CHAPTER III.

GENERAL RESULTS: 1875-1894.

DEVELOPMENT OF ADMINISTRATIVE ACTION

THE last of the great Epidemic prevalences of Typhus Fever had occurred in Glasgow in the year 1869-70, when over 2000 cases were treated in Kennedy Street Hospital; and the administration was now at liberty to develop its attack against other forms of infectious disease.

Early in the present period, co-operation with the School Boards was invited in order to obtain early information of infectious diseases among school children; popularly worded leaflets on the management of Scarlet Fever, on the law regarding infectious diseases, and on the care of children were issued; smoke testing of drains was introduced; methods of refuse removal reformed; District Baths and Wash-houses were provided.

The beginning of the period also saw considerable displacements of population from insanitary areas, and the establishment, by the Improvement Trust, of Model Lodging-houses.

In the later years of the period the first installation of a system of Sewage purification was opened at Dalmarnock, and a beginning had been made with the provision of children's playgrounds.

The average death-rate of the years 1873-4-5 was 30.6; of the years 1892-3-4, 21.9 per 1,000.

The narrative in detail is now continued from the volume on "Evolution."—(ED.)

This period reaped the first-fruits of the steady work of the Sanitary Department and the operation of the City Improvement Act. The campaign against infectious diseases was pushed home. The ordinary "Fevers" having been subdued, attention was turned to the now more destructive infectious

diseases of children. A system of co-operation with the School Board to prevent their dissemination through schools was established. In olden times the highest demand of reformers was that there should be disinfection of house and clothing, &c., after removal to hospital. Under the new regime the practice as regards clothing was extended to washings during the currency of cases of fever treated at home. The systematic attack on the (so-called) minor infectious diseases meant, therefore, not merely hospital treatment where possible, but a vast

1875-1884.

Mean Population, 511,302.

SANITATION.		HEALTH.	
		1875.	Milk Epidemic of Enteric Fever—Washington Street, Pollokshaws Road, and Kingston.
1876.	Hospital Treatment of Infectious Diseases wholly in the hands of Municipality.		
1871-79.	7 District Model Lodging Houses erected.		
1877.	Small-pox Hospital, Belvidere, opened.	1877-78.	Milk Epidemic of Enteric Fever—West-End.
,,	*Streets Improvement Act.*		
1878.	*Public Parks Act.*		
1878-84.	5 District Public Baths and Wash-houses erected.		
1879.	DAIRIES AND MILKSHOPS ORDER.		
,,	Fulwood Moss leased.		
1880.	*Improvement Act Extension Act.*	1880.	Milk Epidemic of Enteric Fever—North and Central.
1881.	First Refuse Despatch Work opened.		
,,	Arrangement made with Registrars for Returns of Vaccination Defaulters.		
,,	Resolution to admit all Citizens free to Hospitals (April).		
1882.	Systematic Drain Testing begun.		
1883.	New Municipal Washing and Disinfecting Establishment opened at Belvidere.		
1884.	Second Refuse Despatch Work opened.	1884.	Milk Epidemic of Enteric Fever—Hospitals.

Ten Years, 1875-84.	
32 Articles Washed, &c., per case of Infectious Disease registered.	
15 "Nuisances" removed per annum per 100 houses inhabited.	
Two Years, 1883-84.	
683 Drain Tests per annum.	

Ten Years, 1875-84.	
Birth-rate,	39·4
Death-rate,	26·9
Highest Death-rate (1875),	30·8
Lowest do. (1879),	24·6
Death-rate under one year per 1000 born,	150
Death-rate, Zymotic Diseases,	5·05

