

drawn from ditches and wells polluted with the fœtid overflowings of cesspools, a motive for the exertions and self-sacrifices of philanthropy is indicated, which, in a metropolis pre-eminently distinguished for its sympathies with suffering in all its forms, requires, to insure its adoption, only to be known. But there yet remains for the highest of all reflections, that of the Christian, the fact that, owing to the concentration of all these physical ills, the great majority of which, it must never be forgotten, are susceptible of removal, the span of existence allotted in mercy for the preparation for another world is fearfully curtailed in all the densely populated districts of London, the climax being attained in one spot, where the value of human life is cut down to the brief space of eleven years and a half.

In concluding this Report, I beg to state that I have obtained a large amount of information from the valuable reports of the Medical Inspectors appointed by the General Board to superintend the system of house visitation in London, and especially from those of Dr. Gavin, Dr. Waller Lewis, Dr. Macloughlin; Mr. Liddle, and Mr. Walsh. I also feel it to be an act of duty to these gentlemen to state, that during the time they were thus engaged they most zealously devoted themselves to the discharge of the important duties with which they were intrusted; and to the very able manner in which those duties were performed, seconded by the great exertions of the Medical Visitors, I attribute a large part of the success that resulted from the application of the preventive measures directed by the General Board; measures which, under the Divine blessing, were the means of saving a large amount of human life. Some extracts will be found from the interesting reports of Dr. Milroy, on certain parts of the metropolis. To Mr. H. C. Edwards I am indebted for the preparation of several statistical tables, and for other assistance.

I have the honour to be,
My Lords and Gentlemen,
Your most obedient servant,
R. D. GRAINGER.

June 10, 1850.

APPENDIX.

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No. 4.—*Dr. Guy's Table.*—In the Report of the Registrar-General for the week ending December 22, 1849, Dr. Guy has given a very interesting account of the professions or occupations of 4312 men of the age of 15 and upwards, who were destroyed by cholera, the ratio to the living being also calculated as accurately as the data available for that purpose would permit.

ABSTRACT of the PROFESSIONS and OCCUPATIONS of 4312 MALES, of the Age of 15 Years and upwards, who died of CHOLERA in London, during the Epidemic of 1848-9. By W. A. GUY, Esq., M.D., Professor of Forensic Medicine, King's College, and Physician to King's College Hospital. Together with a Rough Approximation to the ratio which the Deaths bear to the Living. This ratio is obtained, in the case of tradesmen, by dividing the number following each trade (as given in the Post Office Directory for 1840) by the number of deaths; and in the case of all the other classes, by dividing the number of the living in each class, as returned by the Census of 1841, by the number of deaths. In the case of such of the working-class as follow occupations of the same name with that borne by tradesmen, the number of the living is obtained by subtracting the number of tradesmen from the total given in the Census, such total comprising both the employers and the employed. The table comprises the inmates of workhouses, hospitals, and asylums, who were returned as having definite occupations.

	Number of Deaths.	Ratio.
Gentlemen, and Men of Independent Means	135	1 in 200
Clergymen of the Church of England (3), and Ministers of other Persuasions (3)	6	1 in 213
Physicians, Surgeons, and General Practitioners	16	1 in 265
Magistrates, Barristers, Conveyancers, and Attorneys	13	1 in 375
Learned Professions	35	1 in 297
Architects, Civil Engineers, and Surveyors	11	1 in 115
Actuaries, Accountants, Bill and Share Brokers, Editors, Reporters, &c.	14	1 in 118
Merchants	11	1 in 348
Officers in the Army and Navy.	11	..
Other Professions	8	..
TRADESMEN (Masters), &c.		
Agents	12	1 in 49
Auctioneers	1	1 in 266
Bakers	8	1 in 133
Blacksmiths, Whitesmiths, Locksmiths, &c.	2	1 in 65
Brewers	1	1 in 160
Bricklayers and Builders	14	1 in 39
Bookbinders, Booksellers, Stationers, Printsellers, &c.	14	1 in 96
Brokers	6	1 in 170
Butchers	8	1 in 123
Cab and Omnibus Proprietors	5	..
Cabinet-makers, Carpenters, Upholsterers, Undertakers, &c.	14	1 in 110
Cheesemongers	13	1 in 51
Chemists and Druggists	7	1 in 86
Chimney-sweeps	2	..
China, Glass, and Earthenware Dealers	5	1 in 51
Clerks, Accountants, &c.	100	..
Coffee-shop Keepers	3	1 in 85
Carried forward	440	

Abstract of the Professions and Occupations of 4312 Males, of the Age of 15 Years and upwards, who died of Cholera in London, during the Epidemic of 1848-9—*continued.*

	Number of Deaths.	Ratio.
Brought forward	440	
Coalmerchants	6	1 in 85
Cornchandlers	5	1 in 85
Cowkeepers, Dairymen, Milkmen	8	1 in 20
Customhouse Officers	11	..
Drapers, Hosiers, Haberdashers, &c.	17	1 in 71
Dyers	2	1 in 112
Eating-house Keepers	3	1 in 36
Egg Merchants	5	1 in 6
Excise Officers	7	..
Farmers	8	..
Fishmongers	11	1 in 20
Foremen	12	..
Fruiterers and Greengrocers	12	1 in 28
Gardeners	4	..
General Dealers	32	..
Grocers	20	1 in 65
Hatters and Furriers	3	1 in 143
Ironmongers	7	1 in 53
Jobmasters, Livery-stable Keepers	5	1 in 37
Master Mariners	25	..
Musicians	4	..
Oilmen	13	1 in 46
Painters and Glaziers	3	1 in 142
Papermakers	2	1 in 15
Pastrycooks	2	1 in 127
Pawnbrokers	4	1 in 64
Printers	4	..
Poulterers	3	1 in 32
Publicans, Licensed Victuallers, Beer-sellers	42	1 in 63
Saddler	1	1 in 250
Sailmakers	2	1 in 30
Salesmen	7	..
Schoolmasters	7	..
Shoemakers	8	1 in 120
Tailors	6	1 in 233
Travellers	19	..
Tobacconists	6	1 in 75
Turners	2	1 in 50
Wharfingers	2	1 in 55
Wheelwrights	1	1 in 80
Wine Merchants	5	1 in 170
Other Trades	34	..
ARTIZANS AND LABOURERS.		
Artists, Print-colourers, &c.	8	..
Bakers	52	1 in 148
Ballast-heavers	7	1 in 24
Bargemen	18	1 in 126
Barmen, Potmen, Potboys	8	..
Basket-makers	7	1 in 96
Carried forward	920	

