

# REPORT

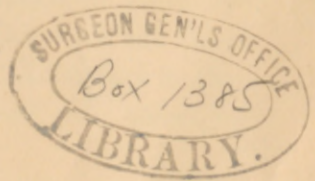
OF THE

# BOARD OF HEALTH

TO THE

CITIZENS OF BRIDGEWATER,

MARCH, 1881.



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BOSTON:

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1881.

[At its annual meeting, the town voted that this report be printed, and a copy thereof be placed in each family in town by the Selectmen.]

## REPORT.

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No prevalent sickness has visited us the past year, except a mild form of measles, which closed for a time one of the schools.

The rate of mortality has been less than twenty for each thousand of population. The previous year it was a fraction over fourteen per thousand. This increase of mortality has been mostly owing to still-births and the increased number of deaths of the aged.

To one member of the Board was committed the matter of the sanitary condition of the school-buildings; who reports some improvements greatly needed in grading, and that all the buildings are somewhat defective in the means of ventilation, effected in most of them only by open windows and doors; and that it is not easy to make ventilation satisfactory in those in present use, but that, when new ones take their places, due attention should be paid to this matter.

The town, last March, appropriated a hundred dollars, to be expended for a sanitary visitation of each house in town by an agent to be appointed by, and subject to, the direction of the Town Board of Health.

The Board appointed one of their own number to this work, who has, in some cases, been aided by the needed advice of another member of the Board, both together acting as a committee of the Board.

The Board has held several meetings to hear the reports of

their agent, and to enforce, by notices, reforms in certain cases, and to counsel and advise him.

Two hundred and forty-six houses have been visited by him, several of which were occupied by two families in each.

The examination included a record of from twenty to twenty-five facts regarding each house, which, in cases of sickness or of sale, may be of value for reference.

Seventy-seven notices have called attention to reforms needed; thirty of which were written, and copies preserved, and forty-seven were verbal, of which record was made.

In forty-seven houses (about one in five visited), reforms have been effected; and in twenty others reforms were promised, but delay for good cause has been allowed.

In twenty-nine cases reforms were advised, but not enforced. Sixty-three revisitations have been made to see that needed reforms *have been* made, or to enforce their being made; and in one instance only, has it been necessary to have served a legal notice. The cost of this to the town (including revisitations and record, writing and copying notices, carriage-hire, etc.), has been but fifty-two dollars, and has averaged about twenty-one cents per house. At the same rate, eighty-eight dollars would cover the cost of the visitation of the four hundred and fourteen remaining houses; but, as many of these are more scattered and more distant from the centre, more time and horse-hire would be needed. Perhaps a hundred and twenty-five dollars would be more than sufficient to complete the visitation.

The subjects attended to have been, sources of danger to wells from cesspools, privies, and the liquids of barn-cellars and hog-pens; defective drainage and protection from the gas of tight drains and cesspools and set-bowls; privies, not only endangering wells, but affecting the air of the house; wet, damp, or unventilated house-cellars; the disposition of garbage, etc.

The houses visited have been, the six residences on Central Square; all on Main Street from said square to High and Centre Streets; Oak Street from Main to High Street; Pearl Street; Broad Street from the square to High Street; Plymouth Street as far as, and including, George A. Copeland's and Brick-yard Lane; Spring and Hale Streets; all but one house in Summer Street from the square to, and including, the house of Ruel Chamberlain; Bedford Street as far as Spring Hill Avenue; Spring Hill Avenue and Cedar Street; School and Grove and Church Streets; South Street as far as, and including, the house of J. C. Alden; Pleasant Street as far as, and including, the house of Martin Swift; Mount Prospect and Union Streets.

In many cases the visiting agent has been heartily thanked for calling attention to dangers, and feels satisfied that it is a good work, and of great value to many families. While he has met with house and barn cellars which should entitle their owners to premiums from the Agricultural Society for their neat and healthful condition, he has oftener met with a deplorable ignorance or disregard of sources of danger.

In London, a city of 3,620,800 population, covering 122 square miles, the annual mortality by fever has, in the last nine years, been reduced more than one-third of what it was annually in the thirty previous years.

