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Various Notes on Milk Nuisances, Schools, Work Permits, Vital Statistics

Milk inspection, prior to 1894, had almost wholly consisted of an attempt to prevent the sale of skimmed and watered milk. Prior to that time there had been spasmodic efforts to inspect cows, stables, and the handling of milk, but without much lasting effect in getting cows, stables and milkmen to clean up, so that the cow's flanks were not plastered with manure and the milk ~~and~~ yielding a lasting cowy odor. A clean cow and sanitary handling of milk was then rather exceptional than common. Milk was then six to eight cents per quart. Its dirt content was so great that even some years later it was determined by wide quantitative experiment, consisting of several thousand weighed, dried cotton discs, through which samples of milk had been filtered, that Rochester was then drinking at least a quarter of a ton of liquid cow manure in its milk each year and liked it; at least it did not protest against it. The dried discs were fastened to glass plates and filed in series so the milkmen and consumer might see them.

Milk was then 66% home drawn[Ⓢ] from little old stables, 10% on alleys in the rear of houses, on Clinton, Joseph, Hudson and other streets, where conditions were unbelievably bad, and whenever anything to eradicate the menace was attempted there was always the alderman, supervisor, ward or other boss to protest, usually with success. Then if 66% of the milk consumed was home drawn and 10% from alley stables, there was then more than 50% of the supply from one to ten miles from the city. No stated inspection of this milk supply source was even attempted prior to 1897-1898.

In 1894, the sanitary work of the inspectors was systematized and extended and records were kept of the work, so that intelligent and immediate answers might be made to questions at the counters and over the telephone.

The disposal of wastes was then much such a problem as it is today, only more so. Added to the spasmodic collection and removal of garbage to nearby farms, the piles of mixed ashes and wastes, much of it in back yards and alleys for the spring clean-up campaign, there was also the contents of 15,000 privy vaults, ^{promoters of sanitation} many of them full and some overflowing, reeking with nauseous odors, swarming with flies in warm weather, and then, too, the several thousand manure pits and piles ^{and} ^{of} horse ^{manure} ^{and} ^{cow} manure, also summerfly breeders, and a refuge for mice and rats the whole year round. Garbage and waste and ash removal, the disposal of feces and urine, from thousands of vaults, was a mixed problem--first, because most of our citizens had come to the city from the country, where wastes were mixed and thrown on the land and where the privy was a place of refuge and an object of reverence; and second, like good Americans, they had no respect for law, in which they were akin to the politician, who later, when garbage was collected and disposed of in a reduction plant, profited from the contract and about ruined the project.

Garbage, until 1905, was collected by hired teams under a superintendent and assistant superintendent, and carted to farmers in the adjacent country. Ashes were used to fill low places in which the city abounded, much of it later being used to make land for the large companies and others of the favored few. Manure was sold by the owners at a price of \$1.00 to \$2.00 per load. The contents of privy vaults were up to 1895, dumped into the river from the bridges at night. Later, when this practice was stopped, the "night soil"--so called because it was often handled at night--was carted by private contractors, who operated the business, to adjacent farm territory and it was there used as fertilizer for the growing of vegetables, some of the eaten raw. How we did---how we do like the flavor of dirt in our milk and vegetables!

Much of this work was stopped by the extension of water carriage toilets and abolition of vaults. Under Mr. Cutler's administration a garbage plant was erected after long struggle, but even he could not altogether prevent the politicians from violating contracts. In the garbage plant, to which was added a waste plant under the Van Zandt and Story administrations, the city had, after long years of struggle, a systematic plan for the collection and disposal of ashes, garbage and rubbish. With the extension of the sewer system, the abolition of vaults, the introduction of water closets, the building of sewage disposal plants, first under the Edgerton administration, Rochester has come to have a nearly ideal system of waste removal. Will it be permitted to extend its city owned water to wells under the Fairchild plan, "to Honeoye Lake" [Ⓢ] or will the politician sell us out to a private water company?

Renewal of the inspection of school buildings, begun in 1874, by the Board, ^{Health} under the direction of Dr. Charles Buckley, H.O., and allowed to lapse, it was again commenced and, after 1900, was made permanent and they needed it. Many of the school buildings were, up to 1900, dirty, badly cleaned, without adequate ventilation, and in at least a fifth of them there were either Smead & Northcote inside vaults or outside vaults. Many of these faults were removed or changed for the better under the School Board which took office in 1900 and their ^{under the militant leadership of} successors. *Arthur J. Brown*

Briefly these were some of the things accomplished in the early nineties.

In 1896, came a new administration with a Board and Mayor, in opposition, and the struggle as always not for health but for power. The Health Board, its budget curtailed, its small force much reduced, through a deadlock between Mayor and Common Council was not sufficiently

a only if a large City owned Metropolitan Water district is established

changed altogether to wreck the work accomplished and in process of extension. Economy was used as the master word, then as now, only long enough to try and turn out the adherents of one party and endeavor to replace them with those of another political complexion. But no group was immaculate; the spots were but covered with the dust raised by petty political polemics, while the needed work suffered.

What was sought to be done in the trying times after 1900? Chiefly it was this:

In 1900, to transfer garbage collection and disposal from the Health Bureau to the Department of public works, where it belongs and where it has found a home since 1900, and where it has been well done in spite of the politicians.

To try by address and public opinion to change people's minds about filth and disease. With abundant safe water, with good sewage and waste disposal, there is little relation between filth and disease.

To extend scientific, laboratory, hospital and inspectional work for the prevention of communicable disease, beginning with smallpox, diphtheria and typhoid and extending to the really larger work of the prevention^{and} treatment of venereal diseases, chiefly syphilis.

To abolish useless disinfection and to popularize the value and extend the use of soap and water.

To get an adequate housing law, which we didn't get and haven't yet got. We have but a building law made by builders and politicians, in which it is permitted, in most places, to build on 75% of an interior and 90% of a corner lot, just as it is in New York City.

To systematize work and records in the Health Office.

To provide stated milk inspection from cow to consumer and to establish summer welfare stations (we tried to get them all the year round) so as to acquaint mothers with some of the essentials of baby care and feeding

and the prevention of disease.

To help get better sanitary conditions in school buildings and to provide for medical school inspection, and nursing. *amplified*

To provide for a hospital, which we did, and then, after having founded a Municipal Hospital under University direction, we were saddled with the unnecessary debt of a tuberculosis sanatorium and a County *Hospital* calamity.

From 1896 to 1900, when the White Charter became operative, with a Mayor, single headed commissioners of Public Safety--including Police, Fire, Health--and Public Works--Water, Sewer, Streets, Collections of Wastes, were years marked by political broils in the Health Board, small force and small budget,--33 cents per capita*--exclusive of garbage collection. Work in the Health office was both hard and long. There was no deputy health officer because the Mayor blocked such an appointment (until 1904-Mr. Cutler) unless the bacteriologist were dismissed and the Health officer would do the work. There were during this time several spasmodic outbreaks of smallpox, a largely unvaccinated population(as Sp.epidemic of 1901-1902)and because of the division of responsibility between the Health Board and School Board no stated vaccination of school children, so both then and later the people suffered.

But, notwithstanding, the division and dissension in the Board, the small budget and reduced force, some progress was made, in that we did not go backward. One of the things that was kept to the fore was our, then and now, wretched housing, our lack, then(not now)of decent school buildings. A brief tenement house survey was made --1901--and the results published in a New York paper, which helped to awake Rochester people to the need of better houses and cheap

• It is now \$1.00 ¹--many other cities having \$2.00.

transportation, though to this day they have neither and this city is still without an adequate housing law.

Private 1900 A brief sanitary survey of school buildings was made, including a special report of air movement by anemometer, heat, light, moisture, retiring conveniences, cleaning, crowding, and the glaring defects reported to the old Health Board and by them to the old School Board, but with little effect and small remedy. Hundreds of children were housed in temporary buildings adjacent to the schools. A part of the campaign in the 1900, election was made on this basis and Clubb's Moving Cartoons, in the Rochester Herald. It was shown by a few bacterial plates exhibited in the school rooms before and after sweeping and dusting with and without feather dusters, properly and improperly, that it was possible properly to clean the room at no greater expense of time and trouble than to do the work badly. It was also shown that window boards were cheap and desirable as ventilators, but they did not cost enough money to suit the politicians. So we had mechanical ventilation of a bad kind. *In the Chambers + Heating Engineers!! Jerfit before 1900*

And there were other things. *before 1900* More than one principal got drunk with illuminating frequency. More than one janitor did the same. One janitor would not only get drunk but turned principal and pupils out and kept the school building to himself. *In a whole day* No one could touch him for he was a power in the ward. Almost all of that sort of thing ended 33 years ago. A.J. Townson, Dr. G.G. Carroll, and most, though not all, of the 1900 School Board, associated ended it. *the* With Chamberlain *was* the political obstructionist.

If nothing else happened as a result of the White Charter of 1900 the change in the schools was enough to justify that instrument.

About 1896 the people had, through Child Labor and other protective agencies, become so insistently opposed to child labor in its worst

form^s that a bill was penned by the Legislature prohibiting children under sixteen from working in factories and under fourteen in stores, and providing for educational requirements and hours of work. The execution of this law in first class cities was lodged in the then Health Bureau. A mercantile inspector was appointed and the law later transferred to the School Board, 1912, with the usual interference of the politicians and the merchant who had worked his children employees at low salaries any number of hours he pleased and proposed to continue to do so, law or no law. The execution of the law was rather complicated by a later added clause, permitting vacation certificates to be issued with minor test and examination, which in Rochester at least had been those tests the law intended. These examinations were conducted by the mercantile inspector and often, too often, it was clearly shown that the child applicant for a "work certificate" had not fulfilled the educational requirements of the law, though he presented a certificate from the school authorities stating that he had done so. The law also said in unmistakeable language that the child applicant for "working papers" must be in good physical condition and that we took to mean that his vision, hearing, breathing, teeth, circulation, must not be sub-standard and that he must be up to height and weight for age. We noted the vision and hearing by accurate testing apparatus, noted lost and decayed teeth, the presence of obstructing tonsils, adenoids, etc., and even determined fatigue on a recording apparatus. But sometimes all the tests indicating low physical and educational status were insufficient to convince the politician that it was not for the child's interest to go to work. The politician said: "The boy needs work. His family needs money. The boy would get the physical reconstruction done when he could earn the money," and, anyhow, he couldn't learn." To which the Health ~~Board~~^{Officer} replied, "He may now

have the physical work done at the Dental Dispensary of the Rochester Public Health Association, and one of the hospital clinics and we will see whether he can't or won't learn." Then the politician went to the Mayor, after 1900 Commissioner of Public Safety, ^{Barry, B. W. Hamilton} who too often issued an order over the telephone to give the boy a certificate. Of course the Health Officer could not disobey an order from a superior, so the certificate was given. Then the matter was reported to the N.Y. State Child Labor Society and they saw to it that the child did not work until the law had been complied with.

Under the operation of the Mercantile Law there was required frequent reference to the birth records to determine the age of the child from the official records in the birth register. Through the last years of the last century but 75 to 80% of the births were recorded. Blooded dogs had a pedigree recorded but not our children. The doctor did not then record births with any more regard for the law than did the clergyman register the marriages he performed.* Appeals to the people, responsible physicians, clergymen, midwives, for these returns of Vital Statistics were made but without much improvement, so a statute was prepared and passed by the legislature providing for the payment to physicians, midwives, clergymen, of twenty-five cents by the municipality for each properly and legibly filled out birth, marriage and death certificate returned within the time prescribed by law. The Mayor, a lawyer, prevented payment, though under the statute it was compulsory, and then finally when suit in the Supreme Court compelled payment, the Comptroller made it so difficult for physicians, clergymen and midwives to get their money that many of them objected by holding certificates they might otherwise have been willing promptly to return.

*During and after the war when birth certificates were necessary for passports there were many amusing and sometimes tragic instances of demands for birth and marriage certificates.

After the passage of this law physicians and clergymen made return of years old certificates, one clergyman returning 175 marriage certificates, some 18 years old. Such is American law, its acceptance by people and enforcement by officers. But years after, through slow, persistent effort through all those years, the health authorities, 25 years ago, succeeded in getting up to 90% of births and deaths, now 99%. About 1908, marriages were no longer registered with the Health Board but with the City Clerk.*

These records of births, marriages and deaths are among the most necessary and important of all public records, yet up to 1898 they were kept in an unlocked wooden closet, after that in a safe, now in a fire-proof vault.

About 1898, there had been completed the first sanitary survey of Hemlock Lake. (See summary--annual report 1896 pp41)

Around 1898, the use of diphtheria antitoxin had been slowly extended. It was being ^{made by} freely distributed through the Health Department, but even this free gift did not prevent some physicians from objecting to its use. A striking but not a single example is that of the physician who in 1898, did not believe in it and who allowed four out of five children to die in one family rather than give it to them.

✓ The first real attempt to control the sale of milk by preventing it from being watered and skimmed, and that constituted milk inspection in the early years, took place in 1892, when a milk inspector, a food chemist, was first appointed, by the Common Council, through an ordinance passed by the Board of Health with a license for milkman at \$5.00.

* Complications--So there are two registry offices--one at the Health Bureau for births and deaths, another for marriages at the City Hall, where any syphilitic or mental defective might get a marriage license. We could not, up to 1930, at least, prevent open syphilitics from marrying.

✓ There were at that time, according to the records, 481^{retail} milkmen, 80% of them producers of their own product either in the city or within about ten miles of its borders. There were reported in 1892, five hundred examinations of which 12 were below standard and there were five convictions. Prior to that time, 1889, there had been ineffectual attempts to clean up the district--Hudson Avenue, Joseph Avenue, and Pryor Street and neighborhood--where many small dealers, with two, three or more cows, kept ~~them~~ in alley stables in such conditions of disorder and filth as to beggar description. (Photos) The work progressed neither far nor well because of the obstructive measures of the dealer, political interference and public indifference. Then, in 1894, an assistant milk inspector had been appointed, who was so ill of tuberculosis that he either resigned or was dropped from the pay roll. He was succeeded in office by a drunken epileptic who on sober and fitless days did good work. Then, about that same period, the milk inspector himself bought a hand Babcock milk testing machine, capable of running 10 to 12 samples at one time, which lightened his labors and enabled him to do a larger number of tests, selecting from these border line or low tests the samples which he subjected to quantitative chemical analysis.

In 1893, there was presented to the Board of Health the first detailed report of the milk inspector-chemist, who estimated that 50,000 quarts of milk were sold in the city; over half of it from within easy driving distance. Thirty-three per cent of the nearby men fed Brewers' grain ^waste or "swill" from breweries. There were no stated, but there were occasional, inspections of cow stables within the city and in nearby territory, such as might be reached in a morning or afternoon with a horse and buggy. But such inspections were not favored by anyone save a few enthusiasts. They were embarrassed by the adverse action of politicians and by people who knew better but did not care just as long as their individual interests were secure,

or, in the case of lawyers, their clients were protected. There was the case of a milk producer whose cows, stables, and living conditions, were so dirty that notorious even among the milkmen he made his filthiness manifest by presenting at the Health Office a straining cloth containing a double handful of manure,* saying, "You say I got dirt in my milk? No, I strain all the dirt out." To this statement the milk inspector replied, "Yes, and leave the juice in the milk." This milk man, warned not to send his milk into the city was defended in a letter by the head of one of the largest corporation law firms, to the Health Office and failing to convince the office that his client be permitted to go on in business, succeeded in getting the proceeding quashed in the underground manner usual in those days and which has not wholly disappeared, even now.**

In 1892,--See Annual Report of Board of Health--the legislature provided for a Milk Tuberculosis Commission as an appendage of the then State Board, afterward the State Dept. of Health, which began work in ~~the~~ tuberculin testing of cattle. Now while this movement was successful in beginning the tuberculin test^{ing} of cattle, and resulted in the education of farmers in the slaughter of hundreds of tuberculous cattle, it soon died for lack of financial food, because the legislature failed to provide for it and for the remuneration of the farmer who lost the tuberculous cattle. The law provided for the payment of losses caused by diseased cattle but not for the replacement of counterfeit money with good money.

Slowly disappearing was the old way of looking at milk as a white fluid, flavored with cow manure and rich in cream and not too heavily watered. Milk was skimmed and watered for years. It still is occasionally

*Dried and preserved for years between two lights of glass, presented in lantern slide exhibits on milk both here and elsewhere.

**See a similar case, Health Bulletin, Nov. 19, '31, in which Judge Wilder granted ten adjournments in a milk case, in an endeavor to tire out the Health Bureau prosecution.

done. Its discovery meant the publicity of a Police Court trial and a fine of \$25.00, perhaps and yet men took chances to the extent that in the nineties and early 1900, there were years when more than 25% of all the fines paid in the police court were collected because of skimmed and watered milk. Ten percent of the milkmen would take chances by watering and skimming milk. For example, in the early days, a man was fined for watering his milk, it having been shown by the chemist that the water separated from his watered milk sample was identical in chemical composition with the water in his well. Convicted and fined this man was later found with a can of Hemlock water on his wagon, taking it to his farm, for, as he told the milk inspector, "You'll never again catch me with well water in my milk."

Watering and skimming were lessened ^{Enthusiastic} but when the inspector made occasional night, Sunday or holiday inspections 20% of the milk was found to be below standard.

In the late nineties and early 1900, people began to split suburban farm property into lots and sell them to city buyers, who, to escape city smoke and city taxes, (vain hope) choose to live in the cleaner air over the city line; to be near the city, to accept its disadvantages and pay nothing for its advantages.* So as the price of nearby farm land appreciated, the farmer was driven farther afield and, therefore, was compelled to ship his milk by railroad instead of driving it into the city in horse drawn vehicles. This moving of the milk farmer from just over the line to the more distant country raised a number of new problems; among them it meant farther afield for inspection in the days of the horse; shipment of milk on railroad and so icing or preservation by such dangerous chemicals as formaldehyd; and it, also, meant the rise of the large milk companies who then, and until quite

*A clergyman friend, who moved out of the city for this purpose, was told -- "So you pray in the city, in the country you prey on the city."

recently, would buy milk anywhere and from anybody if the price was right and the cream yellow. To combat the dirty milk from dirty cows, handled by dirty men, the Health Office, through the newspapers, who gave us much space, and through pamphlets and talks, in schools, churches and before societies, succeeded in getting an additional milk inspector, whose political and personal behavior did not well recommend him for the job, though he had a kind of earnestness and a reputation for honesty which led the health officer to accept his appointment. Over a period of years he justified every trust placed in him. Though by no means young he was tireless. Early morning and late at night he worked. He was the scourge of evil doers and when he caught them he was so merciless that he had sometimes to be called off, or told that while he might hang 'em he must not draw or quarter 'em, before hanging. Moreover it must be said that during all this time he was an affiliant of the political boss, but so faithful to his trust that no one could beg or pry him away from it. Asked once why he was so incensed against one of several equally bad men, he said; "The dirty-----tried to give me \$10.00." This man was William O. Marshall, a real man, a diplomat, who, when he ended his work on the day of his death, had the respect and admiration of nearly all milkmen, who esteemed him for a fair and honest man, though sometimes hard on them. All this work was carried on in the days when political behavior and public honesty was somewhat--just a line--below present standards, the days when a Mayor did not hesitate to direct (1897) that proceedings in Police Court against milkmen be quashed for political gain.

About 1910, with the rise of the large milk companies, began an attempt for the extended political regulation and control of milk. It was proposed by the politicians that the inspection and control of

the shipment and sale of milk be taken from the Health Office and lodged in a separate organization by law empowered to do all the things in relation to milk that the Health Office was then attempting to do. All milk offered for sale in Rochester was to be shipped to the proposed ^{health} organization and it was to make rules and regulations governing that food from cow to consumer. It wasn't done. The Women's Union fought it successfully. The Health authorities' answer to the proposal was to ignore it.

And then extended activities were begun and enlarged in a further attempt to acquaint people with the value of clean milk and the important reasons for its protection. There was more press publicity, in which the newspapers were both kind and generous of space, fighting, then a good fight, in the cause of clean milk. There were illustrated talks in schools, churches and elsewhere. More county and city inspections were made and on the basis of these inspections hundreds of letters were written to the milkmen, both commending and condemning. Stated bacteriological examinations were begun and their results sent to the men whose product had been tested. A protracted struggle was begun for tuberculin testing cows from which the city's milk was drawn, only to have the ordinance tabled and finally prevented of passage (first Dec. 1899) by the Mayor, who said it was among those things impossible of enforcement.

But, perhaps, the most important step taken by the Health Office in its endeavor to acquaint people with the value of clean milk were the Baby Milk Stations first opened in Rochester in 1897. In 1892, Paris, France, startled by her high infant mortality, opened Les Gouttes de Lait, where Variot and Dufour had a consultation. A replica of a painting of this meretorious work, which hangs in the Hotel de Ville at Paris now, by gift of that municipality, hangs in the Rochester

Health Bureau. (In Paris they hung the picture. In Rochester they tried to hang the Health Officer.)

In 1894, Nathan Straus, opened the Straus' Milk Stations in New York and it is to these Straus' Stations that Rochester owes the inception of the idea of its early summer municipal milk stations. (For description of the early days of these stations and their work see printed papers on milk.)

For work in the first year--1897-- the Health Office had to depend upon private subscriptions. The City, now General, Hospital contributed the services of a nurse, Miss Annie Kennedy. The Homeopathic, now Genesee, and the Hahneman, now Highland and St. Mary's hospitals, too, gave us a nurse for a number of seasons. Thereafter nurses were paid \$10.00 per week out of the health funds. When the success of the experiment seemed assured comment upon the work appeared in the Medical Journals, widely in the press here and elsewhere, and both in England and on the continent. Favorable notices soon appeared in news magazines and books abroad, even by writers of school books, interested in the low costs and sinking infant mortality. Requests to tell about the work came from a good many places, at home and abroad, but only a few of the invitations could be accepted and only traveling expenses were paid which did not always cover the outlay and the work both at home and abroad was considerable. Also, some of the comments and obstacles at home were not encouraging. One politician said to the health officer, "How much do you get out of it?"