Abstract of the Professions and Occupations of 4312 Males, of the Age of 15 Years and upwards, who died of Cholera in London, during the Epidemic of 1848-9—*continued.*

	Number of Deaths.	Ratio.
Brought forward	920	
Beadles	5	..
Beggars, Tramps, &c.	6	..
Bricklayers	47	1 in 143
Brickmakers	12	1 in 67
Brass-finishers	3	1 in 318
Boat-builders	3	1 in 166
Bookbinders	18	1 in 150
Brushmakers	11	1 in 153
Butchers	32	1 in 174
Cabinet-makers and Upholsterers	70	1 in 89
Cabmen	35	..
Carmen, Carriers, and Carters	52	1 in 74
Carpenters and Joiners	111	1 in 155
Carvers and Gilders	9	1 in 219
Chimney-sweeps	7	..
(Masters and Men)	9	1 in 109
Cigar-makers	4	..
Coachmen and Cabmen	57	1 in 95
Coachmakers	16	1 in 262
Coalporters and Coalheavers	53	1 in 32
Compositors	21	..
Cooks and Confectioners	11	1 in 106
Convicts	36	..
Coopers	28	1 in 124
Corkcutters	2	1 in 279
Curriers and Leather-dressers	24	1 in 95
Cutlers	6	1 in 106
Comb-makers	3	1 in 148
Dock-labourers	10	..
Draymen	13	..
Drovers	6	1 in 54
Dustmen and Scavengers	6	1 in 39
Dyers	7	1 in 230
Engineers	44	1 in 94
Engravers	9	1 in 199
Farriers	12	1 in 106
Firemen	2	1 in 80
Fishermen	6	1 in 93
Footmen and Men-servants	25	1 in 1572
Founders	10	1 in 12
French Polishers	6	1 in 157
Furriers	6	1 in 116
Gardeners	48	1 in 93
Gas-fitters	8	1 in 51
Glass-workers, Glass-cutters, &c.	8	1 in 126
Glass-blowers	3	..
Glove-makers	3	1 in 98
Grooms and Ostlers	37	1 in 75
Gun-makers	7	1 in 143
Hairdressers	13	1 in 154
Hatters	26	1 in 92
Carried forward	1,926	

Abstract of the Professions and Occupations of 4312 Males, of the Age of 15 Years and upwards, who died of Cholera in London, during the Epidemic of 1848-9—*continued.*

	Number of Deaths.	Ratio.
Brought forward	1,926	
Hawkers, &c.	67	1 in 22
Japanners	2	1 in 187
Jewellers, Goldsmiths, and Silversmiths	6	1 in 583
Labourers	756	1 in 65
Lamplighters	6	..
Last-makers	2	1 in 80
Letter-carriers and Postmen	6	..
Lightermen	20	1 in 75
Lithographers	3	1 in 48
Locksmiths and Bellhangers	3	1 in 117
Masons	17	1 in 204
Matmaker	1	1 in 192
Mathematical Instrument Makers	2	1 in 120
Messengers, Porters, and Errand-boys	99	1 in 131
Milkmen and Cowkeepers	14	1 in 143
Modellers	3	1 in 41
Musicians	6	..
Millwrights	2	1 in 266
Packers	2	1 in 151
Painters, Plumbers, and Glaziers	73	1 in 144
Paper-makers and Stainers	8	1 in 136
Plasterers	20	1 in 129
Pensioners	64	..
Policemen	24	1 in 208
Polishers	4	1 in 36
Potters	6	1 in 52
Printers (including Compositors)	61	1 in 105
Rag-sorters	2	1 in 54
Railway Guards	10	..
Rope-makers, Cord and Twine Spinners, &c.	12	1 in 88
Sailors (including Greenwich Pensioners)	299	1 in 24
Saddlers, Harness and Whip makers	15	1 in 133
Sawyers	33	1 in 90
Scalemakers	2	1 in 60
Shipwrights	20	1 in 105
Silk-dressers	2	..
Shoemakers	151	1 in 162
Shopmen	35	..
Smiths	62	1 in 105
Soldiers	62	..
Stokers	13	..
Sugar-bakers	4	1 in 152
Tailors	80	1 in 244
Tanners	22	1 in 39
Tallowhandlers	2	1 in 430
Tin-plate Workers	7	1 in 178
Tobacco-pipe Makers	6	1 in 75
Toll-collectors	3	1 in 56
Toymakers	4	1 in 76
Turners	18	1 in 83
Type-founders	1	1 in 390
Carried forward	4,068	

Abstract of the Professions and Occupations of 4312 Males, of the Age of 15 Years and upwards, who died of Cholera in London, during the Epidemic of 1848-9—*continued.*

	Number of Deaths.	Ratio.
Brought forward	4,068	
Umbrella-makers	3	1 in 176
Undertakers	2	1 in 325
Waiters	14	..
Watchmen	7	..
Watermen	27	1 in 61
,, (Cabstands)	2	..
Warehousemen	8	1 in 472
Watchmakers	11	1 in 364
Weavers	102	1 in 36
Wheelwrights	8	1 in 294
Window-blind Makers	3	1 in 52
Wine-coopers	3	1 in 171
Wharfingers	2	1 in 85
Wire-drawers	3	1 in 61
Woolsorters	4	..
Other Occupations	75	..
	4,342	
Subtract as entered twice	30	
	4,312	

No attempt is made to correct for increase or decrease of population since 1841; and the persons of the several occupations returned in the metropolis by the Census Commissioners do not include those of Wandsworth, Hampstead, or Lewisham.

