and under the shade of a large tree they stand in the water in the heat of the day.

Its head waters are gathered from swampy land several miles away, where there is a strong suggestion of miasma. It is in the region of a tannery and waste products are poured into this swamp. As it travels it widens into a little stream, which here washes over a dairy farm, furnishing drinking water in the barnyard and the water with which the cans are washed. Now it receives the refuse from a large boarding house. It flows through the village as a reservoir for sewage, and is dammed below for a duck pond in summer and an ice pond in winter. It receives another lease of life and reaches the farm yard, innocent in appearance but full of poison and badly vitiated.

The outside closet is fifty feet from the house. The grass and weeds grow close to the narrow path in summer, and in winter the path fills with snow. The door swings hardly shut on its worn hinges and the snow or rain is drifted in. In rain or melted snow great drops of water fall from the eaves in front of the door. Bare and exposed, the screened outlines suggest decay.

At the side door for many years a woman has appeared several times to fling as far away from her as possible the contents of a dishpan. During these years she has done this daily washing on the porch and thrown the water on the same spot. Here the new stop on their way to meals, fill the basin with the refreshing cold water from the

well near by, bathe their hands and faces and add the contents of the basin to the dish-water and wash-water. Here the hired man, returning from the factory, washes the milk cans and empties the water. The bacterial crop of the dishpan, washtub and milk-can fight each other, thrive, go deeper and deeper, and finally rejoice in the moisture found near the well.

Every season there is an overflow of water in the undrained cellar, at which time the housekeeper picks her way over boards to the potato bin and apple barrel. When the inundation comes, barrel-hoops, washtubs, turnips, onions and apples are loosed from their resting places and float upon or sink beneath the surface of the water. Accidents happen to the milk, pork and vinegar. When the water subsides, it is spring-time, and the decaying cabbage, potatoes and onions lend their disagreeable odor to those of the gases escaping from the damp soil.

The clothes-line hangs across the yard in the rear of the house, and a woman pins a light shawl over her head, goes in a heated condition from the steaming washtub to the snowy pathway, and with the wet clothes stiffening in her fingers, hangs them on the line, to freeze harder before drying. The result on many occasions is a disagreeable cold, from which she hardly recovers before the next wash day.

The parlor, always closed, is musty and damp. The little sleeping room adjoining is used only for the occasional guest, who shivers between the sheets and is kept awake by the smell of must and disused bedding. The rooms are filled with bric-a-brac and heavy draperies, which serve as a lodging place for dust. An ingrain carpet covers the floor. It was bought in the earlier days when carpeting was of better quality and the colors are bright and the figure large. The housekeeper religiously stirs up the dust on the sweeping day, only removing it from its resting place of the week before to allow it to settle in new spots.

The children hug the sheet-iron heater during the evening with backs cold and faces warm, and dread going to their sleeping rooms, where the snow drifts in if the rooms are ventilated, and where they lie awake shivering until they "warm the bed," or sleep makes them forget they are cold.

There are many dark corners and dark closets where dangerous dirt has accumulated, and where mice and moth escape the eye of the most diligent housekeeper. The space underneath the kitchen sink is encased with boards, and it is difficult to clean around the pipes. Dirt and damp have full sway, and one is reminded of the old expression, "Where daylight cannot enter the doctor must."

Farmer James and his wife have lived in this home fifty years, amid varying prosperity and adversity. They have had seven children, two of whom died in infancy with cholera infantum and two at the age of sixteen and nineteen with fever. It has never occurred to the family that conditions in or out of the house could have caused these deaths, and in looking to the decree they thought themselves yielding to an all-wise Providence, resolutions of respect always were made when they said, "Whereas Providence has moved from this house, instead of, 'This is a bad house,' they said, 'This is a bad house.'"

When John came home from the city, he found a holiday vacation. The old man, as he called him, had been in the city for a long time, but as he came home he found the whole scene a different one. He was not the same as when he left, and he was not the same as when he came home. He was not the same as when he left, and he was not the same as when he came home. He was not the same as when he left, and he was not the same as when he came home.

pure water. While the farmer was a progressive man and his wife a thoughtful woman, they had accustomed themselves to surroundings which John determined to change for the sake of the health of the family.

Then, too, at several farmhouses in the neighborhood there were summer boarders who had asked numerous questions regarding the source of water, condition of soil and ventilation. These visitors had come from the city to regain health, and were thinking not so much about the danger from disease germs they had brought with them as the proper conditions in the country for getting rid of them. The neighborhood was thoroughly awakened upon the subject, and the excitement grew greater when it was learned that scarlet fever had broken out in a small village through which the much-loved brook found its way.