increase in the labour of disinfection. Every case of infectious disease entailed service. In such diseases as Scarlet Fever or Enteric Fever treated at home, there was service distributed over a long illness as well as on recovery. Dirt in the house was treated as a bad thing, which it was of public advantage to get rid of by such a revolution as the presence of an infectious disease even of the minor sort gave one a legal right to effect. In this way thousands of houses were at least once in a year made thoroughly clean. The number of articles of bed and body clothing washed per case registered, which in 1865 was only between four and five, rose in the first four years of the extended department (1871-74) to 7, and in this decade, with its widened scope and increased facilities, to 32.[1] Something had also been learned as to the conditions most conducive to success in the application of preventive measures. Experience had taught that from first to last, wherever it existed, infectious disease must be dealt with by one authority, and that any condition of payment interfered with the adoption of preventive precautions. The whole hospital treatment of infectious disease was undertaken by the authorities, and it was resolved to admit every person living within the area of the rates free of charge, and also to make all services of washing and disinfection free to everybody. A much enlarged and better equipped washing and disinfecting establishment was opened at Belvidere. The most important step in the nuisance department was the commencement of the systematic application of the smoke-test to drains, which has now developed greatly both in the efficiency of the apparatus and the frequency of its use. The number of "nuisances" removed per 100 inhabited houses rose from 10 in the first four years of the new department (1871-74) to 15 in this decade. The whole method of refuse collection and removal had been gradually reformed and systematised. In place of the huge "manure depots" which used to disfigure the outskirts of the city, "Refuse Despatch Works" were erected where the refuse was disposed of daily as collected, by despatch to the country either to customers or refuse farms leased or purchased by the cleansing department,[2] or by cremation. The aggregate result was a steady diminution in the quantity of offensive matter to be found within the city at any one time, more especially in the vicinity of the dwellings of the people. Cleanliness of

[1] On the average of the years 1900-4 the number of articles washed per case registered was 34.

[2] In 1879, 98 acres of Fulwood Moss were taken on a 31 years' Improvement Lease. In 1887, 25 acres were added. In 1891, the estate of Ryding, 565 acres, was purchased. The refuse of the city makes the desert to rejoice and blossom as the rose.

person and of clothing was greatly facilitated and promoted by the erection (1878-84) of district Baths and Wash-houses.

The area originally scheduled under the Improvement Act extended to 88 acres, inhabited by over 51,000 persons, and situated chiefly in the Central District, partly in Gorbals and Calton. The borrowing power was £1,250,000. The Act was amended in 1871 and extended in 1880, when the borrowing powers were raised to £1,500,000. Streets Improvement Acts, with borrowing powers to £370,000, were obtained in 1873 and in 1877, which in effect were supplementary to the Act of 1866, leading not merely to improved communication in various places, but to the acquisition of a considerable amount of inferior property in Anderston, which has since been transferred to the Improvement Trust. This Trust made little outward show as a reforming agent until 1870, but between that year and 1877 it carried out extensive clearances and partial reconstructions in the scheduled area, besides purchasing two estates on the outskirts and laying them out with liberal air space for working class dwellings. Between 1871 and 1879 the same Trust erected seven Model Lodging-houses in as many districts, thereby killing off the greater number of the inferior private lodging-houses and attracting lodgers from small private houses. When to these operations by the authorities we add the breaking up of slums incidental to extensive railway undertakings, we may characterize this period as one of revolution in the proverbial Wynds and Closes of the City, and of rehousing of a large proportion of their inhabitants.

Probably the most important event in the sanitary history of Glasgow in this period was the resumption by the Improvement Trust in 1889 of an active policy of demolition and reconstruction. To speak frankly, between 1877 and 1889 the Trust had stood still, and was in fact the largest owner of unwholesome property in the city. True, much had been done to improve this property, but the fact remained that it had been purchased for the very purpose of demolition, and nothing short of demolition would meet the necessities of the case. The explanation, and so far the excuse, for this attitude of the Trust was that, like other holders of property in the commercial crisis of 1878, it suddenly found itself without a profitable market for its land, and, like all holders of property who could afford to do so, it held for a rise. It is an open secret in municipal circles that the Committee on Health found its progress blocked by this position of the Trust. It was impossible to deal with other landlords and leave the Trust alone. In fact, no other landlords held such property, certainly in quantity, probably even in quality. A private survey of the Improvement Trust property was made by the Medical Officer,

and a report thereon with plans drawn up and submitted to the Chairman of the Committee on Health (Mr. Crawford[1]). A special committee was appointed to inspect the property complained of. The reports of these inspections were forwarded from time to time to the Trust, and ultimately it was pressed into that course of demolition and reconstruction on the ground thus cleared and laid out anew, which has since been steadily followed. It may be said that the proverbial Wynds and

1885-1894.

Mean Population, 588,613.