No. 5.—*Dr. Waller Lewis' Report on Investigation into alleged cases of Contagion from washing Cholera Clothes.*

MY LORDS AND GENTLEMEN,

Nov. 29th, 1849.

In compliance with instructions that I received from Dr. Southwood Smith, to investigate those cases of cholera that were alleged to have been caused by contagion from washing the clothes of cholera patients, I have had the honour of laying before you at different periods, as I could procure the evidence and information of the parties concerned, the particulars of every case registered in the weekly returns of the Registrar-General, during the late epidemic, as well as of some other cases that have come to my knowledge in other ways.

Many circumstances caused the requisite evidence to be procured with the greatest difficulty. The death of the women who had washed the clothes, and the universal absence of notes by the medical attendants, caused by the entire absorption of their time in actual attendance on the sick, were among the principal of these.

I have, however, had personal interviews, or have corresponded on the subject, with all these gentlemen, as well as with the various district registrars, and the friends and relatives of the deceased, and have by these means procured a large amount of trustworthy evidence on—

- 1st. The previous state of health of the patient.
- 2nd. Her habits.
- 3rd. The sanitary condition of her abode.

4th. Her diet about the date of her being taken ill.

5th. The presence or absence of premonitory symptoms *before* washing the clothes.

As well as on other subjects pertinent to the case.

The results of this investigation are, that in my opinion *not a single case can be proved to be owing to contagion.* In every instance there were numerous other causes for the disease manifesting itself in the patient, independently of washing the clothes. It should be borne in mind also, that laundresses appear to have fallen victims to this epidemic in a larger proportion than women of almost any other employment whatever, and this without a tittle of evidence being adduced of their having washed the clothes of cholera patients. In the course of the ten weeks ending 6th October, 50 washerwomen died of this complaint in the metropolis alone.

Having already laid before your Honourable Board the particulars of each of the following cases *in extenso*, I will now merely recapitulate the principal points which my investigations have brought to light, and which I think will satisfy any one that, under the circumstances, the attack can be at least as well assigned to other causes as to the alleged one. In one case I ascertained that the deceased did not wash the infected clothes, while the person who did escaped. In three others, at least, the disease manifested itself before the linen was washed. In nearly every instance the condition of the house and the street or court inhabited by the patient was of the most dangerous description.

Case 1. Fol. 53.—S. M., Kensington.

Very intemperate and irregular; locality most unhealthy; open sewer in front. Another person who did not wash clothes died in same house.

Case 2. Fol. 56.—Mrs. C., Parson's Green-lane, Fulham.

Very intemperate, and underclothed and fed; locality the worst in the parish. 13 others died of cholera in the lane. Great accumulations of dirt and filth in the house. Water very unwholesome.

Case 3. Fol. 55.—M. C., Brompton.

Scrofulous habit. Premonitory symptoms certainly present *while washing*, and most likely *before*. Ate tainted pork for supper the night before attack.

Case 4. Fol. 63.—M. S., Brompton.

Had purging and vomiting the day *previous* to washing.

Case 5. Fol. 69.—A. A., Kensington-town.

Before she washed the clothes, took an ounce of Epsom salts, which caused hypercatharsis; but she neglected this, not checking it; and cholera soon ensued.

Case 6. Fol. 43.—C. S., Clerkenwell.

Sanitary condition of Peartree-court "as bad as possible;" close to Fleet-ditch. Untrapped gullies, very narrow and low. Privies overfull and adjoining entrance of house. Ate a large supper of boiled salt pork, greens, and potatoes, the night before the attack.

Case 7. Fol. 53.—M. B., Wandsworth.

Had no symptom of illness till 3 or 4 days after washing the clothes. House small and dirty. Horrible privy adjoining room where she slept: fluids had oozed through the wall into the room; stench consequently intolerable. Much cholera and diarrhoea all round.

Case 8. Fol. 30.—M. R., St. James's workhouse.

Very destitute and poor. Very intemperate. Premonitory symptoms present *before* washing clothes.

The two following cases are not in the returns of the Registrar-General:—

Case 9. Fol. 60.—A. M., Mount-street workhouse.

Very intemperate. Constantly drunk. *Night-nurse* for two years pre-

viously. Deprived of sleep about time of attack. Constitution much impaired. Ate 1½ lbs. of stale suet workhouse pudding boiled up a second time (after having been kept for 3 days or more in a closet in the cholera ward) the day before the attack.

Case 10. Fol. 37.—Notting-hill.

Evidence proved that *she* did not wash any of the cholera clothes, but that the woman who did wash them did not suffer from the disease.

Hoping that the facts I have deduced relative to these cases may prove satisfactory to your Honourable Board, I have the honour of remaining,

My Lords and Gentlemen,

Your obedient servant,

WALLER LEWIS, M.B. Cantab.,

20, Edwards-street, Portman-square.

To the General Board of Health.

No. 6.—Copy of a Letter from the Rev. Charles Marshall, Vicar of St. Bride.

9, South-street, Finsbury,
10th April, 1850.

MY DEAR SIR,

In reply to your inquiries respecting the medical assistance which I was enabled to obtain during the prevalence of cholera in my parish of St. Bride, I have to inform you, that early in July, the cholera having begun to rage with great violence, I took all the means in my power to ascertain the most probable method of success in staying its ravages.

The result of my investigations was that nothing but daily house-to-house visitation was likely to be effectual for this purpose.

I immediately requested the Board of Guardians of the West London Union to grant, agreeably to the wish of the authorities of the parish, such medical assistance as would be sufficient for the visiting required.

The guardians, however, could not be prevailed upon to regard the plan as either necessary or desirable; which may in part be accounted for by the fact of the guardians representing some parts of the union being insensible of the necessity, through the localities and parishes represented by them not being at all attacked, or not nearly with such severity as St. Bride's, where it was raging most alarmingly.

In the mean time the burial-grounds of the parish had been closed, and all done that the parochial authorities could do for the health of the parish.