The Common Council prior to 1900, passed on the bills, then at most \$1,000 per season for milk, rent of stations and for nurses, and then the Council held up these bills for reasons of their own, expressed as "did not believe in the work." etc. But even the Common Council could not resist the favorable press notices and they reluctantly paid, after being told that a small group of philanthropists, chiefly Henry Lomb guaranteed the bills.

Notes on Milk, Nuisances, etc.

Milk Inspection and Inspectors.

Milk inspection, since its beginning in 1892, had--in 1897-1900--been slowly extended from chemical analysis to show the presence of added water or the removal of cream, or both; the presence of preservatives, usually formaldehyd or "milkman's ice", "freezeine", as it was called, because without ice it kept milk from souring. Added to these things were cow stable inspection, within a day's horse driving. This nearby inspection of cow stables left those stables at a distance without inspection. Often the dirtiest stables were near home. In the year following all cow stables were inspected, first by train and hiring horses, in the nearby towns. With the coming of the motor-cycle and motor car it became possible to visit all stables, save those most remote--sixty miles or more--without staying over night. Records of these early milk inspections began to be kept and filed in 1904, and about that time began the publication of short statements and word-of-mouth instruction, by the inspector, about the care of cows and milk, removal of manure, lighting and ventilation of barns, cooling, straining and housing milk, etc., all of which information first came to us from Cornell University and Geneva Experiment Station, to which then and now the Health Office is deeply indebted.

Among the pamphlets issued by the Health Bureau was an 8-page booklet, with illustrated cover picturing "Hogarth's Milk Maid" and "A Model Ice House" on view at the Municipal Hospital and a complete set-up of a small dairy in the basement of the Health Office, showing steam boiler, wash tray, sterilizer for cans, the whole at an expense for the small dairy of \$125.00. 5150-

But whatever was done to protect milk in the country, it had to be inspected there and tested after it reached the city, or the work

on the farm where the milk was produced meant little in efforts at cleanliness. There must be no break in the chain of inspection from cow to consumer. On the farm, cows, men, stables, and utensils must be clean. There must be more than one-fourth of a ton of ^{solid} cow manure annually in our milk. The men and their families must be clean and the city must be protected against such milk-borne diseases as typhoid, undulant fever, scarlet fever, diphtheria etc. The cows must be at least annually tested and shown free from tuberculosis. In the city, while trying to insure that milk shall be neither skimmed nor watered, frequent inspection is necessary to try to insure cleanliness in handling milk to see that it is kept clean and cold until it reaches the consumer. Here it must be remembered that few milkmen have been trained in the rudiments of cleanliness; in handling that delicate and perfect food alike for bacteria and babies. Few men are ready with the answer of the Scotch milk maid, when asked how she kept milk so clean, who replied, "First I wash my "twa" hands." Not until we are able to provide a standard of human cleanliness as high as that of the domestic cat, not until we can under enforced law say to the dirty milkman "Wash or deal in washable food" will we have clean milk. The great difficulty in the way of clean milk is the pettifogging lawyer and the inferior courts. In the early days there was a Judge--Ernst--on the Police Court bench who, tho' a politician, always gave the Health Office a square deal. Then the reformers elected a judge who said from the bench the Health Office "did not even know the "Ingrencencies" of milk". He was right. No one does, even now. After this man came two judges in succession --Gillette and Kohlmetz--who gave all we asked and that was, if there was even a reasonable doubt about the guilt of the accused, let him

go free. And then, to show that even how a change is necessary, we got a Judge whose attitude toward milk may be judged by the following statement, taken from the Health Bureau Bulletin of Nov. 1931. At that time the Police Court Judge was a political ward leader and after a short interregnum the County Sanitarian, a former Health Bureau milk inspector, whose office is charged with the duty of inspecting milk in the county outside the city, became ward leader in the same ward.

To return to the early part of the century, the milk inspectors, then and now, in their efforts to educate the public find themselves in the position of the old woman and her two sons who years ago kept some filthy cows, bedded in manure, on dirty premises near the city. Dwelling-house privy vault and adjacent well were on an eminence 15 feet above and 200 feet distant from the barn. To water the cows a wagon with a water barrel was hauled up to the well by mother and the boys, the barrel filled with water by pails, then with boys in the wagon and mother holding back behind, down the hill they went to the barn where the pails were filled with water from the barrel and presented to the cows. Shown what an old piece of hose would do to lead water from pump to barrel, and as a syphon from barrel to pail, the old woman looked on in astonishment and exclaimed; "By gol, I never t~~epu~~-t on dot". That was her difficulty, curs too, that we never, or hardly ever, "think on dot".

In the early days and up to the present time we were able, excepting in the last years of one Police Court Judge, to ⁸⁰⁶keep that 10% of bad milkmen so they would not wholly discourage the 90% of good men, but there was a time, in 1912 and onward, when nearly all of the cases brought by the Health Bureau were thrown out of Court on some technicality or on the appeals of the politicians. So serious had the difficulties become that this statement appeared in the Dec. 1913

Health Bulletin;

"We have not been able to enforce the milk ordinance because the Police Court Judge has dismissed every case for selling milk without a license brought before him."-----"Three cases of typhoid fever have been traced to one milk producer in the county. Nothing done about the matter."

Then one of the dirtiest of the unlicensed dealers in the city had eighteen cases of typhoid on his route and three deaths. Warned to cease ~~t~~aking milk of the man from whose farm the typhoid infected milk had been coming, this milkman had the milk brought in to the city by a circuitous route, which even the police, whose help we asked, failed to stop. The Commissioner of Public Safety was unwilling to use the police to stop it.

Just about this time a milkman who had assaulted the milk inspector had this letter from milkman to producer intercepted; "Rochester, May 17, 1913. The milk was sampled yesterday and found very dirty. Now if you are willing to take 4½ cents for six months and 4¢ for six(meaning winter months) for such milk as that, why, you can continue to send it." Signed--- ---- --- --- --- ---

This letter, with the name of the milkman making the offer, was published in the Health Bulletin May, 1913.

The milkman had his license revoked but he continued to sell milk, and the Commissioner of Public Safety wrote; "that he call on you, (the health officer), and see if arrangements could not be made for granting him a license."

So for several years the Health Office witnessed its efforts treated coldly by political administrations and not too warmly by the public.

In 1904 there was to be a great meeting in Paris, France, which the Health Officer was asked to attend and present a paper and though

willing to go without expense to the city he asked but three weeks time, this was denied. The paper was translated into French by Prof. Clarence King Moore of the University of Rochester and published both in French and English. (q.v.)

Then about the same time Mr. F.R. Eilinger^{(1) May 20} and the Health Office²⁰ began a series of experiments to determine the Tuberculous infective quality of milk, in the milk of individual milkmen, as shown by the guinea pig test. (q.v.) (Paper in files)

In this work a sample of milk from a retail dealer was injected into each of two guinea pigs and when the animals became profoundly tuberculous, as many of them did, they were killed and the organs, spleen, liver, lungs, temporarily preserved in ^{Cornwall Sealed} Petri dishes with formol jelly and exhibited to the milkman, the tuberculous infectiousness of whose product was so graphically presented in the animal. In this way the Health Office succeeded in getting many herds of cattle tuberculin tested and we seemed in a fair way of getting all our milk cattle tuberculin tested, until we began to test the milk of the large companies and then the work was, by order of the Commissioner of Public Safety--Owen--made so difficult and impossible of performance that it had to be stopped.

On April 4, 1910, the Health Office sent the following letter to the Commissioner of Public Safety:

"We have prosecuted our preliminary work against tuberculosis in milch cattle for a little more than a year. Of the 3000 cows from 700 farms we have had tested more than 1000 cows and had 124 killed. In one herd where the evidence was obtained through the guinea pig test, 52 re-acted out of 100, and 26 of them were so badly affected by tuberculosis that they had to be tanked for phosphate.

One of the excellent outcomes of this work has been the voluntary requests for the testing of herds by men whom the milk inspector has visited. The applications for tests have not all been voluntary but have been due largely to the presentation of facts to the owners by the milk inspector. In one of the herds recently picked up by Mr. Marshall the whole herd of 21 cows re-acted."

On June 24, 1910, the Commissioner of Public Safety sent the following letter to the Health Officer:

"The (Big Elm) Company have appealed from your order of June 20th. I desire to set a date most convenient for all concerned to hear this appeal and request that you confer personally with me on Monday, June 27th in regard to the matter. Pending the result of the appeal I desire that no action be taken as contemplated in your order of June 20th to the Big Elm Company."

On June 25, 1910, the Health Officer replied as follows:

"I have notice of appeal and your letter of direction in the matter of the Big Elm Company, who after a week's delay seek to gain further time so they may continue to ship milk from the proven tuberculosis herds of their shippers. Thus for some time longer the children of Rochester must be exposed to the dangers of this proven virulently infective milk." (Also letters June 28, July 11, requiring uniform herd testing)

The difficulties in getting milk cattle herds tested may be shown by the attached certificate and a letter from the Chief Veterinarian of the N.Y. State Dept. of Agriculture.

The certificate from a Veterinary Surgeon was as follows:

"This is to certify that I have examined (Physical examination only) seventy-six (76) dairy cows for..... of to see if tuberculosis existed in any of them. I found that every one of them was free from every symptom of tuberculosis. I consider them the soundest herd I ever examined. Sworn and subscribed to by....."

The letter of the Chief Veterinarian of the N.Y. State Dept. of Agriculture, dated Oct. 2, 1909, reads:

"On June 30, 1909, you wrote the Commissioner (Agriculture) relative to a physical examination being made of the herd of 76 cows at N.Y. The examination, I believe, was made by Dr..... and he said that he made a physical examination and found the herd free from symptoms of tuberculosis. As you probably know, one of the N.Y. State Dept. Veterinarians has since tested the herd of 96 animals in all, 51 of which reacted to the tuberculin test. These 51 animals were regularly condemned and slaughtered and upon post mortem 27 of these were generalized and 24 localized. (tuberculosis)

It is needless to make any comments to you upon the condition of this herd as shown by the tuberculin test and certified by a careful postmortem. I am now wondering what Dr..... would think if he were informed of the results of this examination of the herd that he had pronounced sound and in which over 50% of the entire herd reacted and about 30% were so badly affected that the carcasses had to be tanked.

I would greatly appreciate if if you could get some statements or a copy of any certificate that Dr..... gave, relative to his

examination of this herd. If we could get some data of that kind and couple it with our findings, it would certainly be an excellent article for the reading of those who think they can determine tuberculosis under physical examination and decry the tuberculin test.

Thanking you for any trouble this may occasion you and for your courtesies to this Department, I am,—"

These test and the work of the Bureau were not kindly received here. It was attacked by a well-known and able physician (J.R.M.) ^{See p. 7} by the Monroe County Milk Commission organized in 1900 for the purpose of stimulating production and promoting the sale of certified milk. Dr. J.R. Murlin, ^{N.R.A. + the R.} ~~nutritionist~~, Public Health Nursing Association, to conduct milk stations in opposition to the health officer). While the Milk Commission attacked the validity and even the judicial character of the Health Officer, it said nothing about the profound tuberculosis of a third of herd of prize cattle from which certified milk was ^{then} being produced. Interesting reading though not always precisely the facts as they then existed may be found in the 1911, report of Caroline Bartlett Crane, brought by the Women's Educational and Industrial Union to make a Rochester Sanitary Survey. Some amazing disclosures may also be found in the report of the Dr. Charles E. North, who in 1919 made a Common Council milk survey, at a cost of \$25,000 and the reports and comments of the Health Officer printed in the Health Bulletins of Jan., Feb., Sept., and Nov., 1919.

In early 1920 there appeared to be a demand for human milk, for those mothers who really could not nurse their babies, so for three years, 1925-6-7, the Bureau had the services of a nurse detailed to collect human milk from the nursing mothers who had an oversupply and were willing to sell it at 10 cents an ounce. In 1925, the first year, 33 mothers contributed 14,705 ounces of milk for which the Bureau paid ten cents per ounce. A small quantity of the milk was sold, most of it given to the needy mothers of babies and some of it

given to the hospitals for their premature babies. In the first year of the work 55 babies were fed. About the same work was done in the second and third years. The work became so expensive that it ceased. One mother in an attempt to have a living child by Caesarian section had lost the child. A second child born in the same way was slowly dying of inanition. Then she fed it human milk and she came to the Health Bureau to exhibit her fine baby in blooming health. This human milk work was done in New York City by Dr. Henry Dwight Chapin, to whose enthusiastic work in many similar lines for Baby Health the babies of America owe so much.

(1)

PP.20--Mr. Frederick Eilinger, chemist and bacteriologist to the Health Bureau in the early days, one to whom, with W.O. Marshall, the city owes so much and without whose work it would have been impossible to proceed as far as we did with beginning scientific milk investigation.

Communicable Disease

Smallpox and Vaccination

Smallpox, a disease of the small, because it affected chiefly children;

Chickenpox, properly Chicane pox; a trifling pox:

Greatpox, or syphilis, a disease of the greater, i.e. bigger or grown people, and, too, because of severity handed down to children.

Cowpox, an eruption sometimes accompanying vaccination.

In describing the course of any communicable disease it must be remembered that every such disease arises from a pre-existing case of the same disease and varies in character and severity, not only in different epidemics but at different times in the same epidemic. At one time or in one section of the county, e.g., smallpox or influenza may at one time be so mild as to escape diagnosis* while at another time or elsewhere in the same epidemic the disease may suddenly change in character and become most severe and fatal. The reasons for these sudden and often violent changes in the epidemicity of communicable disease are only partly known and not yet wholly under control. Another thing to be remembered is that communicable diseases, such as measles, scarlet fever and smallpox, occur in cycles and these cyclical outbreaks are to be predicated with as much certainty as the weather may be foretold (See Creighton Communicable Disease in Europe A.D. 700 to 1900) and the World War.**

Polio men
*Carrier or missed cases. See Chapin--"Sources and Modes of Infection". Also Shakespeare--Dialogue between Camillo and "Winter's Tale" Act I--Scene 2-- "There is a sickness etc"--

**In the World War, for the first time in America, two of the scourges of America, Typhoid Fever and Smallpox were prevented by vaccination.

Communicable Disease---
Vaccination and smallpox

As after all wars, so after the Civil War, diseases were spread throughout the country by the movement of troops and the homecoming of soldiers.

From the late sixties smallpox was variously mild and severe, culminating in the fearful epidemic of 1871 to 1873, when thousands of cases and hundreds of deaths were spread about the country by returning soldiers mingled with many cases of the disease so mild as then to escape diagnosis. In those days, and in neighborhoods where the disease was severe and deaths many, people were vaccinated by the crude means and unscientific methods current in that day; where the disease was mild or nearly ^{so} ~~missing~~ they neglected vaccination, notwithstanding the fact that there were then men and women alive who as children could remember the time, before Jenner's announcement of the discovery of vaccination, when smallpox caused one-tenth of the deaths from all causes.^{xx}

In the epidemics of the seventies the people of Rochester and their advisers behaved toward vaccination ^{but} a little better than most communities.

In '70, '71 and '72 there were fortysix deaths reported from smallpox and often a crowded smallpox hospital or "pest house" as it was then pleasantly called. In the middle and latter part of the seventies there were 22 reported* deaths from the disease. The only smallpox deaths recorded in the eighties were two in '82 and from 1882 until 1902 there were but three deaths reported from the disease. Except in 1885 there was no vaccination except spasmodic attempts at it until the great epidemic of 1902 and 1903, with 1000 cases and 100 deaths. From and after 1885, to fix a date, the last attempt in fifteen years to do vaccination on a large scale in the city ceased.

*Reported--"because it is not possible to tell how many cases or deaths, such are the meager records of the then "book-keeping of Humanity". Even the cemetery records do not yield information.

It was then to the physician's bread & butter disease.

In 1885, there was an outbreak of smallpox (Jan. '85 pp.437, minutes Board of Health) with 2 deaths--and a resolution of the Board of Health; "All persons unable to pay be vaccinated under direction of the health officer at the expense of the City." (11/6/85 pp.450) A committee be appointed to arrange for general vaccination. (Minutes Board of Health 12/4/85 pp.453). 22,000 vaccinated--all public school children--nothing about parochial schools, Resolved that a physician be placed at each public school to vaccinate people who came. pp.455 Paid physicians ten cents at schools, fifteen cents at factories and twenty-five cents at physicians's office. (The manner of vaccination and the outcry against it was not so much due to the vaccine as to the manner in which vaccination was then done.) 1889 ^{Rochester} Pathological Society recommends general vaccination. The Mayor (Warner) said vaccination had been declared unconstitutional by the New York Supreme Court. 1889--January--Board of Health again urged vaccination of the employees of large business house employers. November--attorney for the Board of Health said--had a right to mandamus Board of Education and directed to proceed but the Board of Health was going out of office in December so nothing was done. 1901 (c) Health Officer protesting against use of vaccination shield--Coll. papers T. Vol.I (See old scrap book 1897 to 1900 pp.304-5-6-9-10-Sp. and urging vaccination etc. at school board meeting attended by members of the Board of Health and Health Officer. April 4--Letter to all hospitals urging vaccination.

From c 1897 to the ^{great} famous smallpox epidemic of 1901-2 there were accounted for 62 cases of smallpox and 1 death in 7 outbreaks found in hotels, apartment and boarding houses, making necessary the quarantine, as it was then practiced, of more than 500 persons, In one hotel ^(Powers) the fireman, his wife and child were found with smallpox making it necessary to put a physician in the hotel and taking out everyone sick

&
Same p. 7

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until we found whether by smallpox or not. The Commissioner of Public Safety ^{Cook} said that he didn't believe the people had smallpox so there was no use in keeping them quarantined and to discharge them in an unvaccinated community. I told him an order in writing would be necessary to dismiss them and then told Antisdale, Editor of the Herald (Scrap Book pp.302). The order wasn't given.

Notes

From early times the health officer had been allowed extra compensation for the care of smallpox and I ^{was paid} recommended over a period of years--up to 1900--^{then about 3000-} several thousand dollars for the cases of smallpox both from the city and for the care of patients permitted to be taken into the hospital from adjoining towns for which the town, ^{my fraction of} paid.

Prior to c 1901 all contacts were quarantined but thereafter we appointed a physician to daily inspect them and to remove them to the miserable quarters at Hope Hospital, if illness developed, as fast as determined by a rise in temperature etc. This plan, since carried out for years, is both efficient and economical-(in room, of supervision, food, rent, fuel, and often clothing for three weeks.) ^{quarantine} The removal of contacts to suspect quarters in the hospital and the diagnosis was determined by the Health Officer.

From about the middle eighties until the epidemic beginning in 1902, with the warning from home and abroad of the gathering Pan-American smallpox epidemic storm of '02-'03 the occurrence of 62 cases of the disease and one death in five years, between '97 and 1901, in Seven localized outbreaks: these and other arguments did not stir the authorities to vaccinate school children as required by law or the public to vaccinate adults. Pre-school children, most susceptible, were universally neglected. A kind of vaccinal parsimony affected the school officials who, under the law, were required "to refuse to admit

or receive unvaccinated children or persons into the schools."

In 1894 the Board of Health passed a resolution asking the Board of Education to comply with the law which provided that no unvaccinated child or person shall be received into the schools. The School Board refused or declined to comply with the law. Parochial or private schools* were not then (but are now) included in the law and the exclusion of such schools from the law requiring vaccination did not simplify the task of getting a vaccinated school population as one of the chief bulwark against smallpox, a preventable disease, it must be remembered, chiefly of the small. The School Board failing to comply with the compulsory vaccination law the then local Board of Health by unanimous vote, supported by the State Board of Health, on opinion of the Attorney General, commenced legal proceedings against the then Board of Education to compel compliance with the law, making vaccination of school children mandatory. While proceedings were begun nothing further was done and the matter was allowed to die. In the latter part of the nineties general vaccination was again and again urged upon the Board of Education by the Board of Health and the Health Officer. (Mayor Warner "helped" by stating at a meeting of the Board of Health, that the Supreme Court had declared vaccination unconstitutional. In October 1898, it was shown that but an estimated twenty percent of the pupils in the public schools had been successfully vaccinated and again a resolution was passed by the Board of Health calling on the Board of Education to enforce the vaccination law and in Nov. '99 the request was repeated. The then Board of Education having failed to comply with the law, appeal was made to the business men of the city through a letter, March '01, to the Chamber of Commerce, requesting the aid

*The parochial schools in the epidemic of 1901-02 declined to support vaccination among their pupils. Not until 1916 did they begin to help and even then a number held out. Not until 1920, when they accepted medical school inspection and nursing did they accept vaccination.

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Smallpox.

and influence of the Chamber in providing for the better care of smallpox and vaccination against it. In Dec. '01, on invitation, the Health Officer talked to the Chamber of Commerce Trustees on vaccination and smallpox, estimating the unvaccinated population at 50 to 60% of the total population; describing Hope Hospital as it then was,--impossible and inadequate. In the five years from 1897 to 1901 there had then been the already referred to seven outbreaks of the disease, making in all 62 cases and one death. In addition there had been 500 contacts to isolate*, feed for three weeks and to vaccinate, to clean and to archaically disinfect their belongings, to destroy(a useless procedure) their clothing and often some of their belongings, bedding, etc., and to furnish them with new clothing and bedding as a reward for neglecting vaccination. Sufficient help was wanting. Vaccinators, diagnosticians, clerical and help, often untrained, had to be obtained at a day's notice, and then nearly every time a case of smallpox was reported or a localized outbreak of the disease began, there were objectors to be found, who said, "Measles", "Chickenpox", for although prior to 1900 the Health Officer was paid, in addition to his salary, for the care of smallpox the stress of work was such that it didn't pay. Added to these difficulties was the attitude of the then Commissioner of Public Safety, after Aug. 1900, (When Mr. Cutler went out and Casey came in) who said he didn't believe that a patient confined at the hospital with smallpox(see photos), his wife and two children had the disease.** Then the physician, as a rule, did not know how or were barbarous vaccinators. Teach'em! Try to change a woman's habits or a woman's opinion. It's easier.