SANITATION.	HEALTH.
1885. *Glasgow Corporation Water Works Act.* (Extension of Loch Katrine Works.)	
1887. Belvidere Fever Hospital completed.	
	1888. Milk Epidemic of Scarlet Fever —Garnethill.
1889. Improvement Trust resumes reconstruction.	
,, Resolution of Committee on Health condemning the Privy System.	
,, Tuberculous Meat Case.	
1890. *Glasgow Police (Amendment) Act.*	
,, THE HOUSING OF THE WORKING CLASSES ACT.	
,, INFECTIOUS DISEASE (NOTIFICATION) ACT, adopted 1st January.	
,, Third Refuse Despatch Work opened.	
1891. *City of Glasgow Act* (1st November) Extension.	
,, Ryding Estate purchased.	
1892. Second Reception House opened.	1892. Milk Epidemic of Scarlet Fever —Paisley Road.
,, Site acquired for Fever Hospital, Ruchill.	
,, *Building Regulations Act.*	
1894. First Sewage Purification Work opened (May).	1893-94. Milk Epidemic of Scarlet Fever—Kelvinside.
,, New Bye-laws—Cow-houses and Byres.	
,, Washing and Disinfecting Establishment for North and West, opened at Ruchill (October).	

Ten Years, 1885-94.	*Ten Years*, 1885-94.
43 Articles washed, &c., per case of Infectious Disease registered.	Birth-rate, - - - - - 35
18 "Nuisances" removed per annum per 100 houses inhabited.	Death-rate, - - - - 23·2
2,540 Drain tests per annum applied. (5,390 in 1894.)	Highest Death-rate (1885), - 25·3
	Lowest ,, (1894), - 19·9
	Death-rate under 1 year per 1000 born, - - - - - 144
	Death-rate, Zymotic Diseases, - 3·8

[1] Afterwards LL.D. (Hon. Causa), Glasgow University, 1902.

Closes have now ceased to be. The special feature of these operations is that the Trust, having failed to get its land feued in the ordinary way, is itself building, with the result that ultimately Glasgow will exhibit another development of what has been called "Municipal Socialism," but like her other enterprises of the same nature, not aimed at or advocated under a general theory, but reached on the lines of business expediency applied to each question as it arose in the course of municipal life.

It was in consequence of the observations made by the special committee referred to above, that the Committee on Health (March, 1889) formally recorded their condemnation of the privy system in these terms:—"In our opinion the privy is in no case a sufficient provision for flatted tenements. It is never used, and cannot in the nature of the case be used, by females, and seldom by children. The result is that every sink is practically a water-closet, and the stairs and courts, and roofs of outhouses, are littered with deposits of filth cast from the windows. Some form of wash-out closet, in the proportion of one to every two or, at most, three families, ought to be provided, as far as possible in a back jamb." The importance of this resolution cannot be exaggerated. It struck at the root of all that filth in the Wynds and Closes, which was so prominent in the criticisms of visitors, but could scarcely be described. It singled out the one element in the circumstances of the inhabitants which thirled them to indecency and made immorality natural. The practical outcome of this resolution was the introduction of a clause in the Amendment Act of 1890, the application of which has begun a revolution in the tenement houses of Glasgow which is yet only in mid career. The Committee at the same time expressed the opinion that supervision by resident caretakers is necessary in tenements, and directed the attention of the Trust to the prevalence of farming out of small houses in their property. These observations also have borne fruit in voluntary action, though they have not yet become the subject of legislation.

The completion of the permanent structure of Belvidere Fever Hospital, the acquisition of the estate of Ruchill where, taking advantage of the experience gained at Belvidere, another hospital is being erected, and another Washing and Disinfecting establishment is already in use for the north-west quarter of the city, show that the resources for dealing with infectious disease are keeping pace with the growth of the city. The adoption of the Infectious Disease (Notification) Act on 1st January, 1890, brings automatically into the hands of the Medical Officer information for which his staff had laboriously to seek. The Police (Amendment) Act of 1890 adds to the

stringency of the powers for dealing with infectious disease, and in respect of drains, conveniences, overcrowding, lodging-houses, disease in dairy cattle, and uninhabitable houses, &c., &c., gives Glasgow, on the whole, the benefit of the advances in sanitary law following up the advance of sanitary knowledge, from which Scotland in general is shut out by the neglect of her interests in Parliament. The systematic removal of refuse, and the daily disposal of the daily collection have been further developed, and the great and necessary task of purifying the Clyde begun by the opening of the Dalmarnock Sewage Purification Work in 1894.