The Board of Health, learning the distressing state of things in St. Bride's, ordered the guardians to appoint 6 additional medical officers: on which the union appointed 3; afterwards others were appointed in addition. But it was not till after a month or six weeks' delay that the system of house-to-house daily visitation was commenced; which was conducted for a few days, partly by the medical gentlemen appointed by the Board, and partly by additional medical gentlemen obtained by me from the Committee of Health of the City of London.

No sooner had the system been in operation for a day or two than the most important improvement took place in the health of the parish; and in a very short time the pestilence was arrested.

I do not mean to impute any want of readiness on the part of the guardians to do what appeared to them right; but I mention these facts, at your request, to show that hundreds of lives may be lost before you can convince a Board of Guardians what is best to be done. In such cases as cholera, promptitude in action is everything. My own experience has proved this again and again.

Yours faithfully,

CHARLES MARSHALL,

Vicar of St. Bride.

R. D. Grainger, Esq.

To the guardians of the poor of the several unions named in the schedules hereunto annexed;

To the councils and other governing bodies of cities and boroughs, commissioners under local Acts, the surveyors of highways, their deputies and assistants, the trustees, county surveyors, and others by law intrusted with the care and management of the streets and public ways and places within the said unions;

To the owners and occupiers of houses, dwellings, churches, buildings, and places of assembly within the said unions, and others having the care and ordering thereof;

And to all whom it may concern.

WHEREAS by the provisions of the "Nuisances Removal and Diseases Prevention Act," 1848, for the prevention of epidemic, endemic, and contagious diseases, and by virtue of an order of the Lords of Her Majesty's most Honourable Privy Council, bearing date the 28th day of September, 1848, directing that the said provisions of the said Act be put in force throughout the whole of Great Britain, we the General Board of Health are authorized to issue such directions and regulations as the said Board shall think fit for the prevention (as far as possible) or mitigation of epidemic, endemic, or contagious diseases; and whereas by the said Act it is provided that the directions and regulations to be issued as aforesaid shall extend to all parts or places in which the said provisions of the said Act shall for the time being be in force, under the order of Her Majesty's Privy Council, unless such directions or regulations shall be expressly confined to some of such parts or places, and then to such parts or places as in such directions and regulations shall be specified:

Now, in exercise of the authority vested in us aforesaid, we the General Board of Health do issue the directions and regulations hereinafter contained, to extend to all parts and places within the several unions named in the schedules hereunto annexed, and to all extra-parochial places adjoining to such unions, viz. :—

I. We direct that all councils and other governing bodies of cities and boroughs, commissioners under local Acts, surveyors, and district or assistant surveyors of highways, trustees, county surveyors and others by law intrusted with the care and management of the streets and public ways and places within the parts or places to which these directions and regulations extend, shall once at least in every twenty-four hours effectually cleanse all such of the streets, rows, lanes, mews, courts, alleys, and passages, and public ways and places under their respective care and management, as by the medical officer of the guardians, or others authorized to superintend the execution of this direction and regulation, shall be certified in writing to be in a state dangerous to health, or to require frequent and effectual cleansing by way of precaution against disease; and shall remove all filth, ordure, and nuisances therefrom.

II. And where any such streets, rows, lanes, mews, courts, alleys, and any passages, public ways or places, to which any houses or tenements adjoin, which have not been intrusted by law to the care or management of any council, commissioners, surveyors, trustees, or others, have been certified in writing, by such medical officer as aforesaid, to be in a state dangerous to health, or to require such frequent and effectual cleansing, we direct that every occupier of a house or tenement so adjoining shall keep or cause to be kept sufficiently cleansed, at least once in every twenty-four hours, such part of the street, row, lane, mews, court, alley, or passage, way or place, as adjoins the house or tenement occupied by him.

And we direct that all such works of cleansing, and removal of filth, ordure, and nuisances, as are required by these directions and regulations, shall be done

in such manner by effectual washing or otherwise, and with the use of such fluids or substances for preventing the escape of noxious effluvia during the operation, as the medical officer of the guardians or others authorized to superintend the execution of these directions and regulations shall think necessary and shall direct.

III. We do hereby authorize and require the said guardians, by themselves or by their officers or persons employed under them in the administration of the laws for the relief of the poor, or by officers or persons specially appointed in this behalf, to superintend and see to the execution of the foregoing directions and regulations within their respective unions, and in any extra-parochial places adjoining thereto respectively.

IV. And further, where it shall appear that by want or neglect of the council of any city or borough, commissioners, surveyors, trustees, or others intrusted with the care and management as aforesaid, or by reason of poverty of the occupiers or otherwise, there may be any default or delay in the cleansing of or removing nuisances from any street, row, lane, mews, court, alley, passage, or public way or place certified as aforesaid, within any of the said unions, or any extra-parochial place adjoining thereto, we authorize and require the guardians of such union to cause such street, row, lane, mews, court, alley, passage, way, or place to be effectually cleansed, and all nuisances to be removed therefrom, and to do all acts, matters, and things necessary for that purpose.

V. We also direct as follows:—

That,

When and so often as any dwelling-house in any part or place to which these directions and regulations extend, is in such a filthy and unwholesome condition as to be a nuisance to or injurious to the health of any person; or

Where upon any premises, or any part or place as aforesaid, there is any foul and offensive drain, ditch, gutter, privy, cesspool, or ashpit, or any drain, ditch, gutter, privy, cesspool, or ashpit kept or constructed so as to be a nuisance to or injurious to the health of any person; or

Where upon any such premises swine or any accumulation of dung, manure, offal, filth, refuse, or other matter or thing is kept, so as to be a nuisance to or injurious to the health of any person; or

Where upon any such premises (being a building used wholly or in part as a dwelling-house), or being premises underneath any such building, any animal is kept, so as to be a nuisance or injurious to the health of any person;

In each of the above-recited cases, the owner or occupier, and persons having the care or ordering of such dwelling-house, or of the premises where the nuisance or matter injurious to health may be, shall cleanse, whitewash, or otherwise purify as the case may require, such dwelling-house or building; or abate or remove the nuisance or matter injurious to health as aforesaid, with all reasonable speed after the publication of these our directions and regulations, or after the nuisance or matter injurious to health shall have arisen.

