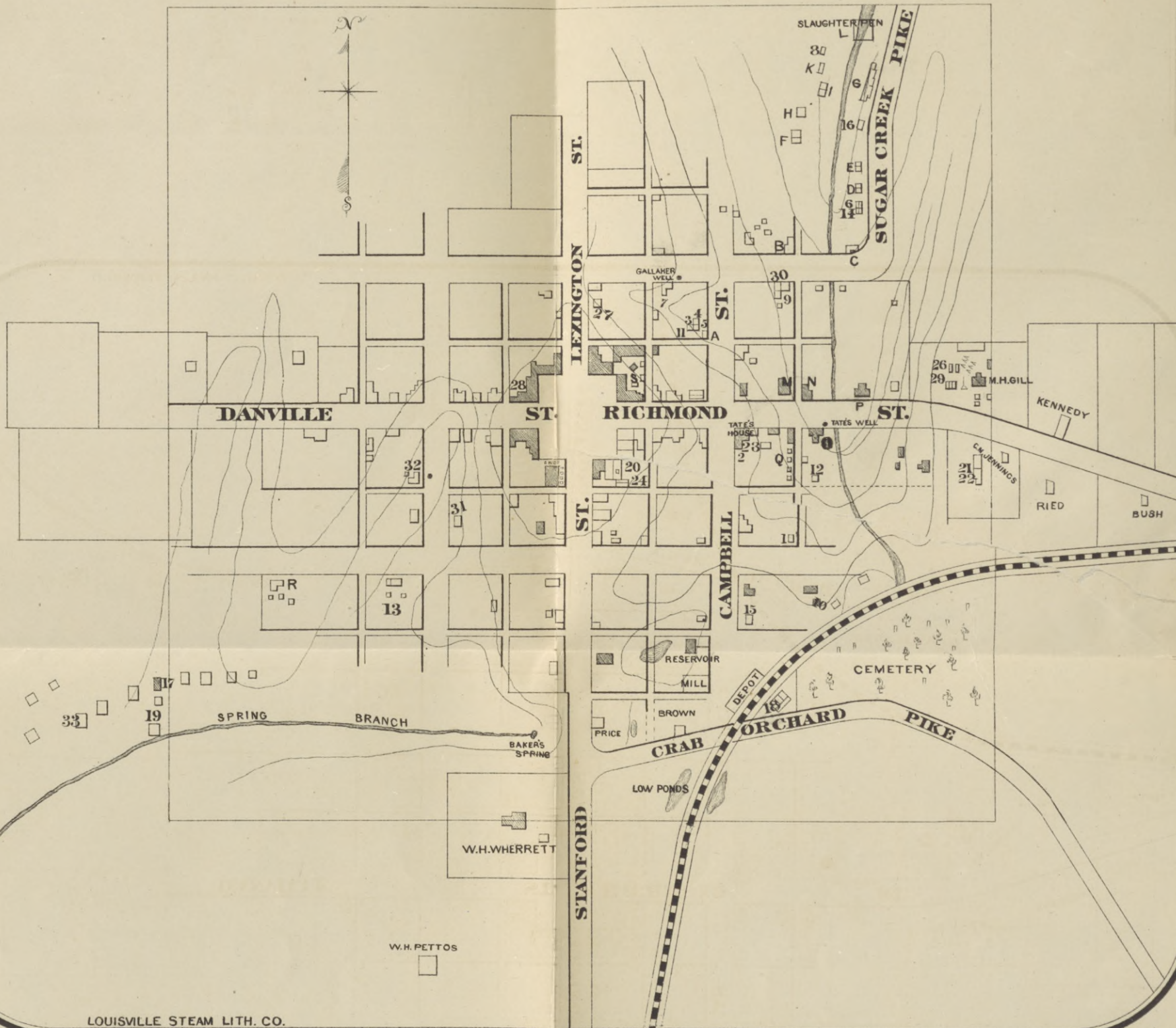


Berry (Wm) & Wilson (F.C)



MAP OF LANCASTER, KY.