The father and son put their heads together and drew one plan after another without settling on any, before it occurred to them that it might be well to consult the women concerning this house, since they occupied it most of the time. These consultations prevented many mistakes, which only a practical housekeeper would notice.

John explained how impurities may be transmitted by the porosity of the soil, and how germs of disease may float in the air. The soil all these years had received neither tillage nor drainage. Organic matter—matter once living, now dead—had been falling upon it, loading it with impurities, while the house and its occupants had received the disease-laden gases made from constant putrefaction.

They decided that the site must be drained. They dug a trench on all sides of the house, from which water flowed towards it at a depth below the level of the cellar bottom. In this was laid a tile drain which led to the brook.

Then Mr. James said: "I wonder if that cellar is the cause of the fever the hired man has gone home with." Mr. James knew that the only way to reduce a death rate was to consider the conditions for health. He was haunted by an expression he had heard, "A damp cellar weaves shrouds for the upper chamber." He was wise enough to see that he could get no richer returns for his money than to secure healthful conditions at home.

They decided that the cellar should extend under the entire house, because a greater amount of ventilation and dryness could be secured, and because a larger one was needed for storing provisions. A closet was built for milk and butter. Bins were provided for storing the potatoes and vegetables. The walls were whitewashed; the ceiling was high. Windows easily opened were placed opposite each other. Another important addition was a cement floor, which proved very durable, since the cellar would be made dry by the outside drainage.

Probably the most difficult problem they had to consider was how to dispose of the slops without polluting the water supply. There were serious objections to a cesspool. However, the only alternative was to have a small pipe attached to the kitchen sink. This, with trap connection, united outside with a large venting pipe, which also received the wash water from a funnel on the back porch. This drain emptied into a cesspool a long distance from the house and on lower ground.

The well on this farm had always furnished cool and refreshing water, and although Farmer James had some misgivings, he was not willing to give up this pleasant habit when the water was so good. The water was so good that he was not willing to give up this pleasant habit when the water was so good. The water was so good that he was not willing to give up this pleasant habit when the water was so good.

company, and since the prices of farms have improved, a larger number of prospective buyers have come to inspect the farm; while peddlers, hired help and tramps are frequent visitors. There was therefore danger from typhoid and other disease germs finding their way to the drinking water. They had a dug well. The wash and dishwater were thrown near it, and John said there was danger of pollution from household and barn excreta.

They decided that a drilled well was the safest and cheapest of all. This would furnish the drinking water for the family, but it was too hard for household use. They planned a cistern under the steps, 6 ft. deep and 5 ft. wide, covered with two layers of plank. This was lined up to within a foot of the surface of the ground with water-lime cement, without the use of brick or stone, as the subsoil was hard and tenacious. An outlet was furnished near the surface by a pipe leading to the brook, and another pipe connected the cistern with a pump in the kitchen.

They decided to raise the roof and have the second story extend over the entire floor with higher ceilings, larger rooms and better windows; the chambers would thus be made healthful and comfortable in cold weather. Where windows could not be had in a closet they were to place transoms over the door, and where these were impracticable the closet could be so arranged that the door on being opened would let in the light from an opposite window. John knew each member of the family would appreciate the difference between the vigorous, healthful sleep in a well-aired, comfortable room, and that in a room where the air is close and stifling.

John discussed with his mother the dangers from dust which might be laden with bacteria. They decided that the draperies and bric-a-brac should be replaced by white wash curtains, and fewer, more simple ornaments. John explained also that the "bacteria of the dishcloth" might be a dangerous source of pollution. As a precaution against the accumulation of grease and the clogging of the pipes, Mrs. James now had in her sink a fine sieve through which the water was poured. This was cleaned often and the contents burned. Before emptying liquids into the sink, which might leave on the sides of the pipes a greasy deposit, she allowed them to stand until cool and removed from the surface the coating of grease, the cleanest of which was utilized for soap-making or other purposes. They planned to use small pipes in connection with this sink, because the velocity of the water thus became greater to wash out the dirt which otherwise would collect.

The doorway between the parlor and guest chamber was to be enlarged, and the little room added to the larger one as a cosy sitting-room, though having still possibilities as a guest chamber. The parlor wool carpet was sent to the weaver's to be converted into two rugs, one for the larger room and a smaller one for the cosy. The cracks of the floor were to be filled with putty and the floor painted a rich dark color. A great advantage would be gained in that the former hard sweeping and dusting would be reduced to the lesser work of placing the rug on a line outside, to have the dust whipped out and the floor wiped with moist cloths.

The old stoves were to be replaced by better ones, whose dampers would prevent the access of air. John showed how the stoves regulated by dampers in the pipes exhausted the oxygen and drove the burned air back into the room.

"The fireplace is a waste of heat and does not warm the rooms in very cold weather," Farmer James reasoned. "But