*Prior to the epidemic of 1902 & 03 it was customary to vaccinate and shut up all contacts in houses or remove them to separate quarters in the hospital for three weeks observation. That was the custom, observation as afterward conducted was unknown.

**See Rochester Morning Herald 5-23-01. #2 Scrap Book pp.77.

Same also 3

These patients gave the Health Office more than usual anxiety because the man was the repair mechanic in a large hotel, where during the eruptive stage of the disease he had been much about the building and in rooms in contact with many people, both from here and away. Unless there were further cases knowledge of this man's smallpox would mean not only ruin to the hotel but a hard blow to Rochester business. To protect Rochester from smallpox and to prevent its spread, the patient and family were removed to old Hope Hospital, and a physician with knowledge of smallpox was placed in the hotel, all the help were vaccinated and kept under daily observation. Any person becoming ill among the employees was taken to the hospital, placed in separate quarters until it was determined whether he was coming down with smallpox or not. There were no further cases of the disease traced to this source nor did news of the outbreak become public.

Among the cases of smallpox prior to the great epidemic of '01 and '02 the initial cases always either came from away or owed their disease to contact with visitors from a distance and as both cases and contacts had to be traced, vaccinated and isolated they were not altogether satisfied with loss of liberty for three weeks.*

Here it may be said that a diagnostician with experience rarely mistakes smallpox for another eruptive disease but in the beginning the diagnosis of smallpox is often ~~times~~ beset with difficulties. So to be safe a suspect was always isolated until one way or other the diagnosis ^{was} ~~is~~ certain. Rochester followed the rule. (Photos here*) (Prior to 1900 the health officer was given extra compensation for cases of smallpox and permitted to take cases from adjoining towns.)

*Three weeks is the longest period from the time of the exposure to smallpox and the beginning symptoms.

**At the time of my resignation from the Health Bureau, a large box of photographs--2x4x2--was sent for safe keeping to the Rochester Historical Society. The box and contents disappeared along with some of the letters and scrapbooks.

The Smallpox Epidemic of 1902 and 1903

Smallpox became epidemic in Rochester in May, 1902, when two unvaccinated wayfarers came to the city and secured beds in a large lodging house. The strangers became so rapidly and seriously ill that they were unable to give an account of their goings and comings and one of them died in about ten days. (Photos)

The usual routine of vaccination, isolation, etc., was carried out. From the middle to the end of May twelve cases of smallpox were discovered in various parts of the city without having had known contacts with strangers or having been away from home. One of these patients, a woman, had the disease in such severe (Hemorrhagic) form that she died in four days. (Burial) ^{the burial} Now it was clear that Rochester was in for an epidemic of smallpox such as she had not experienced. There were 1000 reported cases in New York City, 400 in Buffalo (seaports, lake ports and railroad centers always suffer most severely in such epidemics) and the authorities were appealed to for help,--money, vaccinators and the extension of the then Hope Hospital, but help was not forthcoming,--neither authority to employ vaccinators in sufficient numbers nor clerical help ^{now} to temporarily rebuild the hospital. Hope Hospital was then a two-ward and one room, sixteen bed hospital, with one water tap in the kitchen, without a sewer; an old, partitioned privy in the back yard, labeled "Ladies", "Gents", a two-room, battered, unpainted hemlock-board shack for isolating suspects, and an old grocery wagon (the horse had to be rented) for an ambulance. (Photos)

On May 29th 1902, the Health Officer wrote the President of the Chamber of Commerce reciting some of the difficulties confronting the Health Bureau in the management of the beginning epidemic of smallpox, lack of trained help, of physicians, vaccinators, no permanent deputy

health officer, no additional funds and no response to repeated personal and written pleas for help. Finally on June, 18th, in despair of getting help, the Health Officer called a number of gentlemen on the telephone and briefly told them the story of the dangers which he then believed confronted the people of the city. Among the gentlemen called were Mr. Eastman, Mr. ^{L.G.}Ross, Mr. ^(W.W.)Lindsay, Rev. Max Lansberg, W. C. Barry, Max Brickner, D. C. Murphy, Doctors Ely, Sumner and Mulligan, and at their request the Health Officer met with them that same evening at the Genesee Valley Club and laid before them the situation as it appeared to him. The next day at two o'clock an enlarged committee of twenty met at the Mayor's office and asked that \$50,000, or so much of it as might be necessary, be provided to prepare the city to cope with smallpox, by widespread vaccination and temporary quarters for smallpox patients. Dr. Landsberg and Mr. Murphy were the chief spokesmen, the Mayor silent in his chair. Dr. Landsberg said "Well, Mr. Mayor, what are you going to do about it? Still the silent Mayor! Then Mr. Murphy: "Well, if you don't do something about it and quickly, we will provide the money, etc., etc., and we will be later ask to be reimbursed for whatever is expended. The City made the appropriation.

In June smallpox rapidly increased at an average rate of a patient a day. The Health Officer had proposed a plan for the establishment of vaccination stations and the employment of as many vaccinators as rapidly as they could be trained and used by the Health Office, for school and adult vaccination. The Mayor delayed for ten days^{Went to} (Buffalo) and then proposed to have five vaccination stations in different parts of the city, to which nine vaccinators should be assigned, he, the Mayor, to name the vaccinators. Though the Health Office did not approve of this plan, and said so in a letter to the Commissioner of

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Public Safety, rather than have more delay, the Mayor's plan was immediately put into operation. A little later when the epidemic became ~~extensive~~ fifty vaccinators were employed and house to house vaccination was done, and ~~together with~~ an increasing number of vaccinating stations were ~~all~~ opened, in an attempt to stop the spread of smallpox. With so many vaccinators at work, (most of them did not know how to vaccinate, ^{but to} it was necessary to have large quantities of vaccine. That the Health Bureau might be protected in the use of vaccine the Health Officer believed that one make of vaccine should be used and that while it might be desirable to use the one make we had been using, any one of the good makes would be acceptable, but it must be ^{so as to fix responsibility} one make. The politicians wished to split the contract and divide it between the different makers. The Health Officer had his way in the matter, using the one make as had been theretofore done. The vaccine was apparently good vaccine until about the middle of the summer epidemic, when one and then others of the vaccinators reported that they were getting a large number of "no takes". Brief examination showed this to be true and it was believed that because of ^(Philadelphia) widespread smallpox and great demand for vaccine, the Philadelphia firm [^] were allowing the vaccine to weaken, i.e., to run out*. We therefore stopped using this vaccine and purchased vaccine from another firm. A few days later the Health Officer received a telephone call from the vice-president of the company, who said he had come all the way from Philadelphia to invite the Health Officer to dinner. Invitation declined!

In making vaccinations it is necessary to do a few simple things: clean the arm with a piece of gauze, using plain tap water, put a very small drop of vaccine in a particular spot, the deltoid-biceps-triceps

*What this meant in delayed protection may be understood by physicians and also by those who uphold a capitalistic society.

triangle, make a scarification no larger than the end of a match, so as, if possible, not to draw blood; let the point of scarification dry in the air and put no dressing on the vaccination wound. Keep vaccine cold or it will spoil. Could we get this done by half the vaccinators? Just about half. One of our great anxieties was the vaccination and the vaccinators. The public vaccinators we could in a measure control, while many of the others then used a lancet, made long scratches, drew blood and put on vaccination shields, for the use of which a firing squad at sunrise is fit punishment. Could we get vaccine kept cold? We could not. A physician would get vaccine, put it in his bag which he left in ^{to warm} ~~the sun~~ or placed on a radiator!

These were a few of the difficulties we had in controlling the work of the vaccinators and in getting vaccine.

There were two epidemics of smallpox, one ending in August--the summer epidemic--and the other beginning in late October, the winter epidemic. During the summer there had been much talk of a new hospital, but just as soon as the reported cases of smallpox began to decrease in number even the talk stopped and nothing was done about the hospital until the recrudescence of the epidemic in October. During the summer epidemic a kitchen, laundry and other temporary shelters were built of hemlock, boards, sewage was carried into the canal feeder which flowed by the hospital and sometimes, as it did in spring and fall, the road overflowed with flood water, the contents of privy vaults and the vaults themselves were carried away. There was ~~not~~ time to build even temporary structures,--labor being difficult to get, the Health Inspectors were set to work building tent platforms and second-hand tents were purchased and patients housed in them. In July patients came so rapidly they were sometimes sitting under a tree waiting for a bed. In the hospital a resident nursing and housekeeping staff had to be organized

from Thomas Wright

an ambulance provided, and we had to bury the dead for no undertaker would do so. Purchasing and delivery, too, had to be provided for and it was at a price. This old hospital on the River Road, situated in the triangle between the Erie and Lehigh Valley Railroads, housed patients with a loathesome disease, some with mixed syphilitic infection, without adequate toilet conveniences, attacked by swarms of flies by day and mosquitoes by night, with a death rate of over ten percent, yet it was inhabited by a singularly happy group of people; children sang and played, and the older patients endured their lot as only poor people do in adversity. (About 150 cases of smallpox in the old Hope Hospital, many quarantined in their homes, which we rapidly stopped.) (Photo; Summer Tent Hospital) (See Annual Report Health Dept. 1902 and 1903)

For popular appreciation of the Summer Tent Hospital see Democrat & Chronicle and Herald of June 10th, Post Express June 11 '02, Annual Report of the Health Bureau 1902-1903.

Tired and ill the Health Officer with the end of summer epidemic, on the advice of his physician, went to Europe Sept. 2, '02.

A hospital site had been secured on the Waring Road, plans drawn and accepted for a hospital, the contract for it to be let, but with the end of summer epidemic work on the proposed new hospital was stopped, and vaccination also stopped, only to be renewed with the marked rise of the winter epidemic in October. Returning to Rochester, December 2, 1902, the Health Officer found the Acting Health Officer, Dr. W.M. Barron, overwhelmed with the work of a new smallpox epidemic. The new Waring Road hospital being but half built, to provide for the rapid influx of patients with which the erection of temporary hemlock board structures did not keep pace, election booths were pressed into service to house smallpox patients in winter. Warmed by stoves by day, lighted by lanterns and lamps, dark and dirty because of insufficient

windows, water and cleaning facilities; by night lighted by lanterns,*
 because lamps were too dangerous to use with careless, often delirious
 patients, somehow the patients were cared for by a medical, nursing
 and housekeeping staff, short of nearly everything that could make
 for the conduct of a hospital. Indeed, often the night staff had to
 sleep in the beds of the day staff. It was difficult to get housekeeping
 and ordinary help. Many of these people didn't believe in smallpox
 but they were afraid of it. Few physicians would take appointments ^{at the hospital},
 because it meant loss of practice, but those who did take the work,
 especially to Dr. Barron and W.H. Sutherland, the city owes much, and
 cities never pay. Nurses, (nearly all R. N's) came to us and to that
 group of women who intelligently worked long hours, often with hands
 sore with pus infections from handling patients, without sufficient water,
 too much praise cannot be given for what they did.

During this time the Mayor was silent, the Comptroller suspiciously
 voluble, the Common Council hypercritical and the newspapers of varied
 opinions. q.v.

The machinery of the city did not provide for emergency purchases,
 so if a thing were ordered one day, for delivery the next day, it might
 be sent next day or next week or not at all.

*Fire was so feared that arrangements were made with one of the
 railroads, in case of fire, to move patients in box cars.

Note: As a shining unusual example of the city's conduct of
 business: Once upon a time,--1900, a deserted wife with a newly born
 child, and three other children seriously ill with scarlet fever, was
 found at 8:30 Saturday night. Absconding, drunken husband had wrecked
 or sold the furniture, including the wife's bedstead. The children were
 removed to the Municipal Hospital but no general hospital would take
 the mother and her baby because of scarlet fever. A nurse was placed
 in the home with mother and babe, food, clothing and all that could be
 provided was sent from the Municipal Hospital, except some things we
 did not have, which were purchased at a nearby Department store at less
 than \$10.00. The then Comptroller refused to pay the bill because a
 member of the firm from whom the goods were brought was a member of the
 city administration. The then Health Officer still has the paid bill,
 paid by him.

During the smallpox epidemic, as we could not get necessary things with authority, we got them without it, buying them on order from large well-established firms and retaining a duplicate of the written order. We still had, December 1902, after the summer epidemic, the old grocery wagon ambulance* and as we could not get a new ambulance in the regular way we bought one irregularly and we bought a pair of horses, harness, and many other things in the same way. We even bought coffins at wholesale, or thought we did, but the undertakers and politicians fixed that later.** Firms would take these orders and later they all got paid.

In December 1902, 232 cases of smallpox were reported, most of them in the hospital, but about forty of them, chiefly milder cases, were confined in their homes, where they got free food and sometimes rent and clothes, necessitating night and day guards.*** Letting people stay at home with smallpox was discontinued in December for the inmates of such homes were menaces of infection, because of the complacency of the guards and often freedom of such patients to leave their homes, visit stores and even places of amusement. As patients, too, were known to steal away from the hospital at night, a uniformed policeman was placed at the hospital to guard the barriers, that had been erected, across the road and to patrol the railroad embankment, where he could, save on the darkest and stormiest nights, see what

*The old ambulance was used as an undertaking wagon, for we had to bury the dead.

**The undertakers would not bury the dead but they wanted and did sell coffins at retail. *• beat us at our pocket*

***In January, 92 out of 142 cases were in 22 homes, 13 in one family. These patients got free board, lodging and often new clothing and bedding at city expense as a reward for neglecting vaccination.

was going on around the hospital. At the entrance to the road was a small tent with a backless bench where the policeman and a hospital guard might take occasional shelter after midnight. One night, at midnight, the police officer was found ^{by} in the health officer's stretched out on the bench, his overcoat hindside before, his helmet over his face, fast asleep. One of the buttons was cut from his coat while he slept and the police station asked to send another man. Next morning the officer appeared before his superiors with a coat minus one button and a piece of cloth through which the white underlining showed, but such was his "pull" that he was allowed to go with a reprimand, perhaps a fine, and then he said to the Health Officer who presented the case, "Now gimme that button". He didn't get it.

In Dec. 1902 and Jan. 1903 temporary quarters for both patients and staff had been rapidly extended* and owing to renewed vaccination activities in stations, stores, factories and house to house, the epidemic became lessened and under control. From 232 reported cases in December, there were 84 in January, 8 in February and 6 in March.

A victim had to be found so in January the Grand Jury, ~~the~~ Police Justice, Chadsey, the Common Council and some others (the Board of Supervisors had already done so) criticized the Health Bureau's conduct of the smallpox epidemic and the Common Council was preparing to investigate the Health Bureau and the Health Officer. Among officials only the Commissioner of Public Safety, George A. Gilman, cared to understand what the Health Bureau was trying to do and he was a strong man in a difficult position.

(Note: For the story of the prosecution see Notes on Smallpox and Scrap Books and Letter Books.) (The Common Council declined to type the testimony.)

^{refused vaccination}
*It was difficult to get help for they had to be freshly vaccinated and have a "take" before beginning work. One man, aged 40, who was pitted with smallpox from a childhood attack caught smallpox while working at the hospital.

The Common Council investigation was carried on while the Health Officer was engaged in the work of diagnosis, passing on doubtful cases brought by his associates, meanwhile spending the night at the hospital and seeing every patient and part of the hospital before leaving, bathing and changing clothes in the morning.

In April a small localized outbreak of smallpox occurred in the northeast part of the city among a belligerent group of people, ^(Poles) whose smallpox-infected men, women and children were found hidden in outhouses, in coal cellars and under beds. In the control of this epidemic all the ingenuity of the health authorities was required to get people vaccinated and when infected to get them to the hospital.* In this work, on more than one occasion, the ambulance, a patrol wagon and several police officers were required to induce the hesitant patient to go to the hospital. In such work as this, both then and now, the police were nearly always diplomatic, courageous and efficient. There were then no ward politicians present to prostitute them. They were afraid of the disease. A policeman has been seen to advance upon an infuriated, drunken man, pointing a loaded revolver at him in the defense of his wife and children with smallpox, and take the revolver away from the man, hustle him into the house and get the family into the ambulance, then wave his hand, to conceal ~~these cases~~, the occupants of the ambulance as he resumed his beat.

Then in May a man in the central part of the city was stricken with a smallpox so virulent--he entered the hospital in delirium--that he became blind and comatose on the fourth day. The flesh melted from his body so that in ten days the man had lost half his weight. (Photos) Attending this man, beside the hospital physician, were a skin specialist,

*See the flaming headlines in the Press; note the fulminations of the Common Council Committee and then ask yourself, if you had then had smallpox would you have gone to the hospital?

who saw him on the first day, two trained nurse, and Dr. Wheelock Rider* ophtholomogist at that time to the City, now General, Hospital, yet by a member of the Common Council, in a long newspaper article, the patient was said to be neglected. (See Post Express)

The dreadful nastiness of many of the confluent cases, where the bodies of patients were covered with masses of scabs, was often heightened by the complicating syphilis--before (salvarsan)--and it required treatment.

Photos: 1.
2. A living Scab.

The medical complication was added to by laryngeal diphtheria, requiring intubation of the larynx, and by an obstruction of the bowel, requiring an abdominal section. (Recoverd) There were a number of alcoholics and others requiring whiskey.** Early in the outbreak it had become apparent that the surgical principle of healing under a scab was most desirable, so that dusting powders were used instead of lotions. Ointments were not used and if the patient could be kept from scratching, especially the face, more rapid healing and less ultimate scarring or pitting was the result. (Photos of patients who scratched and those who did not.) There is no other way of measurably preventing facial disfigurement during or after smallpox. Pitting with the passage of time gradually fades in all but the worst cases. Nature, not art, does the repair. While the epidemic of smallpox was waning the Waring Road hospital was opened in May and some of the patients at Hope Hospital removed to Waring Road and the old shacks and election booths were sprinkled with oil and set on fire. (Photos of fire) The delay in occupying the Waring Road hospital was because the road to it was

*Dr. Wheelock Rider had from the early winter outbreak quietly visited a number of eye patients at the hospital. He had to do so unknown to the public because such was the fear of smallpox that people would not have consulted him had they known he visited the smallpox hospital. At the end of the epidemic he rendered a bill of \$150⁰⁰ and the bill was held up by the Comptroller but finally paid.

**We bought whiskey at \$2.00 a gallon.

impassable. Built on the site of an old nursery, in heavy clay, the road insufficiently drained, it was so muddy that it took four horses to draw three-quarters of a load of gravel over it.

When the epidemic ended so did the Common Council investigation. In its report it recommended that the Health Officer resign or failing that be dismissed. (For details see Scrap Book and volume of notes on smallpox taken by the Health Officer at investigation for his attorney.)

From 1903 until 1911 the city, save for an occasional case, remained free from smallpox. In 1912 an epidemic resulting in a total of forty-two (42) cases and no deaths was introduced into the city by some negro hay buyers coming from twenty miles or thereabouts south of the city. There was the usual large number of unvaccinated persons and 35,000 vaccinations were done.

In 1912, there were three cases reported. Then after the World War smallpox again became epidemic. Several large cities in the country had cases by the hundreds; some of the northern and western cities a thousand or more cases and death rate of twelve to fifteen percent. Then in 1924, some campers brought smallpox to Rochester. It was concealed by a barber and his family and with a patient from a western city resulted in 24 reported cases and one death, that of an unvaccinated school teacher, from hemorrhagic smallpox. The death of this teacher roused the city and through many stations organized by the Health Bureau and private physicians 100,000 vaccinations were made. (See Mo. Report Health Bureau, 1924, pp. 8 and 3.

The chief objective sought by the Health Bureau was the prevention of smallpox, diphtheria, tuberculosis, rabies, tetanus, the improvement of the milk supply, better obstetrics among the medical men, the elimination of the midwife, the better health of children through milk, the welfare stations, medical school inspection and nursing, later pre-natal clinics in the schools, immunization against preventable disease.

There was ~~also~~ ^{well} work to be done against nuisances, such as old vaults, ~~better~~ the storage, collection and disposal of garbage and manure, plumbing and drainage, smoke and housing, and all through these years there was the insistent endeavor to get a hospital first for communicable disease and later for all diseases.

Copy of Health Bulletin--July 1926--"New and Old Hospital"

Health Bulletin--Feb. 1914--Hospital for Infectious Diseases.

1- 766791

NOTES ON HEALTH

From about the post Civil War period to the superseding White Charter-effective 1900-with a Commissioner of Public Safety-police, fire, health, there was a Board of Health consisting of seven members, the Mayor-Chairman. The board members were nominated by the Mayor, on recommendation of the boss, and had to be confirmed by the council. There were no health ordinances of worth until the early 90s and most of these were written by Dr. J. A. Biegler, a board member, and were then and after based on the antiquated idea of air and sewer-borne disease.

From the early 90s, the officers of the board were nominated and appointed by the board. Appointed every two years were a health officer-part-time- small part- a clerk, a registrar of vital statistics- births, marriages, deaths not well reported- a plumbing inspector, later an assistant, two sewer flushers, a superintendent of garbage, later an assistant, who supervised a number of teams and selected farms in the suburbs where garbage might be dumped and also the farm or vacant lands on which night soil from thousands of vaults might be put, when it wasn't dropped from the bridges into the river by the private, odorless(?) excavating companies.

From 1892, there was a part-time milk inspector- in 1894 became full-time- a druggist, Ph.G., who was a skilled chemist and who not only collected milk samples but tested and analyzed them-- and did it well. A meat inspector who was an unknown rouge who looked over and over looked local slaughter houses, meat in butcher-shops, and, five or six sanitary inspectors, all but one senile, who investigated citizens complaints of vaults, garbage etc. and reported to the board and later to the health officer. The force was small

and unorganized. It was directed by a politically appointed health officer who knew little of the then sanitation and hygiene, and who visited the health office seldom, dominated by the old filth and air-borne theories of disease. The measures then used against disease were to clean-up the "breeding places of disease" and to disinfect things, not persons, cleaning and disinfecting vaults of which there were thousands, the removal of garbage and wastes, draining quarry^s and wet places, maintained inspite of the law, and, then, the inspection of plumbing with traps, traps for preventing "sewer gas" from entering the houses. Sewers of which there was much need were laid where the pull of the politician was strongest and the price paid and the character of the work-load where the people were most docile. Same with street improvement.