SHOWING THE LOCATION OF EACH CASE OF CHOLERA
1873.



THE AMERICAN PRACTITIONER.

OCTOBER, 1873.

Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than any thing else.—RUSKIN.

Original Communications.



A HISTORY OF CHOLERA AT LANCASTER IN 1873.

BY WM. BERRY, M. D., AND F. C. WILSON, M. D.

The town of Lancaster is situated near the center of Garrard County, Ky., five or six hundred feet above the level of Louisville. The stone near the surface is gray limestone, covered with a tough clay soil, such as is usually found in the "Blue-grass Region" of the state. The ground upon which the place is built is undulating, the court-house square marking the highest point, from which the surface slopes in every direction, affording fine natural drainage. The water-supply is from several wells situated usually in low places, where at every rain they receive the washings from a large surface of ground. In the eastern portion of the town a small branch, commencing near the cemetery (see accompanying map), passes down through a low, marshy lot overgrown with tall grass, and crosses Richmond Street through a culvert, continuing in a direction parallel to the Sugar-creek Pike. On the bank of this branch where it crosses

Richmond Street is the Tate well. On either side of the ravine, through which the branch runs, a large number of shanties and hovels are built, usually upon low ground, no provision being made for ventilation beneath. These were occupied by negroes, and were generally kept in an exceedingly filthy condition. Upon the branch at the point marked *L* was placed a slaughter-pen, the stench from which could frequently be perceived in the center of the town. The sanitary condition of the town was found to be wretched, no effort having been made to clean the streets and alleys, nor had the privies and stables received proper attention.

The first deaths from cholera occurred on Friday, August 15th, and were those of Isham Jenkins, colored, and William Turner, white. Mr. Turner was the father-in-law of Mr. Bewley, who, coming from Jonesboro, Tenn., was taken sick on the way, and stopped at Mr. Tate's, marked 2 on the map. Here he was visited by Mr. Turner, who remained with him several days, and on starting home was taken violently ill when a few miles from town, and was carried to the house of a negro man, where he died of cholera the same day. Isham Jenkins, who had waited upon Mr. Bewley, carrying out the discharges, was also attacked with cholera, and died in ten or twelve hours. He was said to have eaten largely of green corn, and had stood for several hours in a pond washing a buggy.

Until the occurrence of these cases there was no suspicion that Mr. Bewley had cholera, though the physician attending him said that his attack so much resembled cholera that he would have considered it such had there been any cases in that section. From the description given us the discharges certainly very much resembled those of cholera; and though the patient seemed to be better for a few days, he fell into a typhoid condition, and finally died. No care was taken to disinfect the discharges, which were thrown out in the rear of the lot. This was upon the hillside immediately above

the Tate well, which, being located in the hollow, at each rain was nearly filled by the washings from privies, stables, hog-pens, and out-houses on every side. Isham Jenkins used water from this well. On Saturday there were no deaths, but on Sunday Fanny Bailey, colored, who lived with her mother in the shanty marked 3, was taken sick and died the same day of cholera. The house was low, damp, and in an exceedingly filthy condition. On the following Wednesday her mother also died of the disease. Both used water from the Tate well. There were no more deaths then until Tuesday, when Cary Burnside, who lived in the room adjoining the one occupied by the Baileys, was attacked and died in ten or twelve hours, as did also Susan Carr, who lived on the same square at Mr. Gallagher's, marked 7, and Martin Hickman, living in another room adjoining the Baileys. Sally Hogan, living further down the ravine at 6, was also taken sick and died the same day. Out of twenty persons occupying the four rooms in this group of houses four died of cholera, and several others were more or less affected with diarrhea. On Wednesday Mrs. Collier, living at 9, but who had left town the day before, was taken sick and died in twelve or fourteen hours; as did also Antony Smith, who lived further down the ravine, at the house marked 8. On Thursday there were five deaths. First, Sam Salter, who lived at 10, and used water from the Tate well, was taken sick and died, having been nursed by his wife Edna and sister Alice, the discharges being thrown into the privy used by the two women. Second, Frances Bailey, mother of Fanny Bailey, was taken sick and died in the same room, marked 11. Third, Bell Soper, living at 12, but who left town on Tuesday, died at Camp Nelson. Of the fifteen persons occupying this group of houses, marked Q, one died of cholera, and three others had violent vomiting and purging, but recovered. They all used water from the Tate well. Fourth, Anderson West, who lived on the other side of town, at 13, and who, so far as could be ascertained,