In this period systematic efforts were for the first time made to provide Children's Playgrounds. The city has always been supplied with suburban parks. The historic Glasgow Green was purchased at various times in the 17th and 18th centuries. It remained the sole park until 1854, when the West-end Park was obtained, and several new parks and large additions to old ones have since been acquired from time to time. Still no provision had been made near to tenement houses, for the use of children, of smaller spaces such as may be found near all our large self-contained houses in the shape of *pro indiviso* gardens or pleasure-grounds. George Square, St. Enoch Square, St. Andrew's Square are examples of spaces left near the houses of the wealthy of former generations which remain for the use of the many. The City Improvement Trust left spaces in feuing Overnewton and Oatlands for tenements, and in the course of laying out afresh areas which had been cleared reserved useful vacant plots, of which Cathedral Square and Bain Square are examples. The negotiations preliminary to the extension of the city in 1891 led to several of these more modest play-places being bargained for as a condition of consent. Still there was no effort here to redress the wrongs of the past. These negotiations showed that the people of the present were alive to their interests, and although still in close touch with the green fields, were determined to anticipate the day when the growth of the city should cover them. Power was obtained in 1878 to lay out and throw open the graveyards which had been closed. Six of these now furnish attractive spaces in the midst of crowded localities in the oldest parts of the city, and make one thankful that the necessity of "the possession of a burying place" preserved from the builder of former generations some space of which the living now enjoy the reversion. Since 1892 the Committee on Health has made it a part of its ordinary business to secure, as opportunity offers, play-places for the children of the poorer and more crowded localities. There is a special Sub-Committee for the purpose. The noblest of these acquisitions hitherto is "Phœnix Square,"

which, in place of being one of the grimiest, most repulsive spots in the city, now smiles in the sunshine and echoes with the laughter of happy children. From Mr. MacLellan's interesting book on "Glasgow Public Parks" we find that in 1893 the parks and spaces extended to 700 acres, of which about 30 were distributed in smaller plots near the houses of the people.

We have seen that, naturally and logically, along with the project of improving the Wynds and Closes, came into the minds alike of individual reformers and of the authorities themselves the conviction that new buildings must be controlled and supervised in the interests of public health. This in Glasgow meant that power must be put into the hands of the Dean of Guild Court. This was begun in 1843 and 1846, and considerably extended in 1862 and 1866. Following the historic and natural course, no sooner was the representative mind compelled by the special inspection of Improvement Trust property, and the revived interest in the physical environment of the dwelling-house, to consider closely the conditions which made existing buildings unhealthy, than the necessity for a thorough revision of the powers of the Dean of Guild Court was borne in and recognised. Hitherto, too much in detail had been left to the discretion of the Court and the Master of Works for the time being, even in matters regarding which they had general powers, while there were other matters regarding which they had no power or only a restricted power. The result was Glasgow's first Building Act passed in 1892. Another generation will reap the benefit of it. The Municipal Extension Act of 1891 made the Building Act very opportune, because it is in the suburbs that the future of Glasgow, so far as house building is concerned, is being made or marred. It is to be regretted that this measure did not accomplish the same end as the Extension Act of 1846—bring together into the fulness of one corporate life *all* the dissociated administrative fragments of this great community. Nevertheless there is enough in the promise of progressive returns from that which has long ago been accomplished, and of a fresh harvest from that which has only just been inaugurated, as well as from the entirely new enterprises which lie in the future of a city which has never failed of intelligence and courage in administration to warrant the expectation that the vital statistics of the next decade will prove that Glasgow has kept up the running in the race of progress.

In an appended diagram, the rate of mortality during the last forty years is shown, and the proportion of the total rate contributed by—(1) Zymotic Diseases; (2) Phthisis; (3) Other Diseases of the Lungs; (4) The Balance of Miscellaneous

unclassified Diseases. The following Table reduces this annual to a decennial statement, the figures being death-rates *per million*.