Summary:

The many wells, some at the curb. We early got a good and efficient water supply to the city largely for fire purposes but the extension of the water main was chiefly to the business and "better" areas. Sewers were extended in the out-lying sections, without or with political inspection, badly laid, elongated cesspools often in rock or heavy clay. A large boulder in the way of a sewer on Frost Avenue was not removed the sewer carried to the boulder and continued beyond it.

Far back in the building of cities, and even in the early 1900^s, street sewers were laid before water was carried so that fewer street mud holes might make the streets more easily passable. Sanitary eve troughs were made so that malaria from wet cellars might be limited but the rain water was sacred, taken to a mosquito breeding cistern, the over-flow allowed to go just beyond the house. The backyards were drab and dreary, the vaults, the stable--when there was one--

often for horse and cows, the fly breeding areas around the manure piles or the rickety manure box, the ashes and other wastes, the chicken coop, and not seldom pig sty, harboring ducks and sometimes geese, not seldom the well--all made for unsightly and unsanitary conditions which, up to and including the early 90s, were a part of the city. Often these conditions without were but reflections of the house and person and personal hygiene.

What they then did was not so much to furnish breeding places for disease, except typhoid, but to make it difficult to get people to change their habits and customs and switch dirt and disorder for cleanliness and order.

With the extension of Hemlock water mains the wells ever so slowly were abolished. A hundred remaining, some at the curb--^{h₂O?} with the extension of sewers, and pavements and sidewalks.

But it was not until the Cutler administration-1906-that a nearly adequate system of garbage, ashes, and waste collection began to make headway against the manner of the politician. All this was public sanitation getting much attention because people could see, even the dirtiest, the changes wrought by such improvement. It, too, affected suddenly the course of disease as typhoid. Malaria for some unknown reason had earlier almost disappeared though physicians by habit clung to the old medicine as to a much loved family. If modern public sanitation and personal hygiene were difficult to introduce the prevention of communicable disease by vaccination against it was an advance, insurmountable, task, requiring years of hard work,. The era of the prevention of disease was ushered into our lives with the great bacteriological discoveries of the 80s and 90s--chief among them tuberculosis, diphtheria, typhoid, tetanus and others.

Tuberculosis

With Koch's discovery of the tuberculosis bacillus, the fanfare attending it, leading many hopeless tuberculous to Berlin, the tuberculosis mania broke and continued for years leaving various social and medical organizations, alike, to promise that which even the sobered thought of today has not wholly discovered. Millions of dollars have been and are still being wasted on building expensive and useless sanatoria to house the tuberculous patients who might better be cared for in the ^{hospitals} pavilions and the fear of adults acquiring tuberculosis has resulted in a wider spread of the tuberculosis phobia. Tuberculosis in civilization is acquired in infancy and early childhood not in adult life among city dwellers but the tuberculosis mania, especially with the social organizations and physicians, continued and still goes on. *See TB paper by Fishberg authority + author of Standard TB text book in Am. Museum July, 1928*

Smallpox and vaccination against it is another story for vaccination properly done, always to be followed by revaccination in the early years-infancy, school age and then on entrance into industry, offers a nearly complete protection against the disease. With the discovery by Force, of Jenner's hidden paper on "The Reaction of Protection", a guide to vaccination against smallpox, offers a certain protection against the disease. Smallpox was the one disease which in the early years we knew how to prevent and that we did not do. Epidemic after epidemic swept over the country, mild in form as the Maryland, and vicinity outbreaks of the late 90s, when it prevailed in such mild forms, as to be designated "Cuban Itch", with but a few hours illness and then the eruption; the disease so mild that patients sat about in the street and in the stores scratching their ^{faces} sides. Compare this to the ^{various} ~~famous~~ epidemic of the mid-west in the 20s when in some outbreaks of a thousand or more reported cases the mortality was 15%/. Between these mild and severe epidemics, Rochester, notwithstanding repeated warnings, about the unvaccinated and the lack of

hospital bed facilities to cope with an epidemic, ^{was} ~~were~~ after a few scattered group of cases, in the late 90s and early 1900, plunged into the 1000 cases and 100 deaths epidemic of 1901-02. So hesitant was the city to prepare and so slow and so inadequate did it proceed that not only did it then severely suffer in sickness, death, expense and loss of business but it was, thereafter, and for years, with the greatest difficulty, that the Health Bureau was able to get children and adults vaccinated and then only after years of work.

R A B I E S

In 1900, the health officer learning that rabies was appearing in the United States went to New York to visit Dr. Rambond who had been doing work in the Pasteur Institute. Dr. Rambond then said that he believed that we were on the eve of a rabies epidemic. He exhibited some of his rabid animals and experimental methods and said that we'd better acquaint ourselves with the disease. In a few months it broke. The health officer without experience ^{in Rabies} or assistance, with the press- four ^{of} five papers- ^{against} physicians, with notably few exceptions, of the administration, and the great mass of the public against establishing a laboratory for the municipal detection of rabies, and set-up an animal house in the rear of his home where experimental and affected animals were kept. (Hasty visit to Hopkins, Philadelphia and Cornell, learned methods and applied them.)

The work was difficult but harder still was it to convince profession and people of the presence of the disease for less than 20% of the infected animals were furious. Most cases were of the dumb rabies with jaw drop and hind quarter paralysis. Dumb rabies, to public and profession, did not mean rabies. Cages were set in front of the City Hall with furious animals. All brain specimens from suspected

animals were first confirmed elsewhere before announcement was made of rabies. Then when a dog owner's protective association, of one thousand members, was organized, when the animals, dogs, cats, horses, came together to be unmistakably affected, Mayor Carnahan appointed a commission of inquiry-Drs. Angell, Zimmer, Keegan-and they found for the Health Bureau, two or three persons bitten by proved rabid animals (cat) who declined to take vaccine and who died. In two cases we got brain specimens and inoculated animals also came down with the disease and they, too, became rabid. We sent a specimen abroad to Germany. Among the worst obstacles to overcome were the dilatory tactics of the Humane Society, charged with animal quarantine, who haltingly, to the point of obstruction, blocked the muzzling ordinance and did not promptly take and detain unmuzzled dogs and other animals. After the widespread outbreak in Rochester and vicinity there were rabies epidemics limited by the same halting measures. In addition to sporadic outbreaks there were marked outbreaks of the disease in '13, '14, '15 and in the 20s with several proved human deaths.

Milk Stations

In the early 90s there began a wide movement to clean up the cow stables, the cows, the utensils and to make better provision for handling milk. In the United States, Nathan Straus had opened milk stations for the sale of pasteurized milk. So dirty were the cows, the stables and everything pertaining to milk that it became necessary to pasteurize then, and for long, by "flash" by which milk was heated to 160° just long enough so that it would not spoil. The infant mortality--so many babies were nursing bottle fed-- was appalling and Straus' work helped to focus the flighty minds of the public upon the dangers of dirty milk.

We, in Rochester, followed his example, and opened milk stations in 1897, for the sale of pasteurized milk but so bad was flash pasteurization, so impossible was it to pasteurize the dirty milk, thus produced, that we soon stopped pasteurization and devoted as much time as possible, with country and city inspection, to clean up the cows that were then most of them caked flanks with manure in dark and dirty stables. The milk, the men, the containers, dirty so dirty.

Prior to the close of the century, milk--two-third to three-fourths of it--was produced on farms within driving distance of the city and 5-10% of it was alley milk from a neighbor who kept two, three or more cows in alley stables surrounded by conditions of unbelievable filth. There were a hundred or more such alley stables kept mainly by "widow women" who the politicians sought to protect in their filthiness. The stables were cold and dirty in winter, hot and swarming with flies in the summer, where the milk was often kept just back of the cows with the accidents that would and did happen.

Endeavors to clean up began in the early '90s and were haltingly carried on, interrupted by necessary attention of the small force to ~~the~~ epidemic⁵ of smallpox etc. First ordinance in what was then a real attempt to clean up began in 1892, with the appointment of a milk inspector, when the work was almost wholly directed against skimming and watering--Sat. & Sunday 37 samples-- 20% watered. There were through 1892, 491 milk venders, 80% of them small producers (the day of the large milk companies was but just beginning) 5.5 or) 50% of samples examined, twelve below standard and there were five) convictions in police court. In 1893, the first detailed report of the milk inspector estimating 50,000 quarts of milk sold daily,

5% drawn by railroad. Thirty-three per cent of the nearby dealers fed quantities of brewers' grains, often a sodden fermenting mess, later, in part, prohibited by ordinance, though 25% of food for some of the cattle. In 1894, a drunken epileptic, without experience, was appointed assistant milk inspector to inspect cow stables and city milk. All of the inspection at that time was necessarily directed to making city cow stables less filthy. The milk examinations were made to prevent watering and skimming. In 1894, there also began spasmodic attempts to awaken the public to the conditions prevailing in and around milk.

Then, in '96 and '97, milk inspection was extended to reach the men within driving distance of the city and a few inspections of milk produced at a distance were made by the then newly appointed milk inspector. About this time- mid 90s- the State Health Department had a Tuberculosis Milk Commission which as long as it funds lasted did good work. But the legislature declined further to appropriate money for the work and it stopped. Not until 1897, with the opening of the Summer Milk Stations, and the extension of milk inspection to the distant country producers, the added work done by the milk inspector-(bacteria examination began in 1898) who then became chemist and milk bacteriologist- was real attempt begun at milk protection from cow to consumer. To these measures the milkmen countered by putting formal in milk, straining it through heavy layers of absorbent cotton, anything to conceal dirt and bacteria. One man was found watering milk and prosecuted in police court. When the chemist showed that the water separated from his milk was identical with that in his well, he was after his conviction, found, by the milk inspector, taking Hemlock water from the Rochester water supply in a can to his farm, frankly telling the inspector that he wouldn't be caught again. Another man, shockingly dirty in person and living

in a filthy manner, brought to the Health Bureau a straining cloth filled with manure whose weight, as he brought it, exceeded four ounces, saying; " I'am a clean man. I strain the dirt out of my milk." For years we exhibited this dirty, ^{straining}~~strong~~ cloth enclosed in a 30x40 frame between glass plates. Beginning early in '99 we began a nearly monthly, systematic inspection of all producers and retailers- the dirtiest ones receiving more attention and we also began monthly bacteria ^{counts}~~examination~~ of milk from the retailers. In 1900, we could dimly see an improvement in many of the farms on which cows were cleaner, stables brighter and manure got out to the land earlier and more frequently but the housing of milk was still, in the main, in a corner of the barn or in the dwelling. Milk rooms came later. Just as we were getting cooperation from 75% / of farms and dealers, then our work was all but stopped by the Rabies epidemic of 1900-01 and the smallpox epidemic of 1901-02. Recovering from these earlier and later blows, the obstructionists and the politicians as when the then Mayor Aldredge said of the milk inspector-" His is a useless function" and may as well be disposed of, or, as when the common council held up an appropriation, of less than a thousand dollars, for milk stations and we countered by getting a subscription from a few private citizens to pay the bills. Then the health officer believed it necessary to accept some of the invitations to discuss the Rochester milk work in lantern talks that were coming from away, so that the city might learn what was thought of it elsewhere. So, then, and in succeeding years, such talks were given in, and papers read- Boston, New York, Chicago, Milwaukee, Toronto and smaller cities. Pamphlets were prepared and distributed, papers read, and invitations came from England and France and favorable comments in two English books. At home there were several magazine; articles and even books on related subjects commented

favorably on the work. Dr. Roby had a paper at Rome, Italy. The work was hard to get to the people at home. So talks in churches, schools, fraternal societies were given and the Chief Milk Inspector-W.O.Marshall--then an old man, but friendly to the boss, was so filled with enthusiasm that he worked overtime and he couldn't be bought--though the milkmen tried it. Then seeing that both the producers and the retailers had to be shown we ^{put} bought a model ice house after the plan of that genius--Dr. Wheelock Rider--published a pamphlet in which we showed how an ice house could be built holding four tons of ice for a total expense of \$50.00 that would keep ice for two years. (Ice House article published in Good Housekeeping.) We also set up in the Health Bureau basement a model dairy, small boiler, hot water, wash rack and can and bottle sterilizer and invited the retailers to see what could be done for \$150.00. The farmers on the Rochester Milk Shed built several hundred such ice houses.

Bacteria Counts

Prior to 1900, when we began systematic bacteria counts, both of dealers from the wagons and summer milk stations, the average of 22 counts at the Municipal ^{no station} Hospital was 14,000; that of the dealers 2,000,000/.

1900 The prosecutions of dealers in police court for milk below standard yielded fines of \$675. 4,000/ samples 10 formal. First guinea pig injections of 12 animals 60% tuberculosis of liver and spleen. The gross specimens of these animals being preserved in formal jelly and shown to men whose milk had been so tested. (See paper by Goler and Ellinger--the work based on that of German and the U.S. P.H. Service investigations.) (See vol.3-M Tuberculosis & Milk C. Letter 2/6/00) To these demonstrations of the widespread inspection of milk the dealers objected and the Certified Milk Commission fought them. Then we were getting the confidence of the small dealer but the

larger dealers so objected through the Commissioner of Public Safety that the work had to be discontinued. (Scrap Book # 1 p. 3) (Anderson Jour. of Inf. Diseases 1907-08.) In 1909, the Cullinan herd--75⁺ cattle--Avon-- were given a tuberculosis free certificate by a veterinarian, on physical examination, when on tuberculin test and slaughter 3/4 were found tuberculous. One of the larger and wealthier milk producers, whose large herd of highly bred cattle was found by physical examination, had over half tuberculous on tuberculosis test and slaughter. The milkmen also objected to the publicity given to bacteria counts (S.B. # 2 9/21/00.) While the milkmen, the politicians and the Certified Milk Commission succeeding in blocking the efforts of the ^{H. B.} ~~health officer~~ to show that milk was tuberculosis infected they tried to go further by (c.1908) trying by legislature and common council enactment to take the inspection and control of milk away from the health officer and place it in the hands of the Commissioner of Public Safety.

In 1901 G. S. Forysth--~~the~~ ex-district attorney and attorney for milk dealers, said the bacteria test was impossible and he, with the politicians, tried to transfer milk control from the health officer to the Commissioner of Public Safety. Hundreds of letters, commending and condemning (Scrap Book 9/21/01) written to milkmen with duplicates to the producers (note M vol 3 coll. papers) Common Council.

Icing ordinance made a joke by declaring that the milk should be 50° F or less at time of delivery to consumer and that two inspectors be required to secure *evidence*, Cogswell, Brighton Place Dairy--furnished (see vol 3) milk to well to do neighborhoods, had many of his producers dirty, with no place to keep milk away from stables. A Civil War veteran, retired butcher, ~~meat~~ and assistant milk inspector

was suspended by the health officer for not icing samples for bacteria examination and not collecting duplicates, was, by the Commissioner of Public Safety, fined loss of pay during suspension.

Health Officer asked five weeks leave-privilege of paying his own expenses--to accept an invitation to read a paper at Paris Milk Congress--denied leave by Commissioner of Public Safety and Mayor Cutler. In 1906 at a common council hearing on a milk ordinance F.M. Goff--attorney for milk dealers--said we should not raise price of milk (see papers). *for the sake of Howard Baker*

1906

Three filthy milkmen with counts of $3\frac{1}{2}$ million had licenses revoked but went on selling milk (see letter to Corporation Counsel 9.28.06) How much longer are they to be permitted to poison babies? They are not licensed to do so. As the price of land near city rose and as combinations resulted in the formation of large milk companies with "pure"^{milk} the difficulties of cleaning cows and stables increased. We then had but one and part-time of another milk inspector for the country district-average 20-30 men in area-and we could, except in the dirtiest places, make but two to four inspections yearly. Now, as well as much later, pasteurization by "flash" was a farce. Milk strained through layers of absorbent cotton or centrifuged and then "flash" heated to keep the milk from spoiling the insoluble dirt retained, the soluble going through with the milk. About this time we began using the Lorenz milk tester through which an inch cotton disk a pint of milk was forced. The cotton disks were mailed to the retailer. Even after the milk had been filtered by the producers, and sometime again by the retailer, the disks bore visible evidences of the dirtiness of the milk and were redolent of the barnyard-a little more strange through layers

*Supplies as
file*

of absorbent-compelled us in the end to rely on bacteria counts as a rough way of determining milk cleanliness. At this time we made the widely used statement that citizens of Rochester not be permitted to drink in their milk more than a quarter of a ton of cow manure annually. To this statement the milkmen objected and they also said that they were being persecuted because inspections were made at unreasonable hours. We asked what they wished us to understand by ~~un~~reasonable hours. When milkmen licenses were revoked by us and we were having trouble with only about 10% of them Police Judge Chadsey and the politicians said we were persecuting these men! (Judges Ernst, before, and ^{later} Judges Gillette and Kohlmetz were fair.)

Communicable Diseases through Milk--
Typhoid Fever, Scarlet Fever

There were outbreaks of scarlet fever traced to a milkman with cases in his family and there were several outbreaks of typhoid fever, the most distressing in 1906, consisting of 13 to 17 cases and three deaths, perhaps, more, traceable to one man who though unlicensed, the Commissioner of Public Safety would not give police aid to stop. Even a warrant for his arrest was refused by the police court--Views of Corporation Counsel Webb (Letter 11/28/08 p.39 etc.) on milk powers under the ordinance (L. 2/27/08) Letter to assistant district attorney Bechtold reporting eight milkmen whose cases had been dismissed or warrants refused by police court. (1.21.'09)

Rochester Kindergarten Association gave \$120.00 to pay for a visiting nurse at milk stations (letter 6.7.10) 1910 standard moving pictures of summer milk stations. Mother and babies First shown at St. Stanislaus School-(L. 10-.13-'10) later at No.9-film

film donated and camera loaned by Eastman Kodak. 1911 attempted legislation by Foly bill to plan milk work in New York, Buffalo, and Rochester, under a board of three appointed by the Governor - defeated. 1911 - Rosenau and Park, under the notorious North, tried to form a ~~natural~~ milk commission and divide milk into four classes (q.v. 1912) Milk no longer sold in summer milk stations and name changed to welfare stations with emphasis on immunization against diphtheria, whooping cough etc., 1915, requested and got cooperation from all but large dealers, that milkmen be vaccinated against typhoid or show by Widal test and two negative stool cultures that they were not positive for typhoid and not infectious. Hiram Wood, attorney for the milkmen, in a Supreme Court action, prevented the Health Bureau from inspecting cream used for ice cream. The Health Bureau had stated that there was nearly everything in the ice cream of the Rochester Ice Cream Company but cream. Many examinations showed butterfat 1/10 of 1 per cent-- and advertised as food. New York city had found glue and we asked ; " Why pick on glue?" Shortly after these examinations the percentage of cream rose to 8% and over. Then the Rochester Ice Cream Company was furious. In 1917 there was still some "dipped" milk. 1919- we began ^{sending} ~~decidedly~~ our milk inspectors to Cornell University for the shorter course (three weeks) in dairy sanitation. 1919- seven outbreaks of milkbourne communicable disease- chiefly typhoid in the past 15 years.

The Rochester Public Health Association and the Milk Commission of the Chamber of Commerce, backing the milkmen, tried to increase the consumption of milk. Though desirable, where were the people, who most needed milk, to get the money to pay for it-- they couldn't tell. Pasteurization - not so much against it as against its insufficiency-- milk was heated enough to keep it from spoiling.

(L. 10/6/19 and 10/22/19. Also under M vol. 5 voll. papers.)

1921 R.P.H. & C.C. opened private milk stations and prenatal work duplicating the work the Health Bureau was already doing. (Notes: earlier on milk pasteurization-coll. papers vol. 2 and 3 under M.)

At various times, at least twice a year, the health officer went over a part of the milkshed with one of the milk inspectors. There were still between 5 & 10 milkmen, whose licenses had been revoked by the health officer, selling milk without licenses and who, notwithstanding their dirt and more than one conviction, sold milk inspite of the law. All pressure was used by both politicians and some citizens and lawyers whose clients they were even by the various Commissioners of Public Safety to get the Health Bureau to issue licenses to the dirty milkmen. The police court, ^{under Chadsey} before whose bar we had to appear to present these men, not only gave no help but they obstructed the law. Eight years of the stupid ^{3 years he believed} Chadsey and eight years of the political Wilder and in between only Judge ^s Gillette and Kohlmetz who were always fair in handling milk cases. We had for years, up to 1929, an able chief inspector, who was more interested in politics than in milk and for whom, in reward for his political services, had set up a County Department of Sanitation of which he became the chief at \$5,000 per annum. When he retired from City employment he tried to foist upon us a drinking, illiterate man, next below him in the service, but he did not succeed in doing so, thanks to the then Story administration and the Civil Service ^{Commission} didn't quite dare even with its willing tool- ^{the Secy} (willing to do anything to further boss rule) the secretary to the commission. When the chief milk inspector resigned we-the health officer and one of the milk inspectors, went over some of the area inspected by him and the friend he tried to place and some of the

cow barns and cows in this area were less desirable than we had been led by him to believe. The State Health Department had sent a veterinary inspector--Dr. Peacock--to look over some of the barns and cows and found them dirty. (See letter 1929) And the State Department placed the former chief inspector at the head of a milk program meeting. Succeeding this man, we ~~succeeded~~^{got} through the aid of Commissioner Baker, ~~in getting~~ a young Cornell graduate, B.S. in agriculture, with experience in dairy management--Mr. George West and we had a hard time getting him because of the politicians and the civil service. Mr. West proved himself to be an intelligent and indefatigable, scientific, worker and also something of a diplomat who, in the course of a few months won the respect and admiration of the force-sanitary as well as milk inspectors--for whose work he was responsible.