had not been near any cases, died after a short illness. Fifth, Wilson Logan, the husband of Sally Logan, who died at the house marked 6, was taken sick in the same room and died in twelve hours. The house containing three rooms, low and damp, but kept clean, was occupied by an aged couple with several children and grandchildren. Of the seven or eight persons two died of cholera; the two old people remained in the house suffering for several days with nausea, vomiting, and diarrhea, as did also the son of the woman who died, while two others left town and had no symptoms of cholera. On Friday Mrs. Temple, who lived at 15, and who had left town with her family, was taken sick and died. One son also had diarrhea, but recovered. On the same day Edna Salter, the wife of Sam Salter, who died on Wednesday, was taken sick at the house of her father, Moses Doty, and died that night. Moses Doty's house was on the other side of town, at 16, near a branch somewhat marshy. The discharges from Edna were thrown into the privy used in common by Moses Doty and his next neighbor, Ned Cecil. Alice Salter, who had also helped to nurse her brother Sam, went home to her husband's house, marked 17, where she was taken sick and died in twelve hours. The discharges were carefully disinfected and buried, and no other cases were developed in her family. On Saturday Mr. Brown, the miller, who boarded at 18, was attacked and died in ten hours. He was very dissipated, and had been drunk for a week before his attack. His discharges were disinfected with carbolic acid and buried. In the same house were four or five other persons, none of whom were affected except the landlady, Mrs. Bishop, who was sick for several days with nausea, diarrhea, and vomiting, but recovered under treatment.

Ned Cecil, who lived next to Moses Doty, and who had used the privy into which the discharges of Edna Salter had been thrown, was taken sick and died in the bank-building, marked 20. On the same day Hayden Spoonamoore, who had

worked at the bank-building, boarding at the hotel marked S, was taken sick in Lincoln County and died of cholera. On Saturday night, at 9 P. M., Rushbrook, a soldier, living at 21, in quarters clean and well policed, was taken with symptoms of cholera. He was treated with chloroform, camphor, and laudanum-mixture, together with the external application of heat and mustard poultices. At 5 A. M. his temperature was 97°; purging and vomiting excessive, with violent cramps in the muscles of trunk and limbs; surface cold and livid; skin shriveled; entire suppression of urine. We saw the case with Dr. Jackman and Dr. T. S. Warren, A. A. Surgeon U. S. A., and upon consultation it was agreed to give hypodermically one fortieth of a grain of atropia. By this the cramps were controlled, and the temperature rose to 99°, though there was still no secretion of urine. At 8 A. M. the surface again became livid and the breathing short, and he died at 8:30 A. M. His wife was seized at 2 A. M. with violent cramps, vomiting, and purging, the discharges being a rice-water fluid. At 5 A. M. her temperature was 96°; at 5:30 A. M. 95°, at which time there was given hypodermically one fortieth of a grain of atropia with one fourth of a grain of morphia. At 8 A. M. her temperature was 97°; pupils not dilated. At 9:30 A. M. all her symptoms were worse; temperature 95°; suppression of urine complete; gave one fiftieth of a grain of atropia. At 10 A. M. temperature 97°; at 10:45, 98¼°; at 11:15, 100°, but pulse weaker; lies quiet, with no vomiting or purging; still not a drop of urine in the bladder. Ordered ten drops tinct. digitalis to be given every two hours. At 12 M. temperature 101°; lies quiet, with no more vomiting or purging. At 1 P. M. her temperature was 103½°; breathing quick and superficial. In this condition she remained, gradually sinking until 2 P. M., when she died. Both these patients, living in a high, clean locality, used water from the Tate well.

