

and to this day they have received no further attention.

The trenches for the pipes were opened by a party of five Italians whom a railroad friend found for me. These men boarded themselves, slept in the barn, and did the work for seventy-five cents a rod, the job costing me \$169.

Opening the sewer trenches cost a little more, for they were as deep as those for the water, and a little wider. Eight hundred feet of main sewer, a three-hundred-foot branch to the house, and short branches, from barns, pens, and farm-houses, made in all about fourteen hundred feet, which cost \$83 to open. The sewer ended in the stable yard back of the horse barn, in a ten-foot catch-basin near the manure pit. A few feet from this catch-basin was a second, and beyond this a third, all of the same size, with drain-pipes connecting them about two feet below the ground. These basins were closely covered at all times, and in winter they were protected from frost by a thick layer of coarse manure. They were placed near the site of the manure pit for convenience in cleaning, which had to be done every three months for the first one, once in six months for the second and rarely for the third; indeed, the water flowing from the third was always clear. This waste water was run through a drain-pipe diagonally across the northwest corner of the big orchard to an open ditch in the north lane. Opening this drain of forty rods cost \$30. Later