VI. In case, by reason of poverty or otherwise, the occupier of any such dwelling-house or premises is unable to perform any works required by these directions or regulations, such occupier shall give notice of such his inability to the guardians of the union comprising the place wherein the premises shall be situated.

VII. We authorize and require the guardians aforesaid, by themselves or by officers by them authorized in this behalf,

To see to the execution of the directions hereinbefore contained for the cleansing and purifying of dwelling-houses, and for the abatement and removal of nuisances and matters injurious to health, in every case in

which there shall not be a council or other governing body of a city or borough, or commissioners having jurisdiction for the removal of nuisances, or where such council, governing body, or commissioners shall not cause to be effectually executed such directions; and for that purpose—

To visit from time to time, or cause to be visited, the several dwellings and places where there may be ground for believing that necessity will arise for executing such directions.

VIII. And in every case in which, from the poverty of occupiers or otherwise, there may be default or delay in the cleansing or purifying of any such dwelling-house, or in the abatement or removal of any such nuisance or matter injurious to health, and the medical officer or other person duly authorized as aforesaid shall certify that the same requires immediate attention; and in every case in which from want of co-operation of the owners or occupiers there is any default or delay in cleansing any such drain, ditch, watercourse, or gutter into which several dwellings or tenements may drain;

We authorize and require such guardians to cause such dwelling-houses to be cleansed and purified, and such drain, ditch, watercourse, or gutter to be frequently and effectually cleansed, and such nuisance or matter injurious to health to be abated and removed respectively, and to do all acts and provide all matters and things necessary for that purpose.

IX. And we do further authorize and require the guardians to direct their clerk to make out from the register of deaths, or from the district medical relief books, and from any public books or other sources from which information may be obtained within the union, a list of places where epidemic, endemic, and contagious diseases have of late been frequent.

X. And we authorize and require such guardians to cause the medical officers employed by them, or specially appointed for the purpose, to visit the places, of which a list shall be made out as aforesaid, and all such neighbouring and other places within such union as shall appear to such medical officers (from being under like circumstances with the places included in such list or otherwise) to require visitation or examination;

XI. And each such medical officer shall, where it may be necessary, certify in writing to the board of guardians, and to the surveyors, trustees, occupiers, or others required to execute these directions and regulations, all such places as are in a state dangerous to health, or need frequent and effectual cleansing by way of preservation against disease, and such dwelling-houses as are in a filthy and unwholesome condition, and all such nuisances and matters injurious to health as ought to be abated, cleansed, and removed under these regulations.

XII. And each such medical officer shall forthwith, upon any case of cholera, or of typhus, or other epidemic, endemic, and contagious diseases becoming known to him within the parish, union, or district under his visitation, report the same to the board of guardians.

XIII. And where it shall be certified to the guardians by their medical officer or officers, or where it shall otherwise sufficiently appear to such guardians, that extraordinary medical aid is required for persons attacked or threatened by cholera, or epidemic, endemic, or contagious disease, we authorize and require such guardians to provide sufficient medical aid, and, in suitable places, such medicines as may be required within their respective unions for necessitous persons attacked by cholera or by premonitory symptoms, and to make arrangements for the distribution of notices, stating the places where aid and medicines shall have been provided.

XIV. Whereas it has heretofore been found impracticable to ensure proper treatment in their own houses to many of the poorer classes, we authorize and require the said guardians, where it shall appear that such extraordinary aid is required, to provide suitable rooms or places, capable of accommodating neces-

sitous cases, to which persons attacked by cholera, who cannot be properly treated in their own houses, may be conveyed.

XV. And we also authorize and require the said guardians, where it shall appear needful, to provide rooms or places of refuge, to which may be removed the families of such necessitous persons as have been attacked with cholera, and also such necessitous persons living under the same roof with, or in the vicinity of, persons so attacked, as the medical officers acting under the authority of the said guardians may deem it necessary to remove; and the houses, rooms, or dwellings from which persons may have been so removed to the houses of refuge shall be cleansed and purified by the owners or persons having the care or ordering thereof, or, in their default, by the said guardians.

XVI. And on the occurrence of any case of cholera, or other epidemic, endemic, or contagious disease, in any room occupied by one family or more, we hereby authorize and require the medical officer to remove, or cause to be removed, either the patient, or so many of the occupants of such room as he shall consider would, unless removed, tend to prevent the recovery of the patient, or endanger the spreading of the disease.

XVII. And in case of death by cholera, or any other epidemic, endemic, or contagious disease, we hereby authorize and require the last medical attendant upon the person of the deceased, or, in case of there having been no medical attendant, the housekeeper or person present at the death, or who is in charge of the body, forthwith to notify the fact of the death to the medical officer of the district who is charged with the execution of these orders for the prevention of the spread of such disease.

And we do hereby authorize such medical officer to give such directions as may appear to him to be needful, in respect to the care, removal, and the time of interment of the body, for preventing the communication or spread of disease.

And we hereby authorize and require all persons to give such information or such assistance to such medical officer, and to be otherwise aiding him, as he may need in the execution of these orders.

XVIII. And in the event of the fatal termination of any case of cholera, or of epidemic, endemic, or contagious disease, in any room occupied as a living or sleeping room by one family, or more, or by numerous persons, we hereby authorize and require the medical officer to remove, or cause to be removed, as speedily as may be, either the corpse or the persons occupying such rooms, until the corpse can be conveniently removed and properly interred.

XIX. And we do authorize and direct the said guardians to make arrangements for obtaining daily lists of persons attacked by cholera or other epidemic diseases within their respective unions, with the particulars of their cases and treatment, and for communicating the same daily to the General Board of Health.

XX. And we do hereby authorize and direct the said guardians, where it may appear needful, to appoint such additional medical officers, and also to appoint such other officers, as may be necessary to execute and superintend the execution of these regulations, and to publish and circulate, by printed handbills or other means, notices of the provisions of the said Act for the prevention of nuisances, and of our regulations and instructions, or of such part of any of them as it may appear desirable to make publicly known.