On Monday Mrs. Sellers, who for several days nursed Mr. Bewley, was taken sick and died in the country of cholera.

On Wednesday Moses Doty, the father of Edna Salter, who died at his house, was taken sick at twelve o'clock at night with violent vomiting, purging, and cramps. He had been complaining for several days before, but had taken nothing. At 2 A. M., when we saw him first with Dr. S. L. Smith, his pulse could scarcely be felt. His temperature was 97° in axilla, under the tongue 96.6° , and in the rectum 102° . He had voided a short time before a very small quantity of urine. We gave hypodermically atropine and morphine. At 3:50 A. M. his temperature in axilla was 96.6° , in rectum 102° , and there had been no more vomiting or purging. At 4:30 A. M. temperature in axilla 98° , in rectum 102.8° ; at 5 A. M. temperature in axilla 100.4° . The catheter obtained only a few drops of urine. Without any more vomiting or purging he passed into a state of complete collapse and died at 9 A. M. On the evening of the same day Mrs. Finley, the daughter of Mr. Singleton, died in the country after an illness of twenty-four hours. She was attended by Drs. Frazee and Pettus, who pronounced it a well-marked case of cholera. The Singleton family lived in the house marked *P*, opposite to the Tate well, from which they obtained water. Underneath the house the ground was low and wet, so that it had to be drained. The children occupied the second story. On Tuesday the whole family, consisting of Mr. and Mrs. Singleton, with four children, moved four miles into the country to the house occupied by their married daughter, Mrs. Finley. This house stood upon the top of a high hill. Here Hunley Singleton, who had been troubled with diarrhea since the day before he left town, was taken sick on Monday, having violent vomiting, purging, and cramps, with great prostration and complete suppression of urine for forty-eight hours. He was seen by Drs. Hill, Pettus, Frazee, and Berry, who pronounced it a genuine case of cholera. Under treatment he recovered. At the same time his brother and sister were seized with choleraic symptoms, though in a milder form, both

recovering. The discharges at first were voided in the privy used by the family. Mrs. Finley and her husband remained only a few days, moving to a house about a mile off, where she died on Wednesday. She had not been to town for two or three weeks. Her husband on the next day was seized with nausea, cramp, and diarrhea, with every indication of impending cholera, but was promptly relieved by the hypodermic use of atropine.

On Friday Eugene Hasbrouch, a soldier, died after an illness of eleven and a half hours; and the same day another soldier, Herman Rathjen, was seized and died the next morning. The latter had been in close attendance upon the first two cases that died in camp, while the former had only passed through the room in which they died. In the case of Hasbrouch the temperature was as low as 96° , reaching before death as high as $102\frac{1}{2}^{\circ}$; while in the case of Rathjen the temperature was not at any period lower than 99° , and reached before death $103\frac{1}{2}^{\circ}$. In both cases the discharges were distinctly rice-water in character, the pulse scarcely to be felt, the skin livid and shriveled, and the urine completely suppressed. In both cases the atropine given hypodermically controlled the cramps, though it had no effect upon the action of the kidneys. We saw the cases in consultation with Drs. Warren and Smith.

French Smith, a feeble old negro man, who lived at 28, a law-office, died after an illness of forty-eight hours, his discharges and vomit being rice-water in character and very copious. He at first suffered severely with cramps, which were controlled by atropine. His temperature at one period was 96° . That morning we were called to see Reilly Burdett, two and a half years old, the child of a man who had nursed nearly all the cases, and who lived in a house, marked 27, which stood on a low, damp lot, much lower than the level of the street, which had been filled up in grading. His symptoms were those of well-marked cholera, and he died

the same night after an illness of twelve or fourteen hours. The discharges, received upon cloths, were at first merely washed out in water, which was thrown into the back yard. After we saw him care was taken to disinfect and bury them.