For long we had insisted with some success that milk should not be received in Rochester unless the cows and barns were inspected by us. Then dairy combinations were being made, the small dealer forced out or bought up and not only the milk retailer combinations but the ice cream companies were trying to bring to the city Western cream from Illinois and Wisconsin. After a struggle in which some of it came in we succeeded, mainly through Mr. West's work, in getting the General Ice Cream Company to exclude such cream from Rochester though the nearby cities were taking it. The conditions under which such cream was being produced--both on the Rochester Milk Shed were unbelievable dirty. Ice Cream 1/10 1/2 % fat

With the reorganization of the inspection service came a new and added improvement both in scope and extent when the laboratories of the Health Bureau were moved to the U of R Medical School and when Mr. Leahy Chemist and Milk Bacteriologist enthusiastically and

scientifically extended and amplified both chemical and milk examinations. In 1929 the health officer went to inspect milk farms in Wadsworth, Macedon etc. with Dr. Johnson, ^{Ch/Ins + Ins} West, Finein in the area, to which Finein had been transferred, and well had Lawrence done his work, in his old area. On this trip Mr. Rayment of E.K. went with us to show us how to run the new Cine Kodak and we got film and a dozen stills of ~~all the~~ several hundred cows-- 2 or 3 dirty--and many barns clean.

The Commissioner of Public Safety objected to the health officer revoking milkmen's licenses--see letter C.1927 (lost date). About the milkman McGuire with whom we had much trouble in keeping out of business who got into a fight with one of our inspectors in which the milk man's wife joined. This was mainly the fault of our inspector who is N.G. though politically and ecclesiastically right. (7.23.30 letter book) (Then a typhoid carrier belonging in Dansville one whom we declined to take after the usual delays to St. Dept of Health.) McGuire is the milkman who had a group of politicians including a State Senator try to intercede for him and who got nine adjournments of his case in police court by Judge Wilder (continue over- see H.Bull.)

In 1931, wrote anew milk ordinance satisfactory both to the Health Bureau and to the milkmen but could not get it passed by the Common Council.

In the McGuire case Dr. Peacock, Veterinarian, came from Albany, and other witnesses attended a hearing before the Commissioner of Public Safety. The Corporation Counsel called it a family party. The Health Officer said; " A funeral party" because so many children had doubtless suffered through McGuire's milk. And, then, the hearing was adjourned after all the witnesses had been assembled, because ^{Mr} Bostwick, political attorney for McGuire, had filed a notice of appeal, about which the Corporation Counsel knew, and knew that

the hearing would be futile, yet said nothing about it until we all met. Still another former Commissioner of public safety spoke for McGuire. And, then, the Commissioner of public safety, after asking that an informal and irregular hearing be held in the office of Nier, who was McGuire's lawyer and a former commissioner of public safety, a political lawyer, so that McGuire might be given another chance after Dr. Peacock had said that his place was one of the dirtiest that he had ever seen. He didn't get it- the chance- from the health officer but he kept on selling milk. Finally McGuire wanted to know whether we would permit him to sell his route. We told him -No ! it was a subterfuge. " Bring in your license, as directed, then your successor might start in business anywhere he pleases. " Results of all this were that McGuire, with the backing of his people continued to sell milk for long after the proceedings against him ceased.

HOUSING AND SMOKE

Beginning about 1898, attempts were made to show to the people the manner in which large numbers of their fellow citizens lived in tenements and blocks -- the smoke, high street car fares and bad service and the high prices of gas and electricity. Lantern talks were given in churches and schools and whenever invitation came from small groups for such meetings. In the early 1900s Dr. Edward Devine, of New York City, made acquainted with the bad housing and conditions here came, saw, and published, a long article in New York papers (q.v. scrap book) in which he showed, from cases pointed out and pictures furnished by us, what was to be found in blocks, tenements even " dumbell tenements" in Rochester the city of homes. This article awakened a storm of protest from some of the good citizens who had no counterproof but to say; 'It

isn't so. ! (scrap book) Showing the tenements and exhibiting smoke pictures, smoke exhaustion --it was later shown by smoke estimation, from apparatus exposed on the roof of the Health Bureau that an average of $1\frac{1}{2}$ to $2\frac{1}{4}$ tons of smoke and dust fell on the city each day. Later, much later, a smoke inspector was appointed who wasn't of much use until under the Story administration a telescope was mounted on the roof of the old Chamber of Commerce building and establishments, with long smoke belching chimneys, notified by telephone that they must not smoke so much. The work was not carried on for long after 1930.

^{about}
Gara 1908, George Eastman became interested in a housing scheme promoted by an Eastern capitalist. They proposed to build "model tenements" on State Street to be rented at a low rental to the Eastman Kodak employees. E.S. Rumball, minister of the Unitarian church, spoke and wrote against them as did the health officer who said a "model tenement is a model boil" and repeated it at a housing congress in Philadelphia. George Eastman invited the health officer to lunch. At the table the health officer defended his position and told George Eastman that the wages paid by Eastman Kodak were insufficient to enable the workmen to live even in such tenements. We parted and for several years there was no communication between us ~~as~~ Contributions of small sums to carry on health work stopped. The "model tenements" were not built. The only reminder of the project was a huge pile of bricks from old blocks that had been torn down on State, Brown and Jay Streets in preparation for building the "model tenements."

WATER

Sandwiched with attempts at improving the milk was the work of protecting the water supply, by an early sanitary and biological survey of Hemlock lake, by Prof. C.W. Dodge, which included the weekly estimation of the lake flora including the bacteria and a weekly chemical examination of the water by the Health Bureau Chemist, Mr. F.R. Ellinger. These examinations were continued from the beginning to the end of the period considered and they furnished much information about the water. Serving also as indications of contamination; as when circa March 1904, colon was found in the examination and found to be due to washing from the hills during a sudden extensive thaw and again when, C 1910, the State Department of Public Works made a cross-connection between contaminated Holley river/water and the Hemlock mains, resulting in the contamination of the water/supplied to 60,000 people in the Lake Avenue district and a limited outbreak of typhoid which cost the city, in settlement of suits, about \$ 30,000.

WASTES, GARBAGE, RATS and FLIES

Garbage, until the Cutler administration, 1904, had been collected in the old way by teams and dumped in outlying land and fed to pigs. Its supervision was under a Superintendent of Garbage appointed by the Board of Health. There were attempts at a more scientific garbage disposal under the Board of Health but such attempts resulted in waste for the city and victory and dollars for the politician. Even under Mr. Cutler the early works erected for garbage disposal had to be entirely rebuilt at a cost of thousands of dollars, so garbage collection and disposal was wasteful and insufficient until Mr. Baker became Commissioner of Public Works under VanZandt.

In the middle ^{1900's} ~~20's~~ ^{some} cows were kept in the city, more than 10,000 horses were housed, many of them in the ^{central} ~~area~~ ^{Mania}, tons of manure collected annually-- a pile four acres in extent and as high as the

highest church steeple. There were still some, though not many, privy vaults. In all of this putrescible material, ^{plants} and the rendering and soap works, flies swarmed and rats bred--rats so numerous that the large downtown department stores were forced to keep ferrets in a vain attempt to visibly diminish the rat population. It should be remembered that so late as the building of the Eastman Theatre the Health Bureau was called upon for help because the rats ate the stops off the new organ. Rats in early 1900, were estimated to cause damage to the extent of more than \$25,000 annually, in the Main Street stores from the old canal to East Avenue. Not until better garbage collection and disposal, until the automobile displaced the horse, until cows were eliminated from the city, until fly campaigns were promoted and rat elimination campaigns were begun and promoted by the Health Bureau, did we become cleaner and the sewers of smell no longer so grossly offended.

Municipal Milk Stations to Pre-Natal Clinics
(General Summary of Work from '90 to 1930)

We opened first milk station July 1897, and a second station in August. Placed a nurse, Miss Annie Kennedy, loaned by General Hospital, on the John Garnish farm in Brighton, where in an old election booth with an attached tent fly, running water, wash trays, and sterilizer--all home made--had been installed. Two nurses were loaned to us by St. Mary's and by the Genesee Hospitals and in the Milk Stations opened at Hudson and Chatham streets and at Jay Street opposite Holy Family Church, in rented stores, the work began. The milk was prepared on the farm in three dilutions and full milk was put into sterile bottles, iced, and sent to the stations, where, with advice and printed booklets to mothers it was distributed to them. Nurses were in the stations in the morning and made home visits in the afternoon. This work grew from the two original stations to four in 1900, at a cost of \$900.00 per annum. Following this early milk work there was a reduction in infant mortality, which was commented on by the press both at home and abroad. (See various publications, scrap books.) Concurrently, the milk inspectors were getting farms and dairies cleaned out and caked manure was, for the first time, being removed from many cows; absorbent cotton disc filtrates from a pint of milk were being shown to farmers and milkmen; (Q.V.) the chemist was doing stated bacterial counts; quantitatively analysing samples of milk which appeared to be below standard; and chemist and milk inspectors were active in attempts at bringing the guilty into police court for judgment. (see reports and scrap book for the difficulties with Judge Chadsey and later (c.1930) Judge Wilder, the present police Court judge.

We were then striving for an icing ordinance which would prohibit the sale of milk at a temperature over 50.F. We got such an ordinance

with a "joker" prohibiting the sale of milk over 50°F at the time of delivery to the consumer which nullified the force and effect of the ordinance as it was intended to do, by compelling the presence of two inspectors, armed with thermometers, who must take the temperature of the milk in the presence of the milkman and as it was being delivered (See D.&C. of 7/23/07/ pg. 86 Scrap Book and others). The chairman, of the common council committee which drew and introduced this ordinance, became shortly, thereafter, a Judge of the City Court. The effect, apparently produced by this work, was not in the milk sold --300 to 400 babies were at most supplied in July and August--it was in the almost constant hammering on the dirty farmer by the milk inspector, contests in the courts; appeals to legislators; newspaper and other publicity; the work of the chemist and the milk inspectors; the nurses in the summer milk stations and their visits in the homes, and the word of mouth simple lessons by which they helped to introduce or to re-establish maternal nursing. These and more were the things, rather than milk alone, which helped us to get results. (Milk Book; Ice House).

In 1907, the Woman's Educational and Industrial Union contributed \$1000.00 to pay for the services of the first school nurse to work under the direction of the Health Officer. In 1909, the first three health nurses were appointed in the Health Bureau to work in the schools. Then, and as soon thereafter, as additional nurses were appointed, these nurses, taking vacations earlier and later in the season, were assigned to do work in the stations in the neighborhood of the schools to which they were attached so that acquaintance with the children might more easily lead to the mother and so to the baby. Then, too, the schools, rather than stores, hospitals as the Genesee,

neighborhood centers like Baden Street, or a police station ^{Lyell Ave} began to be increasingly used as welfare rather than milk stations, and, with the movement from milk to a broader welfare the sale of milk was discontinued and instead the prevention of disease, such as diphtheria, was more heavily stressed. After having discontinued the sale of milk, in nursing bottles, in 1907, we for three years sold milk in pints and quarts at cost and then altogether stopped its sale. The sale of milk in the stations ceased before our defeat in the icing ordinance and before the (long c. about five years) struggle with Judge Chadsey in the police court.

Child welfare work was at first assisted by the dispensary of the Rochester Public Health Association, by the out-patient departments of the Baden Street Dispensary, the General and Genesee Hospitals and by the volunteer clinical work in the schools of Dr. Franklin Bock and by the early work of the Rochester Dental Society in early opening a dental clinic in the Rochester Public Health Association and later clinics in Schools 14 and 26. To these clinics, merged with the ^(Eastman) Rochester Dental Dispensary in 1916, our nurses took children in ever increasing numbers. In 1905, Henry Lomb provided for the payment of six medical school inspectors for six months and these physicians found, in the first three or four months work in the schools, a number of children suffering from communicable disease--22 of them having diphtheria.

In 1906, the Health Bureau's staff of seven physicians, which until then had cared for the City's poor, was increased to twelve and their duties enlarged to include the medical inspection of school children. (Ann.Rept. p.327 1910) April 1910 was the last year in which milk was sold (quarts and pints) from the stations,

then located at the Genesee Hospital, the Baden Street Dispensary, the Davis Street Housekeeping Center, the Bureau for Foreigners, Frank Street and at a store at 191 West Avenue. The General Hospital would have none of us. The services of two nurses were donated, one by the Genesee Hospital, for the season, and one by the Rochester Kindergarten Association for a year, for whose services that Association paid \$1,000. The Kindergarten Association nurse was Miss Katherine D'Olier who began her work as a pre-natal nurse and was thus ^(over) the first pre-natal, municipal nurse. The three school nurses with one additional nurse acted as visiting nurses for the districts, in which the stations were located, the other nurses remaining in the stations mornings.

S u m m a r y u n t i l 1 9 1 1

Milk Stations opened	1897
Rochester Public Health Association (Dr. Bock, Ear, Nose, and Throat)	1915? 1902(?)
Rochester Dental Society, Dental Clinic, at Rochester Public Health Association	1904
Six(6) Medical School Inspectors (Paid by Henry Lomb)	1905
Medical School Inspection; H.B. staff increased from 7 to 12	1906
Medical School Nursing--Women's Educational and Industrial Union paid \$1000, sent a communication to Mayor Cutler, asking he appoint 4 nurses.	1907
Health Bureau got 3 nurses for school work	1909
" " moved Welfare(8) Stations to <i>School</i> . 4,5,9,12,26,27	1910
Health Bureau got an additional nurse, 4 in all	1913
" " " 4 " " 8 " "	1914
" " " 11 school nurses, in Health Bureau to inspect children for Health Bureau work permits; divided between Jun. High(lice) and St. Stanislaus, vaccination.	1917

Welfare Stat.	Pub.	Par.		School Nurses	Pub.	Par.
1912	6	1			8	
1913	8	2			8	
1915	10	2			8	
1919	11	3			11	
1922	15	2	(Medical Staff increase to		24	6
1923	17	2	18) Dr. Johnson 2nd Dept. H.O. (Mrs. Russ, Sup. Nurse.)		27	6
1924					35	8
1925	19	2			38	8
1927					47	13
1929	40	12			51	15
1930	40	10			52	18

From 1911, a tabular report of the work of the medical and nursing was published in the monthly bulletins and there was a summary of the work in the annual report, until 1926, when that report was discontinued because of difficulties with the printer, a politician who would not make corrections even of his own many mistakes.

Prior to 1922, the figures as well as the matter in the reports are unreliable because of printing and clerical errors and the statements of five of the twelve medical inspectors are, because of carelessness drunkenness and disease, well-nigh worthless. Two of the first three nurses appointed were excellent well-trained nurses, the third was valueless for our work.

In 1913, a nurse was assigned to the inspection of applicants for child labor permits, and to the issuance of work certificates to those children who, by test, were found physically and mentally able, according to the standards of that day. To get such a certificate, the child then must have passed the third grade, be up to weight and height for age; vision, hearing, upper breathing apparatus and teeth

normal or in repair; the fatigue curve must not fall below a given norm, as shown by the recording ergograph; and, when indicated, the child must pass other rough mental and physical tests. In 1917, stated vaccinations began in the parochial schools when the Bishop sent a letter to the pastors requesting that vaccinations be permitted in the parochial schools. Some of the pastors gladly assented, some gave a reluctant consent; and some few--Corpus Christi, & St. Mary--declined. In 1922, the nurses were increased to 30, the medical inspectors to 18. In 1920, the first nurse was assigned to a high school. In the beginning it had not been planned to assign nurses to high schools, but it was later found that so many of the girls came to school without knowledge of themselves at "the change of 14 years" that nurses in high schools were for this and other reasons deemed necessities.

In 1922, the parochial schools having withdrawn their objections to Medical School Inspection and Nursing the Medical Staff was increased to 18 the Nurses to 30 and, according to population, our physicians and nurses were prorated nearly equally between public and parochial schools.

Then in 1922, Dr. Johnson was taken from the medical staff and appointed deputy health officer (part-time) in charge of Medical school inspection and the medical care of the sick poor, insane etc. and Mrs. N.L. Russ was appointed Supervising Nurse. This was of much relief to the health officer. Some public and parochial schools exhibited a reluctance to accept the service offered because of the inherent opposition shown by people to change. (Epidemic of smallpox at St. Bernards Seminary). In 1919, the expensive, and wasteful, Public Health Nursing Association was organized and while attempts were made to link the Health Bureau nurses and the Public Health Nursing Association, either by one taking over the other or the other taking over the one; these attempts failed, because of medical

and other political reasons. About 1914, some of the private groups and the Health Bureau tried to organize a visiting nurses group from the hospitals, private associations, insurance companies and the Health Bureau, merging the nurses into one group operating from the Health Bureau as a center with all of the hospitals and the private groups as subsidiaries. Such a plan would have included the school nurses, with the schools as additional subordinate centers, where the nurses acquaintance in the school district would help the work and where there would be no additional cost for rent, heat, light or telephones. The attempt failed largely because the hospitals declined to have their discharged patients visited by a nurse from another hospital, whether the patient lived near or distant from the hospital claiming a "right" to the patient. Then there was always the sinister influence of the Chamber of Commerce which then and now controls the Rochester philanthropies; ^{the discredited} Rochester Public Health Association; Tuberculosis Association; Visiting Nurses Association; Community Chest supported Hospitals, and the waste of funds of the Community Chest.

Abolish the Tuberculosis Association	save \$20,000
Combine Visiting and Health Nurses	20,000
Stop putting patients in Community Chest supported Hospitals while there are vacant beds in the Municipal Hospital	20,000
Close one Community Chest Hospital (Preferably Highland)	
Close the "County Calamity"	

Close Iola and now that Tuberculosophobia has with the Tuberculosis Association disappeared, redistribute the tuberculous among the other hospitals, in separate wards, where they belong so that the physicians may learn tuberculosis by seeing it, which they can not now do.

In the early 1900's, the Rochester Public Health Association, opened a Nose, Ear and Throat Dispensary and in the same rooms the Rochester Dental Society began to operate it's dental clinic. To these clinics on South Washington Street and the "Toe Path", in high-ceiling^d old houses of a departed aristocracy--houses bought by Henry Lomb and given to the Mechanics Institute, and as Mr. Lomb said, kindly loaned to the association by the Mechanics Institute--children from the schools were sent for treatment and corrective work. Children went to these clinics because they knew that working papers would not be issued to them unless they were in good physical condition, and that defects in eyes, ears, nose throat and teeth had first been corrected. (ruses to try to avoid this work) Some tonsil-adenoid work was done in these clinics by Dr. Bock. Here it is to be remembered that hospitals were not then interested in repair work, (Baden Street Dispensary then, as always, a refuge). Out-patient departments were still used as "fillers" rather than bulwarks against disease.

When Medical School Inspection and Nursing began there was little interest, either in it or in preventive medicine, by the medical men, who like all physicians of the period were clinicians--interested in patients in bed--not in keeping them out of bed, in preventing disease.

Until nurses were well established in the schools it was difficult to get children, especially the younger ones to go to the clinics and it was well into the 20s when there were 20 or more nurses and when one nurse would take 20 to 30 or more children in a group to clinics at hospitals, before the problem of how to get children to the clinics and how to get signed parental consents for them and for treatment became solved. Then there were the long distances to the clinics; Baden Street could not take all of the children from the populous Northeast section; Highland and St. Mary's then had no out-patient

departments; the General took a large number from the North, South, West, Central, etc. We needed a Northeast clinic, as an example of what might be done in a school, Dr. Bock, already serving the Rochester Public Health Association agreed, with permission of the school authorities, and cooperating with the Health Bureau to start a clinic in #26 school, now Washington High School.(gratis, as all his work was).

A similar clinic had been opened the year before (1910) in #14 school so that at the end of 1911, we had two ear, nose and throat clinics in the schools, to which an eye section was later added by Dr. Snell and assistants. The Rochester Dental Society heartily joined in these enterprises; securing one whole dental outfit, through the gift of Mr. William Bausch, another clinic chair, instruments etc. from dental manufacturers, friends of the work and from their own treasury. The Rochester Dental Society were a most accomplished lot of mendicants for the good of the dental service and chief among them was the late Dr. W.W. Belcher, Secretary of the Society and Editor of the Dental Journal. Will Hodge the actor, known to many Rochesterians, and to Dr. Belcher, had promised to give \$1000.00 to the city's most worthy philanthropy. Dr. Belcher early began a vigorous all front and rear campaign for that money and he got it for the school clinics of the Dental Society. Dr. Belcher and his friends had in glowing terms presented to Hodge the work of the dental clinics in the schools. This was done at the house of a mutual friend where Hodge sat with friends, Hodge at the piano playing and singing and the late Judge J.W. Castleman telling him what marvels were being done by the Dental Society in the school clinics.

Just about this time the Dental Dispensary--Tonsil Adenoid idea began to take shape in George Eastman's mind and by 1917, the Dental Dispensary and its endowment was accomplished, with a contribution board of directors. Into this work the school clinics were merged. In 1919, the surgical department was opened and in this department the work has grown from a few hundred tonsil-adenoid operations annually to 1800-2000 each year, 20,000 in all. (See report Rochester Dental Dispensary)

One of the early objections to the flow of patients from more than nearby schools, and the long walking distances, was overcome by the introduction of dental hygienists, who with portable dental chairs etc., are moved from school to school so that all children might early be cared for, inspected and referred to the Dental Dispensary for operative work. Soon will be added a knowledge of how to grow teeth without decay.

The tonsil-adenoid clinics were closely linked with the Rochester Dental Dispensary and had their origin in their founder--George Eastman. The Health Bureau through the Rochester Public Health Association for years had been struggling to get to the public an appreciation of the dangers to health and beauty of overgrowths in the upper air passages and decayed teeth. In (about 1910) the health officer wrote for an insurance company a pamphlet--Teeth, Tonsils and Adenoids--of which a million copies were distributed.

About 1912, a committee of the Rochester Dental Society came to the Health Bureau to ask what they might do to interest George Eastman in a Dental Dispensary. (see letter from a committee of Dental Society on this subject.) *What they were told*

In the summer of 1920, the first tonsil-adenoid clinic was conducted in the Dental Dispensary in which 1470 children, who had

been inspected by the health physicians were gathered together, with signed parental permits, secured by the school nurses, and by the nurses taken to the clinic and returned to their homes after operation.