	Zymotics.	Phthisis.	Other Diseases of Lungs.*	Other Causes.	All Causes.
1855-64 - -	7,841	3,918	5,170	13,121	30,050
1865-74 - -	7,377	3,940	6,522	12,692	30,530
1875-84 - -	5,056	3,396	6,322	12,113	26,886
1884-94 - -	3,822	2,458	5,329	11,566	23,175

* Exclusive of Croup.

If we compare the first with the last decades, we find the following results—

A Decrease of 4,019 or 51 per cent. in the Death-rate from Zymotics.
Do. 1,460 or 37 do. do. do. Phthisis.
A Increase of 159 or 3 do. do. do. Other Lung Diseases.
A Decrease of 1,555 or 12 do. do. do. Miscellaneous Diseases.
Do. 6,875 or 23 per cent. in the General Death-rate.

In short, if we divide the whole balance of gain into two, we find that it amounts to 4019 lives per million saved from the tribute formerly levied by Zymotic Diseases, and 2856 from the tribute of all other diseases, or 58 per cent. of the total saving from the former, and 42 per cent. from the latter.

POSITION OF INFECTIOUS DISEASES IN HISTORY, SCIENCE AND PRACTICE OF PUBLIC HEALTH.

This result is doubly interesting. It is consistent alike with the history and with the science of public health. The history of sanitation in Glasgow is recorded in the preceding pages. It is merely a particularly striking illustration of the history of sanitation at all times and in all places. Sanitation is primarily the outcome of selfishness, a simple effort on the part of the community or the thinking governing part of it at self-protection. Ultimately it becomes altruistic, or at anyrate when the plagues are gone it has passed into a habit, although still Cholera is more effectual as a stimulant to the soporose than a discourse on altruism, or even Christianity. Hence it is that sanitary administration, like an infant Hercules, struggles in its cradle with the serpent brood of infectious diseases, and their destruction is naturally the first evidence of its prowess. But this instinctive effort intelligently directed leads to precisely the same works and executive procedures as the most abstract study of the scientific principles of public health undertaken by the most altruistic of philanthropists would reason out. Exactly the same physical conditions which nourish and sustain epidemics promote chronic ill-health. If we could find a community with a permanently high death-rate and no epidemics, we should find uncleanness of air, water, soil,

I. GLASGOW.—DEATH-RATES PER TEN THOUSAND FOR 40 YEARS (1855-94), SHOWING PROPORTION DUE TO ZYMOTICS, PHTHISIS, AND ACUTE DISEASES OF THE LUNGS.