A commission of Parliament in 1842 made a report which produced a profound impression, and reforms followed. They reported "forty-three thousand *pauper* widows, a great majority of whose husbands had been destroyed by causes easily removable. Filth and bad ventilation cost England more lives annually than were lost by wounds and death in battle, during the bloodiest years of her history." "The *annual* loss of adult life, from causes which ought to be removed, was estimated at from

thirty to forty thousand." "Twenty thousand deaths annually in England from typhoid-fever are said to be clearly traceable to defective drainage and the poisoning of sewer-gas." Reports of physicians show that, in most cases of typhoid-fever, there has been found a close approximation of the well to cesspools and privies not water-tight, or to a broken drain-pipe.

In some places in our own State, the rate of mortality has been reduced one-half or more, by proper precautionary means. A pure water-supply with sewerage has shown a marked diminution of typhoid-fever in our own cities, as well as in those of England and Wales.

Vaults and privies may contaminate the well-water when it smells and tastes *sweet*, and appears *clear*, and yet analysis has shown it abounding in animal and vegetable material. This was the case at the factory at Williamstown, where much sickness appeared, and where the privies and houses were upon a hill above the well.

Where sight and smell *did* show pollution of a well, all the cases of typhoid-fever in one town, twelve in number, were of persons who had drank of its water within a short time previously.

In Scituate eight persons were taken with typhoid-fever in one house, and four neighbors who drank the same water, all within twenty-six days. The well was thirty feet from the privy-vault, and on lower ground, "and in the direction of the water-shed." The vault was full, but cleaned out after two members of the family became sick. The analysis of the water showed the presence of decaying matter, and of insect life.

In Fairhaven, Mass., in 1879, every member of a family had typhoid-fever. The discharges of the first one attacked had passed to the privy-vault. Every person drinking of the well-

water, eight in number (seven at the same time), had the fever within a period of twelve days of each other. A bushel of salt was put into the privy-vault, and another in six days, which soon affected the well one hundred feet distant, showing a communication between the two. "No other cases of typhoid-fever were known to have occurred in the vicinity during the summer," except those who nursed the sick and who drank none of this well-water.

Typhoid and scarlet fever in its worst form affected two families in one house in Palmer, Mass., where the drain was *open* in the cellar, and very offensive, and only ten feet distant from the well. The privy was on higher ground than and thirty feet from the well.

Obstructed drains in two houses in Arlington caused drain-gas to enter the houses. "In one there were five cases of diphtheria, and one death, and one severe case of scarlet-fever." In the other house three had scarlet-fever and diphtheria, and two of these cases were fatal.

Pardon us, therefore, if we seek to prevent drain-gas from entering your houses. An open outlet at a distance from the house, of a tight drain, is far safer than a tight drain-with either an obstructed outlet or discharging into a tight cesspool without vent, and no means used to prevent the drain-gas from entering the house.

We would not create needless alarm. Not all diseases are from the causes we mention; some are caused by contagion, and many from causes yet unknown. We seek to call attention to causes known and hitherto unconsidered, and to the safeguards against them.

In our own town one well has been impregnated by brine discharged one hundred feet distant into a cesspool not water-tight; and the contents of another cesspool, with an earth

bottom, found their way into a well, thirty-two feet distant, by means of a thin layer of clay ten feet below the surface, inclined toward and markedly polluting the well.

Well-brick are not a perfect guard against toads whose dead bodies pollute the water. A softened or defective brick, or spaces from careless laying, will admit them. The well should be carried much above the ground, and laid in water-cement to a distance of four feet below the surface; and if the outer surface, to the same distance below ground, and the bottom of the trench in which the workman stands, are likewise cemented, it will be better. We believe this will afford perfect protection against this source of pollution of our wells.

We would advise a further appropriation to complete the visitation of our houses, under the direction of your Board of Health, if they can procure the services of a suitable visitor. No harm can come from it, and, in many cases, such visits are greatly needed. A few days ago the State Board of Health notified us that it is probable that small-pox will be more or less prevalent in this State during the coming year; and they urge the vaccination of all who are unprotected, and that school committees should insist upon evidence of proper vaccination before admission to the public schools.

From — L. S. HOPKINS, M.D.,  
SAMUEL H. WORCESTER, M.D., } *Town*  
SPENCER LEONARD, } *Board of*  
 } *Health.*