The next year the Greater Tonsil and Adenoid Clinic was opened in Convention Hall and about 10,000 patients were operated there and in the allied-hospital clinics. (see reports, letters, clippings) For all these clinics the Health Bureau physicians and nurses selected the patients, got the consents and the nurses took a large number of the children to and from the clinic.

From 1921 until the present, large numbers of patients have been cared for in the Dental Dispensary, in the clinics in all of the hospitals and by laryngologists as private patients.

In 1909, Dr. L.L. Button, who was much interested in the backward child, went to Buffalo to attend a meeting at which there was a demonstration and exhibit of psychological apparatus and methods by Dr. Henry H. Goddard of Vineland New Jersey, author of the Kallikak Family. Dr. Button was so much impressed with what he heard and saw that he telephoned the health officer who responding to Dr. Button's enthusiasm went to Buffalo, saw and was convinced of the value of Dr. Goddard's work. Dr. Goddard was invited and accepted an invitation to visit Rochester; an informal dinner was arranged to which members of the Board of Education, members of the faculty of the University of Rochester, a Judge and the Superintendent of schools, were invited and one of each group attended. Then and there, after informal discussion a tentative plan of procedure was agreed upon and after Dr. Goddard had talked at several largely attended teachers' meetings, at which he showed some simple apparatus and made a few ^{simple} rapid tests, the plan was approved and soon afterward Dr. Button was appointed special examiner in the Health Bureau. This was the beginning

of psychological work in the schools. The police and courts were interested in the work.

In 1917, the Mayor appointed a committee to study the subject, of which a sub-committee, Dr. George M. Forbes Ph.D. Prof. of Philosophy at the University of Rochester and then president of the Board of Education, Judge Willis K. Gillette, County Judge, and the health officer. The question considered by the sub-committee was-- how might there be set up in the Health Bureau a department or a section of psychology with a psychologist of University rank, who with trained assistants might minister to schools, courts, police and child caring agencies? Inviting replies, advertisements were placed in the Journal of the American Medical Association and several other scientific publications, a large correspondence opened and a number of interviews arranged, but the rock upon which we and the applicants always split was, tenure of office and opportunity for private consultative practice. Not until the organization of the University of Rochester Medical School, the union of Strong and Municipal Hospitals, Health Bureau, courts, police and Child Protecting Agencies did we secure the beginning psychological work which now endures.

Pre-natal Clinics

It had long been the aim of the Health Bureau to unite and extend child caring agencies, to infuse them with the preventive idea, which was to begin with the training of mothers--and fathers--before marriage so that they might early begin the training of the child both physically and psychologically. When and if the child became sick to have sufficient physician, nurse and hospital provision for it's care, but above all to prevent disease in both mind and body. Failing this early and adequately to care for it.

With the establishment of milk stations succeeded by child welfare stations, medical school inspection and nursing it became clear that something more would have to be done to promote a better knowledge of child care. The best that could early be done was to take the "Balmorals" off the baby, get it out of the hooded baby carriage and the stuffy cradle, properly feed it clean food and to try to promote maternal nursing; and it was also necessary to protect the mother against the unlicensed and dirty midwife and the careless incompetent physician.

The state of the midwife may be shown by some brief early notes. (q.v.) In 1893, there were 29 registered midwives, 23 of them German. There were many unregistered. Of a total of 2472 births registered, midwives reported 1069; ^{40 for} physicians 1403. ^{Many missing} Midwives reported most of their births, physicians did not. How many births per annum were unreported may be roughly determined by comparing the rate per thousand some years later, when births were better reported, with the figures for 1893. In 1893, there were three deaths from puerperal fever reported by midwives, 17 by physicians many unknown or reported under other causes. In 1895, 33% of the reported births were reported by 40 midwives. In 1919 5% by seven midwives, in 1933, by ~~midwives~~ midwives, Midwives referred hopeless cases to physicians who reported deaths.

Although the Health Bureau had early endeavored to get the hospitals to start a wet nurse registry, it was not until 1924, that we got in the Health Bureau a human milk collecting station (see later) at which we collected and sold pooled and pasteurized breast milk at cost---and it cost the Health Bureau a lot. In 1910, when the first three Health Bureau nurses began work we tried to get an additional nurse for pre-natal work. We failed, About this time Mrs. William R. Woodbury came to ask if the Kindergarten Association could do

anything to help along the work of the Health Bureau. I told her, rather amused than in earnest, that we much needed a nurse for prenatal work and that the Kindergarten Association would do a fine thing if it would find funds to start such a clinic. Mrs. Woodbury said; "I think the Kindergarten Association will consider the plan," and so it did with \$1,000 and Miss Kathleen D'Olien became the first Municipal Pre-natal nurse, supported for a year by the Rochester Kindergarten Association.

Henry Lomb, the Women's Industrial and Educational Union, the Kindergarten Association, the Baden Street Dispensary, and a little group of five men, only two of whom are now living, these helped to strike the first blows on the wedges that opened the iron bound ^{Sater} ~~stumps~~ of municipal convention, habit and prejudice.

For several years we tried to get a pre-natal nurse, without success. Though we might not have a pre-natal nurse attached to the Health Bureau it was indirectly made known to the Health officer through underground channels, that he might, for the asking, have a Lincoln and a chauffeur! (sell a car to a friend and get a reporter a job) Maternity work was in a low state. Dr. W.M. Brown was of those who helped to lift it up as a specialty. There were several good general practitioners with large maternity clientele. There was no adequate provision for maternity work in Rochester hospitals until after Dr. Brown began his work in the General Hospital. There were two "sinstradeviating" hospitals patronized by some of the good but not-so-careful men. One of these on South Avenue near the penitentiary, the other on Lake Avenue near Irondequoit, the Health Officer had to tell the ^{proprietor} ~~proprietor~~ that if he did not stop doing abortions, a police officer would be stationed in front of the door. The other hospital was licensed by the Commissioner of Public

Safety over the protest of the Health Officer. This hospital was defended by a lawyer--politician and a socially minded woman who at one time, when the hospital had been driven out of the city, and the proprietor got a license in an adjoining town--the part of the town in which the hospital was situated was annexed to the city(not because of the hospital) and the proprietor got a license.

T U B E R C U L O S I S

The work began when about 1895 all over the country professional and lay, chiefly lay people, began to talk of and do something about tuberculosis.

The work began in Rochester with the formation of the Rochester Public Association, furthered and largely financed by Capt. Henry Lomb; and whose first president was Dr. E.M. Moore.

Beginning in 1895, with the formation of that association and on the Golden Wedding Anniversary of Dr. and Mrs. Edward M. Moore, a campaign was launched for the extended organization of the Association in work against tuberculosis.

First, public meetings were held, addresses and illustrated lectures given in schools, churches and wherever an audience could be obtained, in an endeavor to awaken public opinion to the importance of the subject.

About 1898 a plot of land was rented by Capt. Lomb on the south side of Highland Ave., just east of South Clinton, where it was proposed to begin work with a summer camp, but nothing further was done with the project because of lack of interest and funds. ^{*Dr. William Robinson & Spaulding*} The popular educational work of the association went on in the formation of committees, lectures etc.

Capt. Lomb then, in order to have a fixed home for the Association, rented from Mechanics Institute, a house on So. Washington St., second door from the then Canal. There an Association Headquarters and Reading Room was first established, later a visiting nurse, Miss Marie Phelan, and a part time ~~secretary~~ were employed. A Dental Clinic was installed and supported by the Rochester Dental Society, and a Nose, Throat and Ear Clinic was conducted under the volunteer direction of Dr. Franklin Bock.

With the enlarged scope of the work, an endeavor was made to raise funds, for Capt. Lomb had been the sole financial supporter of the Association. Public appeal was then made through committees of the Association and the Press and about \$2,000.00 was raised in sums ranging from \$5.00 to \$40.00, in pennies and nickels. 500 = 1/2 5¢
7/10, Dunn

Then in 1901 came the great Smallpox Epidemic of 1,000 cases and 100 deaths and the tuberculosis work temporarily ended.

During the epidemic of smallpox, land had been grudgingly acquired and a 100 bed Municipal Hospital ~~for smallpox~~ built, (40 years of agitation for it) on the Waring Road. The hospital was built for tuberculosis and communicable diseases, so that smallpox might be cared for with other communicable diseases, but this the Municipal Authorities did not know, They thought that they were building for smallpox.

With the end of the 1901 and 1902 smallpox epidemic only a few cases of smallpox occurred and the hospital, except for these cases was not used. Then, in May 1904, Mr. James G. Cutler became Mayor and he permitted the hospital to be used as a tuberculosis sanatorium, by the Rochester Public Health Association, under the direction of the Health Bureau.

At that time renewed activity began in the cause of tuberculosis. Meetings and appeals for funds were made to supplement the money given by Capt. Lomb and others and tuberculous patients began to be cared for in the Municipal Hospital and an open air camp was opened on the grounds, under Dr. Bock's volunteer direction.

Later small additions and extensions were made to the hospital for the care of such communicable diseases as diphtheria, scarlet fever, measles, epidemic cerebro-spinal meningitis, and poliomyelitis, and still later, ^{C. 1920} a North pavilion was built with ten rooms for the better segregation of patients.

The tuberculosis work went forward for several years, while at the same time renewed attempts were made to center professional and public opinion on the establishment of tuberculosis pavilions in the general hospitals; for it was found that the physician's knowledge of tuberculosis would be there better developed and supplemented by acquaintance with clinical tuberculosis, in the same hospitals where he was doing other medical work. But it was not so to be. The then uncombatable and mistaken idea of tuberculosis infection of adults by contact made that then and now desirable and, impossible of attainment.

Then, too, there began the "No uncared T.B. Movement", in 1915, which however good in itself, operated by a group of emotionalists, here and elsewhere, made the organization of tuberculosis sanatorium enormously expensive. If pavilions had been established in general hospitals then, this movement would not have milked millions from the public for unnecessary hospital expansion. The tuberculosis sanatorium became an early part, here at least, of the struggle for hospital domination between city and county, which is being extended ^{to day} to and through the county hospital.

Venereal Disease

In 1911, suggested (coll. papers vol. 3 V) (paper Nat. Conf. of Ch. & Correction) a marriage license bureau in the Health Bureau. In 1913, set up a panel in the Women's Union Child Welfare Exhibit, showing a license bureau but the church objecting we had to put the panel in the basement. In 1910, "History of Prostitution" paper before College Women's Club--the health officer was censored by the Commissioner of Public Safety and so the opening of the venereal disease clinic in the Health Bureau was delayed until ^{the} the commissioner of public safety was about to go out of office so that there might be smaller chance of interference with our proposed work. In 1911, the health officer read a paper before the College Women's Club, at its invitation, on the History of Prostitution, in which he spoke of disgraceful houses of public prostitution in the city and for which he was scolded by the commissioner of public safety--Owen--who said they were about to close them (L.B. Dec. 1911 p 270). They were soon closed. In 1912, under the law, the Health Bureau declared venereal diseases to be dangerous to the public health and reportable and asked physicians for reports (C.L. page 396, June 1912.) One physician (Ruggles) ^{y. D. Ruggles} said he would not report so he was told--Chief of Police cooperating--that an officer would be put before his office door. He reported. Early in 1913, we took gonorrheaⁿ ophtalmia and vaginitis (see letter L.E. Holt -N.Y. 8-4-16 files) in babies together with some cases of syphilis in the Municipal Hospital. In 1913, Walter Hampden appeared, before a large spellbound audience, in "Damaged Goods" for three days at the Lyceum Theatre where Walter Rauschenbusch spoke an introduction before the play, so had, among others, Howard Kelly, Woods Hutchinson, and Hugh Cabot in other cities.

In 1914, the new health code of the New York State Department of Health did not include venereal diseases among the reportable diseases. As late as January 1918, Dr. Biggs, State Health Commissioner, was not interested. Tuberculosis held the stage. October 1914, stimulated by the pioneer work in the L.I. College ^{Hospital} Dispensary, we opened the venereal disease clinics at the Health Bureau. (See brief description paper 1917, and later papers all in files)

Public health discussion of venereal disease began after Schaudinn's discovery (1905) of the spirochete of syphilis. Wassermann test 1906. Erlich's discovery of salvarsan 1910. Metchnikoff having previously demonstrated the inoculability of syphilis in monkeys we were ready, if unwilling, to apply their discoveries to the diagnosis, prevention and treatment of syphilis. But it was all so slow. The Health Bureau had occasional Wassermann tests made by a private physician at a cost of \$5.00 each, (now--1938 costing 13 cents) but the patents ^{we} it had, after the opening of the clinic, were so unquestionably syphilis that Wassermann tests were then ^{may} needed for confirmation or discharge of the patient. We also had difficulty in getting funds to pay for salvarsan--a German monopoly before the war--and we were only able to get a small supply, which had to be paid for in advance, for which the city would not at first advance money. A small private fund was secured for the purpose and almost thereafter the city relented and we got money for salvarsan. In 1915, the New York State Department of Health began to make Wassermann tests. As Wassermann tests were made available by the State and as the supply of salvarsan increased, we were able to extend our work so that in 1916, we had a total of about 1091 patients attending the clinics. We had earlier approached the, always helpful, Baden Street Dispensary which was willing to take all the patients

sent to it later. The General, Genesee, Highland and St. Mary's ^{belatedly} hospitals opened venereal disease clinics ^{in the order necessary} to which we sent patients in their areas and we kept most of the patients assigned to them to continue attendance by agreement and the delinquents by mailed notes on the exercise of police power. In 1917, the patients had so increased in number that we had to get volunteer help (C.L.B. 10.11.17. pg 978). We had difficulty (1916) in getting a basin and running water in the small consultation room (seven ^{at my time I have three} physicians contracted innocent syphilis) and the comptroller would not early allow \$2.50 for one wash coat after we had bought one ourselves and we had twenty-five to fifty patients per clinic day. (1.4.17. p. 794 C.L.B. to commissioner of public safety with photos of three patients showing dangers of syphilis). Then--C.L.B. 9.1.17 asking help and citing whole families with the disease). Venereal disease greatest single cause of disability in the army. Surg. Gen. Gorgas--Nov. 1917 H. Bull.

In 1919 tried to get Gen. Hosp. to help as we had 230 patients attending clinic. "No!" said it was work of the Health Bureau. First hospital clinic at General Hospital with Dr. Phillips Jr., attending 5.5. 19 p 63. May 13, '19 two lectures in courses on public health administration under auspices of N.Y. Bureau at N. Y. Academy of Medicine. Letter 6.5.'19 to Mr. W.A.E. Drescher, President, General Hospital Board, in which he declined a share of U.S. Public Health Fund because they could not make routine Wassermanns while tests and slvarsan were being furnished by State. 6.19.'19 asked Tuberculosis Sanatorium to make routine Wassermanns. In 1919, Rochester received through the State Department of Health \$2650.00 its proportion of a U.S. Public Health fund made available by Congress for the prevention of venereal disease and the State Department then tried to control us. It didn't.

In Dec. 1919, Dr. Roby began a series of talks to venereal disease patients at Baden Street, which afterwards were extended to clinics for physicians held at the Health Bureau and in (1920-'24) three hospitals and the State Hospital in which a number of physicians participated. The American Social Hygiene Association declined to loan their venereal disease film unless their demonstrator came with it. He didn't. In 1919, all but one hospital had a venereal disease clinic and the Genesee Hospital tried a night pay clinic. After conducting venereal disease clinics for five years the United States Public Health Service Venereal Disease Division wrote (letter 5.20.19) "the Health Bureau is the one organization in Rochester suited to assume active leadership in the campaign against venereal disease." (Ref!)

In 1929, (June H. Bull.) 400, patients were attending Health Bureau and associated hospital clinics of which 5% were delinquent. Five-hundred patients under private physicians of which 45% were delinquent and there are believed to be 5,000 cases of which we know nothing. In the April 1929, Health Bulletin is a resume of a paper in the Journal of Industrial Hygiene by Dr. John H. Stokes of the Mayo Clinic on "Syphilis in Railroad Employees" in which among other things he shows that 10% of 200 railroad employees have syphilis which interferes with their work and that it is eight times more frequent than in farmers, three times more than in business men, and two times more than in laborers. Three-Fourths of the railroad men examined had syphilis of the nervous system. This paper was declined by more than one medical journal.

In 1922, we began distributing arsphenamine to hospitals for their indigent patients. (difficulties) We also had difficulty in getting darkfield examinations of suspicious sores especially those of the lips. Rounding up new and old patients, both for the clinics and private physicians, through notes and the police power and

keeping them in attendance on physicians would have been impossible but for the hearty cooperation of Chief of Police Quigley and the then Police Court Judges Gillette and Kohlmetz.

(Special private hearing for women and children.) H. Bull. May 1925, Ext. work of H. B. attached also attached "Work Against Venereal Disease" in the August 1923, Health Bulletin.)

October 1923, on invitation talked to the Committee on Venereal Disease of the New York Charity Organization Society.

It was and is so difficult to get physicians to report cases, to return needles in Wassermann outfits (loss about 1925 about \$500.00 yearly) to get hospitals to account for arsephenamine etc, etc.

Then, when the Health Bureau was so loaded with this and other work and sought for changes in the basement to make a little more working room for the consultation and the clearing of records of several thousand venereal disease patients to hospitals and physicians together with room for other work, note how it was done. See files 1929--Management and Venereal Disease Consultation,

Vital Statistics

The "book-keeping of humanity" from the womb to the tomb. How was it done in Rochester? ^{See letter to N. Allen from M. Research, Aug 1934} Marriages, births and deaths were, as elsewhere, first recorded in churches. Not until the Great Plague of 1665, did London provide for and make a central record of deaths. In Rochester up to 1896, deaths were not recorded in the Health Department and not until 1880 were marriages and births recorded. These were but slow beginnings. Clergymen kept records in the churches; the large and the small cemeteries did the same but the clergyman, the physician, the midwife, the undertaker, were only after years brought to centrally record, vital statistics. A statute requiring the recording of such life and death statistics was not passed in New York until 1880. Marriages were difficult to get into the records because, for various reasons, clergymen felt that they were church and not public records. There were, both in the early and later, days, many instances of pastors withholding reports of marriages. One clergyman held more than ³⁰⁰ 150 marriage records for years until he was assured, by the health officer, that they would be protected from wrongful use. Both he, and we know that gossips, attempted to find out from the records whether Mary _____'s marriage was dated legitimately. Pastors were sometimes known to "date" marriages. Physicians did the same with births. Births were badly reported. In the late 90's about 40% were attended by midwives. We then estimated that less than 75% of births were reported to us. Then in the late 90's a statute provided for the payment of twenty-five cents for each properly made, legible, marriage birth and death certificate which, though it was the law, Mayor Warner, a lawyer, opposed and the comptroller made the money difficult to pay. Even so the vital statistics records, so important for legal and other

proofs, increased and improved.

In the death records there was a notable improvement in the causes of death. Such causes of death, reflecting the bad education of some of the older men whose names began to disappear from the death certificates, as "Enlargement of the Brain," "Colored Fever", "Choking", "Poisonous Vaccine", "Black Gangrene", "Blood Fever", "Mortification", "Disorganized Temperature", "Overdose of Rough on Rats". When, later, the Registrar got certificates that were clearly unintelligible the certifying physician would not seldom reply; "What do you want me to put on the certificate?" His--the decedent's--symptoms were such (naming them) and I don't know what he died of." (Coroner)

Under the law it was necessary for the undertaker to secure a death certificate from the physician, take it to the Health Bureau and secure, from the registrar, a burial permit to be presented to the cemetery officials before interment. Both undertakers and cemetery officers violated the law. One registrar, early, gave to the undertakers signed blank burial permits so that he might fill in the blank spaces and return the death certificates some-time later. Certificates were often lost and so no record of the death was to be found. At least one undertaker had a private cemetery for burial of babies of whose deaths no records were to be found. So it was with the records of births in 90's. More than two hundred unrecorded birth certificates were found behind the old registrar's desk. This registrar was removed by the old Health Board when it was proved that he had altered the cause of death on a certificate.

As the payment of the twenty-five cent fee did not result in the increase of vital statistics, which we had reason to expect, we

tried to improve the vital statistics registry by examining hospital and church records and checking them with the Health Bureau records. For this we had no help and could get no money from the city to pay for such help so we got a little money from private sources to pay our own clerks for overtime. Churches and three hospitals grudgingly permitted us to examine their records--one hospital and the Catholic Church declined. Of 1476 records checked in nine churches and three hospitals, 16% were missing from our register. We also began, on our own register, to check the baby births recorded against baby deaths and in those births found missing we wrote the physician, later sent the lists to the Corporation Counsel (Letters) and to the State Department of Health, charged with enforcing the law. But no prosecutions were ever made. (1913 ^{before Standard P.V.} registrar's certificate sent to mother of newborn child.) The Commissioner of Public Safety here intervened and directed the health officer to send the lists of delinquent physicians to him instead of communicating directly with the physicians. (H.B. April 1913) Not only were the ordinary physicians guilty but also the leaders, more than one of them former members of the Board of Health. (Requests for birth certificates for passports)

Bad as were these early records they were greatly desired by various people for advertising purposes. Births, by the baby foods; marriages and deaths by the insurance companies and tombstone sellers (letters) and they offered the registrar and health officer up to a cent or two for each name and address. The press wanted them for publicity--births--January 1, Dec. 31, and Feb. 29. We told the press that Health Bureau vital statistics could not be copied by them, if people wanted marriages and births "noticed" they might do so, but the records were not to be thrown open for press publicity.

Reporters and editors came. One of them threatened mandamus proceedings and another was going to have them, so he said, by more devious ways but hesitated when he was told that our protection of the records, from unwarranted publicity, was keeping hidden from public gossip so-called illegitimate births, among them two children of which he was named as father. No more from him.

Later we found collusion between a local reporter and the chief clerk of the New York State Department of Health, whereby they were collecting and selling names from our records which had to be filed with the State Department of Health. The clerk retired and the reporter shortly found other occupation.