Given under our hands and under the seal of the General Board of Health this third day of November, One thousand eight hundred and forty-eight.

CARLISLE.
EDWIN CHADWICK.
T. SOUTHWOOD SMITH.

No. 8.—*Extract from the Evidence of J. Hodgson, Esq., on Dr. McCann's Plan.*

MR. HODGSON, who was a member of the Sanitary Board at Birmingham, thus expresses himself respecting the proceedings of Dr. McCann, who was despatched by the Government, in 1832, to Bilston:—

"We were acquainted with what was going on at Bilston, but it was after it was all over at Bilston that I saw Dr. McCann, and conversed with him upon the subject. I have always felt since that time that, so far as my little knowledge of the matter went, if cholera ever threatened this country again it would be a very manageable disorder, provided Dr. McCann's ideas were fully explained and acted upon, namely, that cholera consisted of two parts—the premonitory condition and the condition of collapse, and that if you catch the disease in the premonitory condition you may stop it at once, but that when it comes to the other condition there is great danger. I wish to state that I consider that very great merit is due to Dr. McCann; there is no merit due to me except that of pointing out to my friend Mr. Chadwick the importance of Dr. McCann's proceedings, which I verily believe furnish a key to the management of this terrible malady. I ascribe to Dr. McCann the merit, not of having first said that there is a premonitory stage, and pointing out that part of the history of the disease, but of having insisted upon, and of having drawn particular attention to this point, namely, that there is a stage at which you may stop the disease at once and readily; but if it gets into the other stage, there is no known treatment upon which any reliance can be placed. I conversed with nearly all the medical gentlemen who went to Bilston to attend the cholera patients there, and also with many medical friends residing in the neighbourhood of Bilston, where cholera prevailed, particularly at Wolverhampton, where cholera was fatal in 193 cases, and they unanimously agreed in opinion as to the importance and efficiency of Dr. McCann's views and proceedings."*

Mr. Hodgson then proceeds to give his reasons for believing that the great success of Dr. McCann's plan did not depend on the epidemic having run its course and worn itself out, but that it "was owing to his stopping the disease in the premonitory stage." In Bilston, where it is well known the disease was most destructive, so that, in a population of 14,700 inhabitants, 3568 were attacked, and 742 died, in less than seven weeks, the plan adopted to secure prompt treatment was by opening a dispensary, and urging all persons labouring under bowel complaints to apply for medicine without delay. The disease began on August 4, 1832, and in 22 days 1812 persons had the disease, of whom 503 died; on the 23rd day from the commencement of the attack the dispensary was opened, after which the disease continued 27 days; during this time 1756 new cases occurred, of which 239 were fatal; and of these fatal cases 134 occurred in the first five days after the opening of the dispensary.

"After these first five days, when the dispensary had come into full operation and the people were aware of its benefits, although the number of new cases continued to be nearly as great as previously, the number of fatal cases very much diminished; and in the course of 20 days the fatal cases altogether ceased. Indeed, during the first five days from the opening of the dispensary, the number of fatal cases, as compared with the number in the preceding five days, had decreased from 227 to 134; in the second five days the number was reduced to 59; and on the eighth day from the expiration of that time, being the 18th day after the opening of the dispensary, not a single fatal case was reported; whereas, during the seven days immediately preceding that on which the dispensary was opened, the number of deaths daily had varied from 36 to 50. After that time, namely, 18 days after the opening of the dispen-

* Metropolitan Sanitary Commission, Second Report, with Minutes of Evidence, Svo., p. 60.

sary, only eight fatal cases occurred during the existence of the disease in the town. Now these facts show, that, after the 23rd day, some important agency had checked the fatal progress of the disease; and inasmuch as no other agency was known to be in operation, and the new cases during the subsequent 10 days were as numerous, or nearly so, as in the 10 days preceding the opening of the dispensary, it is fair to conclude that the proceedings then adopted, by stopping the disease in its first or diarrhoeal stage, prevented its progress to the second or collapsed and fatal stage. Such was the conviction of the professional and other attendants upon the cholera patients not only at Bilston, but also in the neighbouring towns where these facts became known. Again, the abiding of the disease at Bilston, where its attacks were so numerous and so fatal, was shorter than in most of the towns of about the same population both in that neighbourhood and in other parts of the kingdom; and it is reasonable to believe that this was owing to its duration at Bilston having been cut short by some agency employed in its treatment there, such having been the case, and no other cause of its stoppage being apparent. In Bilston it continued seven weeks; at Wolverhampton, Dudley, Wednesbury, Sedgley, Willenhall, and West Bromwich, all of which are in the neighbourhood of Bilston, according to the returns received by the Central Cholera Board in London, it remained a longer time; and in Tipton, where it was very fatal, which is an adjoining parish to Bilston, and from which place it was believed to have extended to Bilston, it continued from June to October."

This is a clear and satisfactory exposition of the working of a really efficient method for the management of epidemic cholera; and the results precisely tally with the experience acquired by the Board of Health during the late visitation.

No. 9.—*Instructions as to the Duties of the Medical Superintendents and Visitors of the Metropolitan Districts, in carrying out the Preventive Measures of the General Board of Health.*

THE *Medical Visitors* provided for each district by the Boards of Guardians should be placed under the direction of the Medical Superintendent, who should be appointed by the General Board of Health.

The duty of the Superintendent should be to ascertain the precise localities most affected by cholera in his district, by means of the returns of the District Registrars, which he should consult every day; by the returns of cholera cases and cases of diarrhoea obtained from the District Medical Officers and Visitors; and by any other sources of information which he may be able to render available. He should make out daily lists of such streets and houses as are specially affected, and on these data he should locate his Visitors for their daily work.

The Visitor should take notes of the particulars specified in the annexed "Visitor's Return," and from them he should make a return every day to the Superintendent. It will be his duty to visit every house in the district assigned to him by the Superintendent, once each day at the least, and, in cases of sudden attacks of the epidemic in confined localities, this visitation should be made at such shorter intervals as the emergency of the case may require.