On the following Wednesday Ellen Lusk, the grandmother of the child, living on the other side of the town, at 30, but who during the sickness of little Reilly had been with him a great deal, was taken sick, having what appeared at first as a bilious diarrhea. Toward evening, however, the discharges and vomit became rice-water, and she sank rapidly, dying at about twelve o'clock that night. The temperature in this case was at no time below 98° . Atropia was used in sufficient doses to control the cramps, and opium, quinine, and calomel had been given by Dr. Jackman, but was rejected by the stomach. Upon consultation it was determined to resort to the transfusion of milk. Having to improvise an apparatus, the necessary preparations were not completed until 11:30 P. M., at which time the patient was pulseless, could only speak in a husky whisper, and was so weak as to be unable to raise her head. It being impossible, because of her dark color and the lateness of the hour, to find the cephalic vein, the median cephalic was exposed, the tube inserted, and milk fresh from the cow, and kept at the temperature of 100° , was slowly passed into the vein. In five minutes six or seven ounces had been transfused, when the pulse became moderately strong, the voice returned so that she could be heard in the adjoining room, and her strength was increased so that she partially raised up in bed and turned over on her side. The movement of the arm threw the tube out of the vein, when we determined to let her rest for an hour, and then procure more fresh milk with which to repeat the injection. At the end of half an hour she was found sinking rapidly, and before the preparations could be made she was dead. A pint and a half of milk had been prepared, but not more than six or seven ounces were thrown into the vein.

The next day Chany Dunn, a negro woman living diagonally across the street, at the house marked 32, and who had been sick with rheumatism for two months, was seized with diarrhea, which at first was of a bilious character. It soon developed into well-marked cholera, having the characteristic discharges, with severe cramps, cold surface, temperature reduced to $95\frac{1}{2}^{\circ}$, and suppression of urine. She died about twelve o'clock. Ellen Mason, living at the house marked 33, died the following morning after an illness of twenty-four hours. This was the last death that occurred. Mrs. Stevens, who lived at 30 in the same house with the family of Mr. Collier, and who had left town, died in the country on the previous Tuesday. Her husband also had a mild attack, but recovered.

The first case that recovered was that of William Arnold, the undertaker, living at the house marked *R*. He had for several days suffered with a diarrhea, which he had somewhat checked by a mixture of chloroform, camphor, and laudanum. On Sunday morning, when first called to see him, we found his temperature 97° , his pulse very weak; and he was excessively emaciated, though he had no nausea and no pain. His evacuations were frequent and very thin, but somewhat colored. Ordered to continue the mixture and take five grains of quinine every four or five hours. 8 P. M.: He has had five or six thin, watery actions since morning, and vomited freely once. Ordered to continue the mixture, adding fifteen drops of laudanum to each dose. 10 P. M.: Has had a severe cramping spell; temperature 95° ; thirst excessive; surface cold, clammy, and livid; skin of hands and feet shriveled. He can only speak in a whisper, and his kidneys have not acted since 5 P. M. We gave hypodermically one fortieth of a grain of atropine with one fourth of a grain of morphine, and in fifteen minutes he said he felt easy and comfortable. He was then ordered a mixture of white of egg, water, and whisky, to be given at frequent intervals. During the night he slept

a little, his bowels moving only once. The evacuations were copious and thin, like rice-water, but he had no vomiting or cramping. 8 A. M.: Temperature 97° ; pulse very feeble; says he feels a little better; still no urine secreted. We repeated the injection of atropine, omitting the morphine. 4 P. M.: Temperature 101° . He still has passed no urine. Ordered

R. Spts. nitrous ether, . . . \bar{z} j;
 Infusion digitalis, . . . \bar{z} vij.

M. S. One ounce every two or three hours.

Tuesday morning: His kidneys acted this morning; bowels moved only twice, the actions being better in consistence and color; temperature $98\frac{1}{2}^{\circ}$; appetite returning, and he feels better. He rapidly convalesced, and in two or three days was on the street.