In the late 1900s a statute provided for marriages licenses and that the marriage records should be returned to a marriage license bureau in the city clerk's office. So two places of record were thus made for vital statistics; births and deaths at the Health Bureau and marriages at the city clerk's office. Among the questions to be answered on the application for a marriage license were those relating to venereal disease. When it came to the Health Bureau's knowledge that a groom-in-waiting had an infectious venereal disease we protested to the marriage license clerk but the license was issued though the Health Bureau had proof that the man lied and was then under treatment for syphilis.

The difficulties in getting marriage, birth, and death certificates, were many. Transcribing and indexing them were equally so. There was one registrar for forty years and ~~at~~ by the ^{18th June} end the work had increased five times. His or her absence had to be supplied by clerical help from the office--night, Sunday and holiday applications for burial permits had to be provided for. The City undertaker sometimes came late and especially annoying

neglect to holding
was the country undertaker who came when his business was done. The health officer for years issued burial permits, after hours, from his residence when the undertaker failed to find the registrar at home. The early manner of doing the work was cumbersome. The legible and properly filled certificate having been accepted by the registrar, it had to be filed, transcribed in brief in a register, indexed, and the originals sent to the State Department of Health at Albany. New York City, Albany, Yonkers, by statute, retained their original certificates. Then weekly and monthly reports had to be sent to Washington and Albany and reports had to be made for our own work including tables of various kinds. There were also many calls for certified copies of vital statistics for legal insurance evidence, passports, and for school and work permits, and to replace lost certificates etc. (H.B. Dec. '27) Aid was so wanting to do this work that attempts to keep up with it helped to kill one registrar. Though we had asked again and again (no registrar for months--1916) for help--C.L.B. p.787,88,89,93 (examples) it was not until January 1917, that we got the present efficient registrar, first as assistant. We got him only after the vital statistics records were held for a month because of lack of help (the illness of the then registrar) to transcribe and index them and, so failing, the vital statistics of the State could not be compiled. (Att'y General and Mayor--letters) (~~political~~ squabbles) Then about 1920, after years of *only* wanting for help we got after much wrangling a photostat so that photostatic copies of vital statistics were filed in the Health Bureau. (We were asked if we could not use the photostat in the city hall--a mile away).

Diphtheria, Scarlet Fever, Measles, Smallpox Vaccination,
Hospital, Venereal Diseases.

After the great epidemic in 1901-02 we found ourselves with an eighty bed municipal hospital and but a few cases of smallpox. Mayor Cutler permitted the use of the hospital for tuberculosis for which the hospital had really been built. A twelve room pavilion for nurses being used for what cases of smallpox we could not prevent by vaccination, the nurses being temporarily housed in the main building. After six or seven years, the county in its endeavor to control tuberculosis work, built a tuberculosis sanatorium and we were left with a municipal hospital for the use for which it had been planned--a hospital for all communicable diseases, including tuberculosis--which the county took over. Even before 1911, when the county took tuberculosis, we had returned the nurses to the pavilion and housed all communicable diseases--diphtheris, scarlet fever, measles, even smallpox, in the same building, all protected by anti-smallpox vaccination and passively immunized against diphtheria. (Schick and toxin-antitoxin had not yet come into use.) In this work we followed Chapin of Rhode Island and our success in demonstrating that all communicable diseases could be housed in the same building, with a minimum of cross-infection, was mainly due to his example. But, fearful, always fearful, that the politicians might upset our plans, a paper with lantern demonstration was, on invitation, read at a meeting at the Baltimore County Medical held in John Hopkins Medical School, where favorable comments were made by several physicians, among them Dr. William H. Welch. Chapin was invited to read this paper and, I have always believed that he declined so as to give Rochester a chance.

Our work went on and for the first time Rochester had provision

for communicable diseases. Instead of having poor patients with communicable disease in boarding houses and blocks or even sitting on door-steps, because they had been turned out of the house, and refused entrance to hospital communicable disease pavilions because they could not pay, we took them all to capacity--and that was sometimes strained--erysipelas, gonorrhea, ophthalmia of children, and syphilis--any patients which the hospitals did not want or refused admission, we took at the Municipal Hospital and with fewer cross-infections than they had among the patients in the other hospitals. When the other hospitals could not find room for poor patients with respiratory diseases, we took them, vaccinated them against smallpox and diphtheria. And, when in the summer of 1914, there were drug addicts to be cared for, we took them to the number of 804. *Swiney & Hyman dying with ch. dis. by pa. to take them & we did*

After smallpox it was to the prevention of diphtheria and, then, syphilis that our attention was mainly directed. Before we had a hospital for the care of patients with communicable diseases, before we had Schick and toxin-antitoxin for active immunization against diphtheria, before we were permitted to purchase salvarsan, before we had adequate Wassermann and public health laboratory facilities (we early had to pay \$5.00 each for Wassermann determinations) we could not do much against the two diseases diphtheria and syphilis which were mainly to occupy our attention for years to come. And our work against diphtheria and other communicable diseases could not have been well done without medical school inspection and nursing and the summer welfare stations through whose work we were able to reach children in the schools and pre-school children in home and school. The early diphtheria mortality in the 90's and early 1900s in Rochester was high (see chart), the lows in some years interrupted by the "highs" in other years.

When the news of diphtheria antitoxin "broke" in New York, Rochester, unable to purchase it, set up a laboratory, in 1894, and

made it ready for use (1.1.95) under the direction of Professor ^{assisted by} Dr. T. J. ^{Vet.} Dodge with the aid of Dr. W.H. Park of New York. We were already making diphtheria cultures. Dr. Wallace Sibley was then Health Officer of Rochester. (N.Y. State Department of Health--diph. antitoxin--June 1902). With free antitoxin we had to convert the physicians to its use and try to convince people that it was life-saving and not death dealing and that was some job. Getting physicians to use it early was at first almost impossible. One physician let four out of five children die in one family because he did not believe in it. The fifth child just escaped, damaged for life by diphtheria. Then in 1914, we began to get Schick and a little later toxin-antitoxin ^{from} Park in N.Y. city. (We got Dr. Perry A. Bly as resident at the municipal hospital (12.12.14) (H. Bull. Nov. & Dec. 1915). (First note of our use of toxin-antitoxin Bull. Oct. 1916--note--^{the} Nov. 1916). We had some severe local reactions because ~~it was~~ ^{it} toxin and we did not know at first how well to use it until Zingher of the N.Y. City Health Department showed us. After the beginning use of diphtheria antitoxin in 1895, too often late and improperly administered, the mortality from the disease rapidly declined (see chart) and we thought we were on the way to the conquest of the disease. Then in the early 1900s when every means was being used by us to publicise facts--in the press and other ways--about diphtheria and smallpox, the necessity for early cultures and vaccinating early, and the early use of diphtheria antitoxin, business became alarmed--said that the diphtheria and smallpox talk ^{in the press} hurt business--and a member of the common council prevailed upon the mayor and commissioner of public safety to stop that publicity and the health officer was compelled to send his diphtheria and smallpox statements for the press to the commissioner

of public safety in whose office they were buried. We then had to get information about diphtheria and smallpox to the public and the not too willing physicians, through our brief reports, first sent to the commissioner of public safety. When in 1902, the reported diphtheria mortality had fallen to twelve and while, just having recovered from rabies and smallpox epidemics, publicity for the prevention of diphtheria and smallpox was prevented. The damage done to the prevention of smallpox by vaccination through publicity concerning it, may be questionable but that diphtheria rose, after we were denied that publicity, which might have given to profession and people useful knowledge concerning it, is not open to question. Diphtheria was an old disease but the culture method, treatment, and passive immunization (we did not have toxin-antitoxin for active immunization until years later) were new and their introduction made necessary the breakdown of old, hopeless, ways of treating the disease and the introduction of new and precise methods of passive (later active) immunization and treatment. Physicians thought that they could give several small doses of antitoxin, gave it late and reserved it for bad cases--When successful treatment required early administration (hours counted) in one large dose and the passive immunization by a small dose; (good for 10-14 days) of those exposed to the disease. We did not in the early days know much about the disease but we were eager, anxious, and willing, to pass that little on when we were given the opportunity to do so.

Then, there occurred, after the suppression of publicity, a rise in diphtheria over a period of four years, when the mortality average was 99% for each year-'03-'04-'05-'06. However, we know that in communicable disease--and diphtheria is a marked example--every fall in disease is always marked by a rise, so that rise in diphtheria mortality 1903-06 inclusive--must not be altogether charged to the

suppression of publicity. Nevertheless, it did not help us to combat the disease and so we called the rise in diphtheria in those years the common council epidemic.

From the early hesitant use of diphtheria antitoxin, we had insufficient hospital accommodations for all communicable diseases, but two, two bed pavilions at the City, now General Hospital; a small pavilion known as Brother Cottage--8 or 10 beds--at the Homeopathic, now the Genesee Hospital, both of these frequently closed for useless disinfection and a pavilion at St. Mary's--about 16 beds--where faulty methods were responsible for so many cross-infections that it had to be closed. In all there were about thirty beds, at most, for all communicable diseases and even this space was limited by attempted segregation of the various diseases and the closure.

We had then in those early days for combatting disease, anti-smallpox vaccination against smallpox, used late and improperly done; (bad scars) culture determination of diphtheria, antitoxin ^{late} ~~early~~; only passive immunization and the administration of diphtheria antitoxin ~~as~~ as a therapeutic measure, given late, and, if early, often in insufficient quantity and then damned for not raising the apparently expiring. Then, and with the coming of Schick and toxin-antitoxin, between 1912 and 1915, our task was not prevention of diphtheria but its treatment but physicians were clinicians and interested in its treatment not, then, in the prevention of disease. Our first need then was a hospital for communicable disease and this we got in 1911, after the county took over tuberculosis. As in tuberculosis, we should have had a pavilion in every hospital so that physicians might see and learn about disease but this much-to-be-desired plan had to be abandoned, because there were few men who knew communicable disease. The General tried the pavilion plan but when, as in at least one instance of violent outbreak of disease, it was closed and only appeal of

George Eastman succeeded in getting it opened. We then needed a hospital for communicable diseases though by segregating them in one hospital at a distance--two and one-third miles--from the city center, physicians would not visit the hospital to make themselves acquainted with communicable diseases and their treatment. We did get such a hospital on the Waring Road. Prior to the building of that hospital we had acquired in the early 70s , as a hospital for smallpox, a small six room, century old house between the Erie and Lehigh Valley Railroads on the Feeder Road, on the banks of the canal feeder before 1898, without running water or toilets. There was an old privy, thirty feet from the well, separated by a partition and marked "Ladies", "Gents". There was no sewer, spring and fall the road to the doors of the hospital was often flooded. Onto the old farm house two wards were built and sixteen iron beds with straw mattresses and a small room with barred windows for delirious patients. City water was carried to the hospital in 1898 and about 1900(?) two (I think that it was one) toilets installed sewerage directly into the canal feeder!

The hospital was kept by a "keeper" a drinking, and often drunken, veteran whose fits of anger in hard words and beatings, were leveled at his faithful hard-working wife, who did all the work. Such was the provision that Rochester had for the pan-epidemic of smallpox in 1900/ and it was from such a center enlarged by tents in summer and by election booths in winter, that we cared for most of the patients in a 1000 cases and 100 deaths smallpox epidemic. Prior to the smallpox epidemic there had been repeated warnings of the necessity for additional beds for the pan-epidemic (see notes elsewhere) and for wide anti-smallpox vaccination but all these warnings went unheeded. So we suffered in fear, sickness, death and loss of business.

When the smallpox epidemic was nearly over the city provided the jerry built 80 bed Waring Road Municipal Hospital, built on heavy clay so badly drained that it took four horses to draw a load of gravel, its buildings shingled with "culls" so bad the roofs had to be replaced in four years. We had running water and sewer, on the advice of the city engineer, with an intercepting tank so that hospital sewage might not without "treatment" mix with the city sewage! Such was the fear of smallpox! The hospital was lighted by acetylene gas and the generator blew up leaving us in darkness--though it was but 1/5 of a mile to electric lines, we were not allowed to have electric current. We had a telephone, a horse ambulance, which the health officer bought without authority, during the height of the smallpox epidemic to take the place of the twenty year old grocer wagon used as an ambulance. Into this hospital we took as Superintendent, J. W. Thompson, a graduate Bellvue nurse, and his wife, after we had fired the old Hope Hospital keeper with a good deal of German *knell* and veteran fireworks. What J.W. Thompson did for us, the long labor, and for patients in intelligent sympathy, needs a separate statement.

We got the Waring Road Hospital only as the smallpox epidemic was past, It lay nearly idle for a year and then, with the backing of the Rochester Public Health Association, which was really Henry Lomb, we were permitted by Mayor Cutler to use it for tuberculosis patients for which it was really built, with plans for extension which should have made of it a hospital for all communicable diseases including tuberculosis. (We had a visiting dentist in 1906) When this plan failed, because the county took over the tuberculosis work in the expensive county tuberculosis sanatorium, where the tuberculosis patients were segregated so that, as in other communicable diseases at the Municipal Hospital, physicians could not see and study such diseases, we proceeded to make of the Municipal Hospital

a much needed hospital for smallpox, diphtheria, scarlet fever, measles, whooping cough, tetanus, erysipelas, syphilis, gonorrhea--much of it in children-- cerebro-sprinal meningitis, infantile paralysis, and to take such diseases as the other hospitals did not want or in time of stress could not accommodate. The health officer and Dr. Roby conducted this hospital for more than three years without a resident physician and, as Dr. Roby's time then was mainly given to calls from physicians for diagnosis, the bulk of the work at the hospital fell to the health officer.

We took all poor patients that applied for admission some others, several of them poor physicians worn out and dying of cardiovascular disease, who asked and begged to be taken in by us rather than to go elsewhere. But we were then mainly interested in helping to reduce the incidence of smallpox, diphtheria and syphilis ^{Scrub Fever} and to that end our work was directed. One of our difficulties in the early period came from the later laryngeal diphtheria when, though diphtheria was falling, there were still late laryngeal cases kept at home until they were rushed gasping to the hospital in the health officer's car, often at night, for immediate intubation. Once, just before we got a resident physician, when the health officer was away for five days, Dr. Roby had an intubation a day and all but one was saved. We then got a resident, Dr. Perry A. Bly, an accomplished physician who, as we, had to learn the technic of communicable diseases and to do intubations. When there were "tube" cases the health officer had to sleep at the hospital. But we at last had a hospital with an able and hard working superintendent, and a good resident. We had four wards of twenty beds each, with no provision for segregation--the only thing that really mattered was sexes and children. We were not permitted to have trained nurses because of

the salaries \$45 to \$60 per month, and maintenance with residence in an isolated place 3/5 of a mile over roads without sidewalks and the season's winds, dust and wind, and snow and ice, to the occasional street car. We took the nurses we could get, most of them good nurses, who readily learned our simple aseptic technic and the rule--wash your hands and keep your fingers out of your mouth. No disinfectants were used. Our cross-infections were less than in hospitals without communicable diseases, though they increased with the coming of the resident. Our chronic tube cases below those at Willard Parker in New York. We had difficulties in getting other help, no out-door man at first, so the large lawn had to be mowed by the superintendent hitched to the lawn mower which an orderly pushed. Even later we were not permitted to pay \$35.00 per month for a cook when we had about fifty patients and employees, so the superintendent and his wife had to do the cooking. In one summer, when communicable disease was low, we took 80 drug habitues, some of them alcoholics, until the Commissioner of Public Safety tried to force on us just drunks (appealed to the N.Y. Child Labor Commission). During the war when the health officer was in the army Dr. Roby took many influenzas.

For years we had been trying to get eleven acres of adjoining land to build a Municipal Hospital for tuberculosis and all other communicable diseases and to extend provision for segregation of patients. The land was purchased before the war; a much needed boiler house and laundry built, the boilers purchased and lying on the ground for more than a year and though there had been erected on the North an open platform where tuberculosis patients used to "take the air", isolation rooms, they could not be used because the old heating plant, beneath the main structure, was dangerously inadequate for the main building heating load. After the war the

new heating plant was completed, new laundry and north isolation quarters connected and we were relieved of some of our problems and the worries concerning cross-infection.

For long we had needed a hospital for communicable disease. The doctors were not particularly interested, so large a percentage of such patients were poor. Then in ¹⁹²⁰ began the plans for a municipal general hospital. So short were we then of beds for all diseases ~~and~~ ^{that} plans were prepared and money appropriated for such a hospital and as we were about ready to begin work the news "broke" (at first private) of the coming of the Strong. For various reasons we changed our plans the chief one being that if we built a municipal hospital how would we staff it? Three lists of names were prepared of physicians we might consider for staff appointments. One group we would gladly take, one we might have to take, and one we would not take. After considering these names it occurred to us that if we were allowed to take all of the staff men from the first list they would have their private patients, their other hospitals, which would receive first attention and the Municipal Hospital would come in for a poor second. There was an alternative--the Strong. Would the University consider joining with the municipality in building a general hospital to be conducted with the Strong under university auspices? Plans had been drawn, money appropriated for a general municipal hospital on the Waring Road site, bids were submitted for the work, but not opened, when the Health Officer called Professor Dodge and asked him if he thought that Dr. Rhees would consider a union of the two hospitals. Dr. Rhees was consulted, George Eastman and Dr. Whipple approved and less than a week remained before the municipal hospital bids were to be opened. Plans for a separate municipal hospital on the Waring Road were discarded and the "union" between the municipal hospital and the Strong assured, thanks to

George Eastman, Dr. Rhees, and Dr. Whipple and, with much relief, to the Health Officer. (Details had to be worked out.)

The most disappointed men were the politicians and the contractors who lost a fat job. We asked a million for the hospital and got \$900,000 and notwithstanding an unlooked for item of piers, because of quicksand, we not only built the hospital within the appropriation but furnished it and had some money left, largely because no purely political bidders could bid against the contractor working on the university project, because he had experts on the grounds and there were the watchful eyes of the University of Rochester and George Eastman, who looked on from a distance. In the combined hospitals Rochester had, for the first time in its varied history, room for all patients, opportunity for extension under one roof in time of wide epidemic or disaster, with skilled attendance that might be rapidly extended from outside. (see plan for epidemic emergency)

We ^{also} provided for the later extension of an additional ^{150 bed} wing in the Municipal Hospital, the piers, elevator walls etc. In the combined hospitals and in the medical school there is one kitchen, like meals are served to all patients. There is one laundry, one staff of physicians and nurses, one social service one admitting and discharging office, one ambulance service, one system of records. In the Municipal Hospital all contagious diseases are, with vaccinating and immunizing protection, taken care of on the same floor, with a minimum of cross-infection. Modern provision for acute psychopathic patients (two weeks limit) were made in a separate twelve bed section with immersion baths, all in charge of trained psychiatrists and nurses and the work was joined with an ambulatory clinic at the Health Bureau. All of the medical and surgical and nursing work was under the direction of the chiefs of staff of the various departments of the medical school. The Municipal Hospital had an

efficient superintendent, J.W. Thompson, who was charged with the Municipal Hospital housekeeping, the entrance and discharge of patients, through the main office, the ability of patients to pay through the assistance of the central social service in the Strong.

Laboratories

The work of the Health Bureau, before the coming of the Strong, had early been devoted to the chemical and bacteriological examination of water and milk etc., the determination of diphtheria in cultures, tuberculosis in sputum, typhoid in stool and blood, gonorrhea, and later to type determinations of pneumonia and to beginning Wassermanns. The heavy laboratory load in times of stress, short of help, sickness etc., made it often impossible to do the work in hand, and less, to extend it. Then when the State Department of Health began to do Wassermanns and pneumonia, the delay, in transportation and communication from Albany, interfered in the rapid ^{diagnosis +} treatment and irritated many physicians who said, as in pneumonia, that the patient was often dead or recovered before a report came through. All this and more was changed when Dr. Stanhope Bayne-Jones, Professor of Bacteriology, took over and widely extended the Health Bureau Laboratories, so that in a few years examinations rose from 25,000 per annum--chiefly "smears", chemical and bacteriological examinations of milk and pneumonia, to 150,000 at a cost so low--twenty cents for all examinations, including pneumonia and Wassermanns, that the State Health Department asked that the costs be made no lower for it could not compete with us. At the same time the county had a color-blind, part-time, bacteriologist at \$5,000 per annum and the costs were \$2.00/- ^{without Serological tests}. There was a saving to the community chest hospitals, in which neither the Strong nor the Municipal participated, because our laboratories were doing their pneumonias and Wassermanns too.

In these laboratories we had the advantage of always having relief in case of absence and also of any studies requested.

Smallpox and diphtheria, also typhoid, have so nearly disappeared as not likely again to become major problems. Venereal diseases remained to be attacked.

Venereal Diseases

In 1912, gonorrhea and syphilis were declared by ordinance reportable diseases but little attention was paid to the ordinance by physicians or hospitals. We had then neither salvarsan nor Wassermann tests and they did not become available for more than limited use, until several years later. Schaudinn discovered the spirochete of syphilis 1905, Wassermann 1906, the salvarsan by Erlich 1910. It was not until about 1916, that Wassermans, the darkfield determination of spirochetes, and therapeutic use of salvarsan, became available to us in limited use for we lacked money to pay for them. About 1913, among other requests for talks to organizations there came to us two young women of the College Women's Club to ask for a talk before their organization. "About what?", asked the health officer, "Oh, any subject you may choose." As these general requests were becoming so frequent as to interfere with the work in hand, the health officer thought to dissuade them by saying, "I'll talk to you on the history of prostitution." The ladies accepted. The paper was given(q.v.) with comments on prostitution in Rochester. The Commissioner of Public Safety hearing about the paper sent for the health officer, criticized him for his comments in Rochester and warned him against discussing such subjects. Replied by letter that he had to do so, ("Damaged Goods.")

We were then preparing to begin our venereal disease clinics, but, fearing that the then commissioner of public safety (Owen)

might interfere with the project we waited for months until he was about to go out of office and then began them, so that he might not have much time to interfere and the new commissioner of public safety--Hamilton--would be too engaged with the politics of police, fire and other appointments, to stop them if he wished to do so. The venereal disease clinics were opened in the Health Bureau--two evenings and one afternoon. The health officer, Dr. Roby and Dr. Plumley, a volunteer. We advertised through small signs in public places and classified advertisements in the press-q.v.- but soon the advertisements ceased to be accepted (Times-Union) because the patent medicine advertisers objected to them.