The Visitor should carefully inspect all the affected localities, and report to the Superintendent all instances where cleansing, either external or internal, may be required. And the Superintendent should visit personally the infected localities, in order to see that the visitation, and reporting of cases and nuisances, are properly carried out.

The reports of cleansing operations required should be sent by the Superintendent to the inspectors of nuisances appointed by the parishes, who should

be requested to proceed immediately on the receipt of such notices to take steps for cleansing.

The *Medical Visitors* should be provided with medicines to administer on the spot to all persons found to be suffering from cholera or its premonitory symptoms. But all cholera cases and premonitory cases which may have passed into cholera should be transferred immediately to the Medical Officers of the districts in which they may occur. The treatment of premonitory cases should be continued by the Medical Visitors. The *Lay Visitors* (where such are employed) should endeavour to discover the existence of cholera cases and cases of diarrhoea in the district assigned to them, and they should immediately send either the patient or one of his friends or neighbours to the nearest Medical Officer for assistance; and they should keep a note of all cases, in order to be able to ascertain whether the parties have applied. Their special duties should be to bring the patient by all means in contact with medical relief at the earliest possible period after the discovery of the case.

An important duty of both classes of Visitors should be to converse with the people, to allay alarm, and to give them advice on such matters of a sanitary nature, as cleanliness, personal habits, ventilation, temperance, &c., as may be requisite.

They should impress on the people the danger of neglecting diarrhoeal symptoms, and the necessity of immediate application to the surgeries of the Medical Officers, at any hour of the day or night, by all persons who may be seized with indisposition in the intervals between their visits.

They should specially caution the people not to wait, if taken ill, till the Visitor comes round, but to apply at the proper district dispensary at once.

Daily returns of cholera cases and cases of diarrhoea should be furnished by the parochial Medical Officers each day to the Medical Superintendent, and the returns should specify the residences of persons attacked by cholera, and at least the *locality* from whence the cases of diarrhoea have proceeded.

The Medical Superintendent should report daily to the General Board of Health on the state of disease in his district, in schedules to be provided for the purpose.

Whenever the number of visitors is found to be insufficient to do the work of household visitation effectually, the Medical Superintendent should report the fact to the General Board of Health. He should also report all neglects in carrying out cleansing operations; and in case he has reason to believe that the medical attendance on the sick is insufficient, or that the system of refuge is not effectually carried out, or that further hospital accommodation for the sick is required, he should immediately report the fact to the General Board of Health. The Superintendent should also make inquiries as to any large works which may exist in his district. He should ascertain whether any provision of medicines has been made for the treatment of diarrhoea at such works, and report to the General Board of Health what measures may be necessary.

Handbills should be distributed throughout the affected districts to inform the people of these arrangements, as the Medical Superintendent may direct.

General Board of Health, Gwydyr House,
Whitehall, September, 1849.

No. 10.—Specimen of Dr. Gavin's Daily Return of Choleraic Disease in each Parish.

RETURN of CHOLERA and DIARRHŒA CASES, in the PARISH of ST. MATTHEW, BETHNAL-GREEN.

Table with columns: District Officers, Diarrhœa, Approaching Cholera, Cholera, Deaths (Cholera, Diarrhœa), Dispensary Cases, Visitors' Cases, Total.

Assistant Superintending Inspector.

Specimen of Daily Return of Visitors to Dr. Gavin.

SAINT MATTHEW, BETHNAL-GREEN.—Premonitory Cases and Cholera discovered on Visitation.

Table with columns: Locality, No. of House, No. of Inhabitants, Cases discovered on Visitation (Diarrhœa, Approaching to Cholera, Cholera), Diarrhœa passing into R. W. P., R. W. P. passing into Cholera, Deaths, Remarks as to Locality or Cause of Death.

Visitor.

* Rice-water purging.

No. 11.—RETURN of CHOLERAIC DISEASE in the PARISH of BETHNAL-GREEN, in the practice of the parochial Medical Officers, and discovered by the Visitors during the Visitation.

Table with columns: Date, Diarrhœa (Visitors, Dispensary, Medical, Workhouse, Total), Approaching Cholera (Visitors, Dispensary, Medical, Workhouse, Total), Cholera (Visitors, Dispensary, Medical, Workhouse, Total), Corpses, Total.

* One visitor.

† Two visitors.

‡ Four visitors.

No. 12.—The following TABLE, prepared by Mr. LIDDLE, and which is referred to at page 163 of my Report, will show the daily progress of cases of Cholera, Approaching Cholera, and Diarrhœa, and cases which passed into Cholera, from the 8th of September to the 4th of October, in the parishes of St. Luke, Islington, and Clerkenwell, and in the Whitechapel Union from the 16th of September to the 4th of October, 1849 :—

Date.	ST. LUKE.							ISLINGTON.*							
	Medical Officers.			Visitors.				Passed into Cholera.	Medical Officers.			Visitors.			
	D.	R. W. P.†	C.	D.	R. W. P.	C.	D.		R. W. P.	C.	D.	R. W. P.	C.	Passed into Cholera.	
Sept. 8	44	10	32	17	..	..	1	..	..	..	..	..	..	..
9 & 10	66	22	23	81	1	4	1	..	..	9	147	12	..	..
11	40	11	15	57	..	4	..	..	..	7	131	10	..	..
12	47	10	14	69	8	1	1	..	7	14	35	5	..	..
13	37	7	16	53	..	1	1	..	33	7	66	6	..	..
14	26	5	16	41	2	2	4	67	12	6	55	1	5	1	
15	6	1	5	16	2	..	2	40	..	2	61	1	..	1	
16 & 17	88	13	8	102	..	..	1	79	..	..	120	7	4	1
18	33	3	15	42	..	..	3	35	1	..	56	4	..	1
19	33	1	2	15	..	..	..	43	..	1	61	3	..	..
20	30	2	4	37	..	..	..	29	..	1	67	1	2	..
21	24	3	6	17	..	..	..	18	0	2	50	1	2	..
22	11	1	1	28	..	..	..	25	..	2	52	3	..	..
23 & 24	39	1	1	43	..	1	..	..	..	..	39	1	1	..
25	16	2	..	59	..	..	..	41	..	3	37	2	..	..
26	16	3	2	22	..	..	..	26	..	..	45	3	..	..
27	33	4	..	31	..	..	..	20	..	2	40	3	2	1
28	19	2	5	25	..	..	..	21	..	..	29	3	..	..
29	13	1	..	27	1	..	..	21	..	1	45	1	..	..
30 & 1 Oct.	26	3	6	34	2	..	2	14	..	..	78	1	..	..
2	15	2	3	32	2	..	..	38	..	2	60	..	..	..
3	14	2	1	24	2	..	..	24	..	..	81	1	..	..
4	12	2	3	18	..	..	..	21	..	..	47	1	..	..
Total	688	111	178	890	20	13	16	565	53	59	1302	70	16	5	