On September 4th Frankie Burdett, the daughter of Ellen Lusk, who died on Friday, and the mother of Reilly Burdett, who died on Wednesday, was taken with a diarrhea, the passages not becoming watery until that night, when she had four or five, the last two very copious and resembling soap-suds. We saw her the next morning at 9 A. M. Her kidneys were very inactive, though she had passed a small quantity of urine. This, upon microscopic examination, disclosed tube casts. Her temperature was normal, her pulse moderately full, tongue flabby and coated, and she complained of a bitter taste in her mouth. She suffered some pain in the bowels, and had some nausea, but had not vomited. She complained of an intense itching in her hands and feet, the same thing having been noticed in the case of Ellen Lusk, her mother, and her child. She also complained of cramp in one leg. We gave hypodermically atropinè and morphine, and ordered five grains of quinine to be taken every four hours. 4 P. M.: She has been easy all day. Her bowels moved at 3 P. M. for the first time since morning, the evacuation being thin and rice-water in character, and in quantity sufficient to fill a large chamber. At 7 P. M. she had taken two doses of quinine;

temperature still normal; has no pain except an occasional cramp in the leg; no more urine secreted. The quinine producing some nausea, it was discontinued, and she was ordered to take ten grains of calomel every hour. At 10 P. M. she had taken only two doses of calomel. Her pulse was weaker, though the surface was warm, and she complained of some pain in the stomach. An evacuation just passed is large enough to half fill the chamber, and is distinctly rice-water in character. Ordered to continue calomel in same doses. At 1:30 A. M. she vomited freely, the matter thrown up being slightly tinged with bile. Her temperature was 100°, and she had passed no urine since the morning before. She has not complained of much pain, except an occasional cramp in the bowels and in one leg. Her knees are cold though her feet are warm. Her bowels have just moved, the action being copious, looking like soap-suds, a shade darker than the others. Gave atropine hypodermically, and ordered another dose of calomel to be given at 2:30 A. M. After taking the last dose she slept the rest of the night. On this morning at 7 A. M. her temperature is 98°; her pulse 68, and moderately strong; her kidneys have acted, her appetite has returned, and she feels much better. She recovered rapidly and was up in a few days.

Two other cases—those of a soldier by the name of Graff, and a negro woman living at the hotel marked *S*—were treated with atropine and calomel by Drs. Smith and Warren. They both had all the symptoms of genuine cholera, and both recovered.

There were seven well-marked cases in all that terminated in recovery. In one of these there was suppression of urine for forty-eight hours, and in several others for twenty-four hours. In six of the seven atropine was used hypodermically in doses sufficient to control the cramps and produce reaction in the temperature. Three of the cases were treated, in conjunction with atropine, by calomel, given in doses of ten

grains every hour, until the vomit and discharges showed the presence of bile. The calomel was then discontinued, and five grains of quinine were given every three or four hours. One was treated by atropine alone until reaction occurred, when it was followed by infusion of digitalis and sweet spirits of niter. Three of the cases were treated with calomel and opium in combination.

Living in the immediate neighborhood of the Tate well, at the houses marked *M, N, O, P*, were four families, two of whom used water from the well, while the other two did not. Of the two who used the water, in one family there were three cases, while in the other every person in the house was more or less affected with diarrhea. In the two families who did not use the water there was not even a case of diarrhea.

We prescribed for a large number of cases of simple diarrhea, frequently accompanied with nausea and vomiting. They were, as a rule, easily controlled by an opiate and astringent, followed by quinine; as almost invariably the tongue presented that peculiar appearance which is indicative of a malarial influence. In cases where the cramps were severe, and the surface already cold and clammy, atropine and morphine were at once administered hypodermically, usually affording prompt relief. By resorting early to treatment no doubt many cases were checked in the first stage.

To sum up: of the first twenty-three cases that occurred there was not a single recovery, while of the remaining seventeen well-marked cases ten ended fatally and seven recovered. Of the forty cases, twenty-five were black and fifteen white; twenty-one of the blacks dying, while four recovered; twelve of the whites dying, while three recovered. All of the cases were adults with the exception of one child aged two and a half years.