At first few patients came to the clinics. Later they came in such numbers that there was but standing room and the attending physicians were hard worked even with rapid fire diagnosis and mercury and later, a little salvarsan, for the most urgent cases--then a German monopoly-- though obtainable for cash which we were not permitted to have for it until we begged some money from private sources, and then we got it from Toronto, and the city relented. It took months for us to get a wash basin installed in the 10x14 consulting room. (I know of more than five physicians dying of innocent syphilis contracted in the line of duty.)

When we were working we ourselves had purchased white coats, the comptroller at first "held up" a requisition for three white coats for a change. Men, forgiving women, and, children, came in such numbers that we invited representatives from the hospitals to see the clinics, from behind a closed screen. They were not interested. One said that it was the work of the Health Bureau.

Then the State Commissioner of Health was approached in January 1918, and he said that the State Department was interested in tuberculosis. We did get a change in the Public Health Law, on the

health officer's suggestion, which by substitution of one word for another permitted ^e ~~venereal~~ disease to be included in the tuberculosis law.

The hospitals at first failed to be interested. When Wassermann tests came ⁱⁿ to use they would not have their obstetrical patients tested. Over the protest of Dr. W. ^M Brown, Chief Obstetrician, one woman hospital executive said, "I can not bear to think of the mothers of these ^{dear little} babies having a loathsome disease." The same executive would not at first have her nurses immunized against typhoid because, as she said, "it might lower their technique."

As the hospitals, so the physicians. They would not report venereal disease cases. One genito-urinary specialists said, "The patients are mine and I am not going to report them." The Health Bureau told him that a police officer would be stationed before his office door to ask name and residence of entrants and Chief of Police Quigley had agreed to do so. The physician reported some but not all cases.

Though the law protected the records against being used for any purpose, several lawyers, without success, tried to break them for divorce purposes (Judge Cunningham ^{syphilis}). The health officer meeting with a group of ladies, at a well-known club, was asked by one of them if venereal disease was not most prevalent in a street of poor blocks and lodging houses. He replied, "Not more so than among the members of this club." The questioner's husband had syphilis.

Later we got Wassermanns through the State Department of Health, we were permitted to purchase salvarsan in quantities (administered by nurses during the war) and venereal disease clinics, following the example of Baden Street Dispensary, were opened in the hospitals; physicians reported venereal disease cases because they found that

the Health Bureau, through its police power, tied their patients to them and, then, the tuberculosis game having petered out, even the social organization turned to venereal disease. Now it is an old story and going so, just as smallpox, after vaccination, ceased to be a "bread and butter disease", then malaria,-typhoid--with us in the North--so venereal disease, though more slowly, will tend to diminish. Even now the clinics haven't a sufficient number of new venereal diseases for teaching purposes.

Communicable Diseases in the City and in the Municipal Hospital

It is difficult to determine the course of communicable diseases because cases are not well reported and deaths from these diseases are so often reported as due to the complicating disease instead of to the disease causing the complications. Most communicable disease is variable in severity, often in widely separated years, seasonable in character and they "peak" at different times of the year. ^{47.} (Scarlet fever in March, measles in April, whooping cough in August.)

Smallpox, when vaccination has been neglected, sometimes as in the South--Maryland and adjoining states--in the late 1890s was so mild, thousands of cases (estimated) then called "Cuban Itch"; and not a death whereas in the West, Minnesota and neighboring states in the post-war years it was so severe as to cause 15% reported deaths. Scarlet fever, rising and falling every five or six years, may for decades be of ordinary severity occasionally broken by a year or two or three of severe infections and high mortality (see chart S.F.) and then, at long intervals, by a disastrous epidemic such as occurred in Rochester in 1875, and '76, when more than 400 deaths were reported. Measles ascending every second or third year in severe outbreaks (England) marked by its attendant pneumonia and also by its ear complications so severe and so numerous in some years as to be known as "ear years."

Whooping cough rising about every second year is too little noticed for its pneumonia complications and its harmful, later, remote, effects, on the teeth, need study.

Tetanus was part of the penalty our children paid for 4th of July celebrations, the neglected proper treatment of punctured and lacerated wounds (also in adults) and the failure early to recognize the disease and apply for treatment as well as the failure early to immunize patients against the disease.

Meningitis: Cerebro-spinal, and other varieties of meningitis rose and fell in years and it was difficult to get Flexner's diagnostic plan and serum used early. (Riley)

Poliomyelitis is considered later. Erysipelas, most of it, was sent to us by the other hospitals.

The Health Bureau had to get the best and latest information about the prevention and treatment of these diseases to the physician and it had to care for some of the patients affected by them, in the Municipal Hospital.

Scarlet Fever was in some years so severe, and the patients came to us in such numbers, as to tax the capacity of the hospital and some of the toxic cases, in several years--notably in 1911--came to us in coma; as one family of four children, three of them dying in less than 48 hours, the fourth only recovering after weeks flat in bed. And there were other like cases.

Measles was in 1912, and several succeeding years, so attended by broncho-pneumonia and such ear complications as not only to require daily ear inspection and drum puncture but also mastoid trephining. At such times the wards of the Municipal Hospital were so filled with measles as to necessitate a row of beds in the middle ward. (photo) And with diphtheria, smallpox and other diseases, ^{but} one resident, short of nurses and other help, the State Department of Charities, through its medical inspector, unfavorably criticised the hospital (see letter) for lack of isolation and not sterilizing dishes etc. We used no disinfectants. We had one rule of practice--wash your hands and keep your fingers out of your mouth.

Tetanus: From 1900, we had annually on July 2, sent postal cards to physicians, and ^{at the time} tetanus antitoxin, warning them of the necessity for cleaning out wounds and then only giving tetanus

antitoxin. While tetanus antitoxin was given, wounds were not nearly always cleaned out to the bottom. As more than half of the tetanus cases came to the hospital (most of them children) we saw what neglect did in causing child and even young adult deaths from tetanus--next to rabies one of the most horrible forms of death. From more than one-third of the patients coming to us we had to dig from the wounds, powder, paper, wadding, pieces of clothing, stick, even a stone, and, then, seen late, most of our child patients died and the neglectful physician damned tetanus antitoxin. After one of the years marked by tetanus fatalities (1908?) when six deaths were caused by tetanus, most of it 4th of July tetanus, the health officer let it be known that he would notify the parents of children dying of neglect and tetanus ~~and~~ that they had a right to sue for malpractice and that he--the health officer-- would be witness for them. No suits were brought but the tetanus rate for the next ten years was halved.

Cerebro-spinal meningitis, often hopeless before Flexner's diagnosis and serum, which was taken up by Dr. Roby and through his work of microscopic bedside diagnosis, and treatment, demonstrated and popularized the method and saved health and lives. A number of severe cases came to us, notably a plus six foot delirious man in a restraining jacket whom we put with one petite nurse in a small-- 10 x 12-- one, room cabin, of which we had then several for isolation. The man was so big we had to knock the foot rail off the bed to give him room. His spinal canal was tapped and then his nurse said; "I think that I can manage him without restraint." And she did. The patient had to be "tapped" again and again as cerebro-spinal pressure increased and he would, as he felt his delirium approach him, call: "Hey! nurse, I'm going to get crazy again, ask the doctor to stick that needle in my back."

Poliomyelitis visited us in the pan-epidemics of 1911-15 and '16 and in 1925. The health officer's telephones were kept busy by anxious mothers whom we had to comfort by telling them of the lower attack rate, lower with us for some unknown reason than elsewhere. Why Buffalo and Syracuse should suffer severe epidemics while we had comparatively few cases, we do not know. We discouraged the use of masks as useless and serving only to alarm people.

Dr. Amoss, Dr. Flexner's associate at Rockefeller Institute, came here to spend two days at the Municipal Hospital where we had most of the cases. Dr. Angell, neurologist, and Dr. Prince, surgeon, acting as our advisers, tried to keep known cases who elected to stay at home, isolated, and we tried to discourage the quack rubbers. We did, on the advice of one physician, want to provide for trained massage and muscle training and when we failed to get money from the city for that purpose Mrs. _____ offered the money. The Commissioner of Public Safety, Hamilton, would not permit ^{the} control of patients who stayed at home, would not give us needed help to control quack rubbers and would neither permit money to be spent for muscle training under competent advice nor permit us to accept Mrs. _____ offer of funds for that purpose.

Publicity about Communicable Diseases

For public distribution we published booklets--"Babies"--in five languages, beginning in 1897. Then, from 1912 onward, booklets (English only) on diphtheria, scarlet fever, measles, whooping cough, pneumonia, cerebrospinal meningitis and poliomyelitis, syphilis and gonorrhea. These were given to each patient or family with the disease. Those on measles and whooping cough illustrated by vignettes from cinekodak movies taken by us(q.v.). Publicity was obtained in various ways, among them advertisements in the press, in street cars etc. (see scrap book of ads etc.) Typhoid fever was, to a limited extent, like smallpox prior to vaccination, a "bread and butter" disease. In the '79s and '80s the doctors met in the back rooms of drugstores--"the doctors' clubs" and "I'll bet you a box of cigars I'll have more cases of typhoid than you." Such talk and typhoid only lessened with the advent of protected water supplies, milk and food. While walking typhoid had been recognized it was not until the Widal test and the technic of stool cultures that mild cases and carriers were more frequently uncovered. Then, about 1909, when Col. F.F. Russell (U.S.A. M.C.) began to get the U.S. army vaccinated and showed that the case rate was reduced from an average of 250 to 7 per thousand, (after Almroth Wright had, 1898, vaccinated British troops in India and in South Africa) though we had to endure the typhoid sacrifices in the Spanish-American War and the country wide epidemic which followed and wait nearly ten years for antityphoid vaccination in the army and its slow adoption in civil life. People then did not and to some extent do not now want disease prevented. They want to be cured.

Fortunately Rochester had an excellent water supply though we

had to labor to protect it. About 1905, J.W. Wadsworth, then a Livingston County Assemblyman, introduced a bill in the legislature to permit fishing through the ice on Hemlock Lake. Bishop McQuaid, who had a farm fronting part of the lake, insisted on washing his four-legged sheep in the lake. The Lehigh Valley Railroad Company proposed to extend the lines and make a summer resort on the lake. It didn't. There were a few summer cottages on the lake and to further secure the lake waters from pollution a Hemlock Lake Commission was established to buy up (we owned about one-half) the land, bordering the lake and about 200 feet from its margin.

Every case of typhoid on the watershed gave us some anxious days. A few--3 or 4--miles from the outlet of the lake was the village of Springwater, population of about 300, where the city, at its own expense, had placed and become responsible for a pail system of excreta reception and disposal. The population was watched for cases of typhoid and later either a man was placed on duty with every case of typhoid fever and free hospital care offered the patient. The health officer of Springwater, over a period of years, failed at three different times to report cases of typhoid and though earnest representation of his derelictions was made to the State Commissioner of Health, nothing was done about it. (The old doctor with a typhoid fever patient and a fly in his stethoscope.)

4/12/04 At about this time Professor C.W. Dodge, Professor of Bacteriology at the University of Rochester, had been appointed bacteriologist by the old Board of Health and he was engaged to make a biological survey of the lake, which he did during the summers and annually, and to further make a weekly biological examination of the lake water, coincidental chemical examinations being made by the Health Bureau chemist. + *Cordell*

There were still, in about 1895, more than a hundred wells in the

city most of them supplying houses to which the city water had not been extended or used, because some of the people said that the water from the wells tasted so good (flavored by leaking vaults, garbage and manure) and Hemlock has no taste. The water supply was watched biologically and chemically, samples being collected from taps in different parts of the city. In 1910, a woman came to the Health Bureau, just at closing time, complaining of the appearance of the water in the mid-State Street section. The health officer heard the inspector at the counter tell her that the water was examined every week and that nothing was wrong with it. But the woman was so insistent about the quantity of mud in the water that the health officer took a bottle and went with the inspector. They found the water in the woman's house, as well as in several other houses, containing much brown sediment. Thinking that local repairs to plumbing, or even the main were responsible, the sample was submitted to the chemist and the next day--Saturday--he reported badly polluted to the Mayor, the Commissioner of Public Safety--^{being} Owen--and to the water department. We, that morning, used all available help to collect water samples in order, as soon as possible, to discover the limits of water pollution, which we found to include the whole Lake Avenue district. The pollution was so heavy in the central affected area that rapid chemical examination, taking but a moment, was sufficient to detect it. The chemist, then, set-up a temporary laboratory in a fire house, in the polluted area, employed our small force as collectors, pressed hacks into service (we had but three horse drawn buggies) and by late afternoon we had discovered the extent of the pollution whereby the water of 60,000 people, one-fourth of the population, was seriously endangered. But we did not yet know the cause of soiling of the water. The water department said it couldn't be so. "Well, here is the proof and I am going to notify the papers to publish a statement asking that everybody boil the water,"

said the health officer, "Don't you think that you ought first to see the Mayor?" "I'll see the mayor ^{later} but this boil statement is going into the papers now." It did.

Next day was Sunday and we were still working to determine the cause of the pollution. Then, Professor Dodge suggested that we put a quantity of salt--a barrel--into the Holley mains and chemically determine whether the excess of salt came over into the domestic supply. We did. It did. Then we knew that there must be a cross-connection somewhere between the Holley System--used for fire purposes--downtown, and canal lift bridges. As there had been no fire requiring the extended use of Holley water, we inquired about repairs to the canal bridges and we found that about two weeks before a lift bridge main had been repaired, and, then, we found that a six inch Holley main had been connected with a domestic main by the State Department of Public Works. The guilty ones were not uncovered. No one was punished.

What did it cost? We do not know the cost in sickness and death but the city had to pay thousands of dollars to settle the suits brought against it by those who had suffered. (scrap book '09-'11; 1911 & '12 p.100 et seq.) The assistant corporation counsel asked the health officer to help work up the city's defense. The health officer declined and appeared for those who brought the suits. J. Van-Voorhis' sons had the cases against the city. As there could not be much question of the health officer appearing for gain--there was none. Shortly after these suits were settled the VanVoorhis' firm had some suits in Seneca Falls where a private water company had been responsible for gross negligence in causing water-borne typhoid. They asked the health officer to help them but he declined because they were then for the water company. The suits were not brought because the water company was bankrupt.

In November-December-1926, there was an outbreak of 25 or more cases of typhoid with three deaths, traced to infection in a large department store. The store was fearful because of its employees and damage to the holiday trade. Dr. Roby in charge of the investigation examined the water and food of the employees and their families. One or two nurses were placed in the store to take blood and stool samples on those employed in food preparation and distribution. The chief plumbing inspector, and assistants, went over the water and sewer lines and soon found that a sump pit at the bottom of an elevator run by Holley water was seeping into the domestic store supply. The leak was repaired, the outbreak controlled but we were not able to determine all the relating facts. Commissioner Baker had ^{then & there} ~~pronto~~ this time cut-off all cross-connections between Hemlock and Holley as the health officer had recommended in 1904 (letter). But even he could not foresee such a connection.

Typhoid, Milk and Food

When Nathan Straus opened his milk stations we embraced milk pasteurization but we soon found that it was with us, in Rochester, only a scheme used by the milk producers to enable them to sell dirty milk by flash pasteurizing it. We had, through the years up and to the mid "teens", several outbreaks of typhoid and we still objected to milk pasteurization but when the State Department of Health recommended milk pasteurization we, though not in agreement, joined and without reservation enforced the law. (See H. B.) There were (here list the outbreaks by decades or otherwise noted in Dr. Carpenter's recent papers in the H. Bull.) In one year, to mention but one outbreak, there were 17(?) cases and three deaths on the route from milkmen, whose license had been revoked, getting milk

from a dirty producer with typhoid in his family, This man did not know what cleanliness meant. We tried to stop him from selling milk and his producer from bringing milk into Rochester, without avail. Then our inspectors were early stationed at one road but he came in at another and left his milk at the home of a friend of the milkman. We could neither get him punished by the Police Court nor get police help from the commissioner of public safety to stop him from bringing in and selling such milk.

There were other similar typhoid outbreaks due to milk and more than one of scarlet fever. Much of the milk coming into Rochester in, the early days, and even up to the 20s and later, was produced on farms within driving distance of the city. The difficulty of inspecting and controlling the milk of these small dealers, with the aid of the inspector, was considerable. For instance, in 1904, Peglow a milkman in Brighton, with one or more cases of typhoid in his family, reported neither by the attending physician or the health officer, ^{3 months} and the milk was responsible for six or eight cases on his route. Beginning before 1900, it had been our custom to list under the names of retail milkmen every case of diphtheria, scarlet fever, and typhoid fever and when more than one case, especially of typhoid, was checked against a milkman, to follow the milk from consumer to producer and to inquire into any cases of illness in the milkman's family, among the producers, often several, on the route of milk from producer to consumer. In this way we early checked and discovered several small outbreaks of communicable disease particularly typhoid fever.

This plan was reported in a discussion on milk and communicable disease at a meeting to the State Health Officers at Albany in 1903,

when the then Commissioner of Health of New York City (Lederle) reported eighty cases of typhoid fever on the route of one milkman.. Letter Sept. 22, '04 p. 34.

These and other questions were considered in our decision not to early pasteurize milk, until the State Department recommended it. We early thought that it was better to expend the work of our small force on attempts to clean up than it was to "flash" pasteurize dirty milk. Then, less so later, it was difficult to get physicians to report cases of typhoid fever and it was almost impossible to get internes and nurses vaccinated though internes contracted typhoid fever as did two well-known physicians one of whom died. (Killip) *Prine vaccine* We could not get all of our Health Bureau medical staff vaccinated against typhoid fever, one of whom contracted the disease and later died of a complication. We tried to get the hospitals to determine freedom of discharged patients from typhoid carriage by stool cultures. We could not do so without a long struggle. After delay (1916) and a test case carried to the Supreme Court by the milkmen (H. Bull.) we got authority to make Widal tests and stool cultures on milkmen though more than two-thirds of them were willing to have the tests made.

In 1924, a warm autumn, an epidemic of typhoid fever from the coast to the Great Lakes, we found to be due to infected oysters. As the proletariat did not eat oysters it was confined to the well-to-do and in New York City known as "Park Avenue Typhoid." A meeting in New York was called by the State Health Commissioner to consider the matter at which oyster men and health officers of the larger cities attended. There was no question about Long Island oysters, Sayville and other beds being the chief offenders. At this meeting a most moving extempore oration, pleading for unrestricted

sale of oysters and denying that oysters were responsible for the outbreak, was delivered by an unlettered oysterman. The sale was restricted, we advised cooked oysters and vaccination against typhoid, and people did not eat many oysters for some months. We got cases which doubled our ordinary fall typhoid rise even though we got most of our oysters from Baltimore.

At one time, a little earlier than the oyster outbreak, we were made aware of typhoid fever in one section of the State Hospital and our endeavor to find the carrier source of this outbreak was finally successful after discovering that a typhoid carrier patient was in the habit of acting as alternate, supplying for one of the kitchen help when he had his day off, and it was his duty to cut bread.

WATER

Earlier, but mainly in the 60s and 70s, Rochester, as other cities, was struggling to get a pure and sufficient water supply. Lake Ontario was considered but fortunately the city went to Hemlock where after building the conduits it was found that it cost more to let the water run down hill than it was estimated to pump it up hill (7% thirty year bonds). After an ample supply of Hemlock water was secured there was difficulty in getting mains laid in the city and piped into the houses and even the people complained of the taste, which to them was not so good as their well water flavored with leakings from cesspools, vaults, animal manure and garbage. There was much difficulty getting house wells, even wells at the curb, closed. But even with the slow extension of Hemlock water to domestic use the typhoid rate began to decline, though we were still menaced by wells both within and without the city's borders.

Then in the late 90s the Lake Ontario Water Company was

organized as a tentacle of the New York Central Railroad Company, because, as the railroad company said, their city water bills for engine etc., were so high. The Lake Ontario Water Company extended its lines so as to supply outlying towns and as parts of the towns were taken into the city it supplied water to parts of the city also. The Lake Ontario Water Company took its supply from Lake Ontario just west of Charlotte where it established a pumping station, precipitator and sand filtration and chlorinating plants. When the lake water was so contaminated that it was necessary to twice so heavily chlorinate, as to make taste, and the odor in the bath, so offensive as to result in many complaints of the water, even then the water was found at times to show contamination on the fermentation test made in the Health Bureau twice weekly and often daily. Unheeding the warnings by the Health Bureau we resorted to advertisement in the press. (q.v.) Then the water company appealed to the State Department of Health who examined the water and gave the Water Company a clean bill of health resulting in paper and press advertisements by the water company, to which the Health Bureau paid no attention but went on with its advertisements. Shortly, thereafter, it was discovered that the water company had sent in a rush order for a new chlorinator, rapidly installed it and had then invited the State Department of Health to examine their water and the State Health Department came, collected, samples and took the samples to Albany instead of using our laboratories as they were invited to do.

Some years ago when the company was striving for political domain over the struggling city manager government, the county charged that Lake Ontario was being polluted by untreated sewage

from Rochester into the Genesee River. So it was, though nearly all of the sewage was then being treated except that of the Lake Avenue district where a considerable engineering problem delayed construction. The State Health Department employed Professor C.E. Ogden of Cornell University, Consulting Sanitary Engineer, who in his demarcation report (q.v.) failed to mention that the towns, bordering the lake from Manitou Beach to Nine Mile Point, were sewerage directly into the lake and scores of privies were on the lake borders. And, with the town health officers we could do nothing though we inspected and took samples in summer.

The City and the Parks

In the city there were now and then a number of small local points of contamination which gave us trouble. Once just prior to the 30th of May an anguished father came to the Health Bureau to say that his young son had typhoid and that he got it in the Durand-Eastman Park. We told him that the water at the park was potable and that he could not have had the disease from the water.