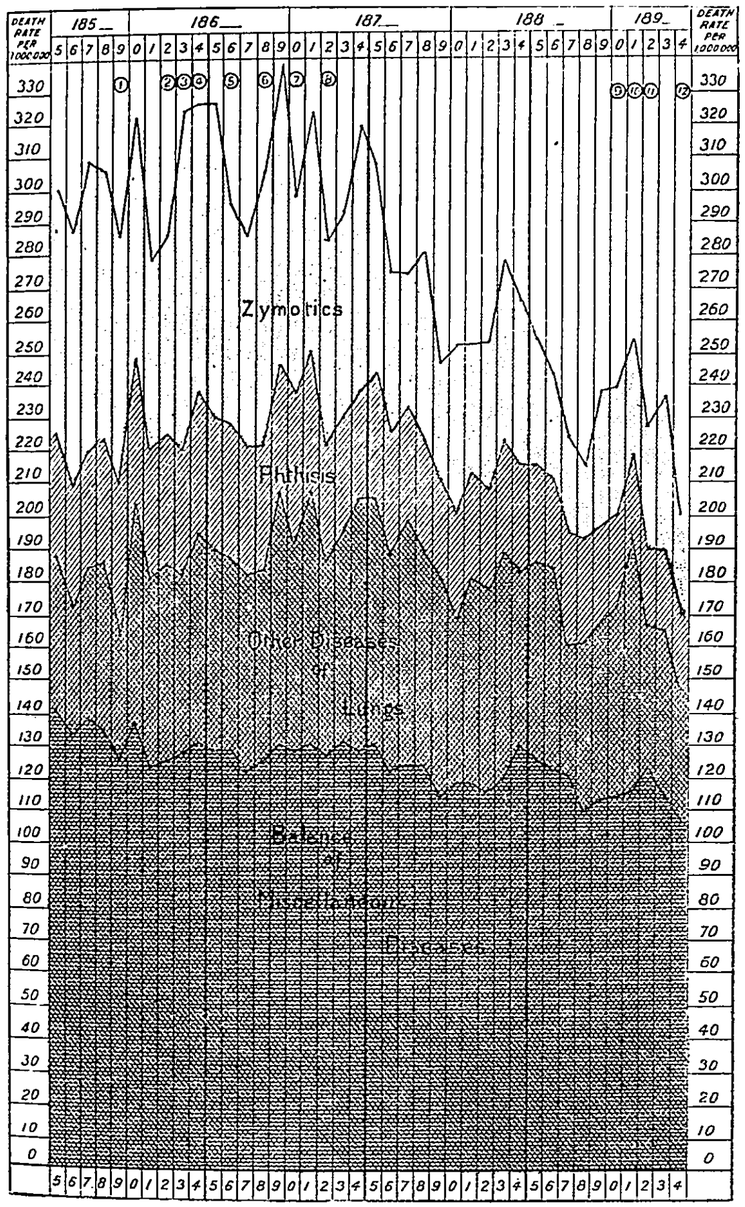

DIAGRAM NO. 1. HISTORICAL REFERENCES.

(1) Loch Katrine Water turned on. (2) Police Act (1862). (3) First Medical Officer of Health appointed. (4) First Municipal Fever Hospital. (5) Police Act (1866). City Improvements Act. (6) Cleansing taken over by Municipality, and Cleansing Department organized. (7) Sanitary Department organized. (8) Scotch Education Act. (9) Police (Amendment) Act. Notification Act adopted. (10) The City of Glasgow Act. (11) Building Regulations Act. (12) First Sewage Purification Work opened.

if not co-existent, at anyrate in various combinations, expressing themselves in the detail of slums, want of drainage, want of conveniences, impure or imperfectly distributed water, overcrowding, personal and household dirt, &c., &c. The clue to sanitary work is to follow infectious disease into the houses of its victims, whether they live in the Wynd or the Crescent. It brings you not merely to the place where disinfection is wanted and isolation may be expedient, but to the place where the technical "nuisance" may be looked for. In the Crescent, infectious disease sharpens the senses and quickens the critical faculty of the householder; in the Wynd, it enables the sanitary inspector to elicit complaints of nuisance hitherto endured without murmur, and gives him the chance of discovering others undreamt of. In neither case does it matter whether the nuisance has anything or nothing to do with the particular disease. Etiology may be left to others to discuss. Sewer gas does no good, whether it causes diphtheria or not. The business of the medical officer is to get rid of it first, and afterwards to find out if he can what particular part it plays in the depreciation of health.

CHAPTER IV.

THE HISTORY OF HOSPITAL ACCOMMODATION FOR INFECTIOUS DISEASES IN GLASGOW.

(*a*) GENERAL. (*b*) THE POLICY AND PRACTICE OF GLASGOW IN THE MANAGEMENT OF EPIDEMIC DISEASES.

THE pages of "Evolution," in which the history of hospital provision for the treatment of infectious diseases is sketched, may form a prelude to the more detailed discussion of the subject, as presented to the Epidemiological Society of London in 1881.[1]

Practice, however, crystallises into policy only through a long period of experimental working along lines more or less tentative in character, and so we find in the Kennedy Street Hospital Reports recurring references to the functions of a fever hospital in relation primarily to the treatment of the infectious sick, but also, as affecting the spread of the particular disease under treatment. "The *prevention* of disease is the function of the Local Authority. Its *treatment* may devolve on various public bodies, according to accident or special circumstances. . . . It is quite possible *to treat* 'contagious' diseases in the most perfect way so far as the sick individual is concerned, and yet to fall short of perfect precautionary measures for the prevention of its spread."

The question was raised in an acute form at this time by a proposal of the Directors of the Royal Infirmary to the Board of Police to erect a Convalescent Home for Small-pox patients. The duty of the Infirmary to the patient ended when he could be discharged without injury to himself; whether he might still be capable of spreading disease to others was a question which did not primarily concern them as an institution maintained by public subscription for the specific purpose of treating disease only. The solution was ultimately to be found in

[1] "The Policy and Practice of Glasgow in the Management of Epidemic Disease." *Trans. of the Epidemiological Society*, New Series, vol. i., Session 1881-82.