* The returns of the number of diarrhœa cases which were attended by the medical officers of Islington are very imperfectly recorded in this table.

† Rice-water purging, or approaching cholera.

NOTE ON THE CHOLERA MAP OF HAMBURG.

This map, copied from the interesting work of Dr. Rothenburg,* and which indicates by the depth of the red tinting the relative severity of the epidemic of 1832 in the several districts of the city of Hamburg, places in a striking point of view the predominating influence of locality over the progress of the disease. By casting the eye over the map it will be observed that the epidemic specially developed itself along the river Elbe, and the streets bordering the numerous canals which intersect the city: so much indeed is this the case that the course of the latter may be immediately recognised by the deep red streak on each of their sides. The further details may be gathered from the following extract from my Report on the progress of Cholera in Hamburg, containing a brief analysis of Dr. Rothenburg's investigations as to locality :†—

" 1. The per centage of attacks for the whole city in the epidemic of 1832 was 2.26, and of deaths 1.12.

" 2. In the tract of the city that extends along the Elbe, including that of the canals, the proportion of attacks was 3.63, and of deaths 1.85.

" 3. In the district which includes the eastern height of the city, but which also includes very many poor, the attacks were 1.97, and the deaths 1.04.

" 4. The district which takes in the middle of the city suffered less than the preceding, the proportions being—attacks 1.80, deaths 0.72.

" 5. The part that suffered least was the western part of the town, which was at that period the airiest and newest portion, and traversed by a greater number of straight streets, and this notwithstanding that many poor dwelt together in the labyrinth of alleys which existed in portions of the district. Here only 1.25 per cent. of the inhabitants were attacked, whilst the deaths were as low as 0.65.

" A closer analysis places in a still stronger light the predominating influence of locality. Thus, of the first group noticed above, taking the district lying immediately on the Elbe (from Eichholz to Schaarthor), the cases rose to 3.76, and the deaths to 2.05. But the most fatal attacks were made in the street called the 'Erste Vorsetzen,' where the attacks amounted to the enormous portion of 7.13 per cent. of the inhabitants, and the deaths to 3.01; and in another street leading out of the former, named 'Neuerweg,' the attacks were 7.67, and the deaths 3.06; while in the fourth or best district, where, nevertheless, a very great number of the poor dwelt, the attacks were only 1.53, and the deaths 0.79: even in the labyrinth of alleys of this district the cases were but 1.47, and the deaths 0.81.

" It is thus found that, irrespective of poverty, irrespective even of crowding, there was a difference [in the same class of inhabitants, namely, the poor, represented by the following ratio :—

Healthiest locality	Attacks.	Deaths.
Unhealthiest locality	1.53	0.79
	7.67	3.06

"That is, among the poor residing in the most unhealthy part of Hamburg there were five times as many attacks of cholera, and nearly four times as many deaths as among the poor living in the most healthy district."

It is very important to know the condition of the localities thus severely visited, and for this purpose I cannot do better than adduce the description given of them to me by Mr. Lindley, an eminent English engineer, who was employed by the authorities to rebuild the city on an improved sanitary

* Die Cholera—Epidemie des Jahres 1832, in Hamburg.

† See "Official Circulars of the General Board of Health," p. 52.

plan after the great fire of 1842, by which nearly one-third of Hamburg was destroyed:—

“ Upon comparing the map of the town, which shows the upland and marsh levels (as these ought to be called, although covered with buildings), with the cholera map of Dr. Rothenburg, it is immediately apparent as a general rule that the main ravages of the disease have been in the latter, and that the former has comparatively escaped. To this there is a marked exception in the suburb of St. Paul's, which, although in the immediate vicinity of the Elbe, lies at a very high level; it is frequented by sailors, &c., and is, in fact, the Wapping of Hamburg. Upon a more careful scrutiny, it appears that those parts of the marsh district which are most subject to the periodical floodings of the Elbe, and which are intersected by numerous canals, are those in which the cholera especially prevailed. It is particularly to be noticed that the whole drainage of these localities is into the canals and open ditches, there being no system of sewers in the old town to carry off the refuse. One district lying between Eichholz and Vorsetzen, which is depicted in the cholera map as having suffered in a high degree, forms a shallow basin lying between the foot of the uplands and the Elbe; the whole of this district is flooded from above by the former, and below from the latter, without having any efficient drainage outlet for this excess of water. The direction of the disease from the district just described, follows in a very marked manner the course of two canals up the Jungfernstieg, which is the best part of the city. One of these canals, called the Bleichen Fleth, was noted at the time of the visitation for its offensive exhalations; it was, in fact, a vast cesspool, and so affected the neighbouring houses, which were some of the best in the town, that it was often necessary in the summer to close the windows. There is a tongue of land extending between the inner harbour and the present city ditch, called Kehrwieder, which is also marked as a locality that suffered severely: this district lies also very low, and in addition to the inner harbour and city ditch, is intersected by most noisome ditches. It is interesting to observe how the disease here, as elsewhere, has followed the course of the water; a narrow strip, Doven Fleth, strongly tinted, runs along the canal of the same name, leading out of the inner harbour. The houses adjoining the several canals (or fleths) of this district are all marked as suffering in a similar manner, the sanitary condition being the same. On casting the eye over the cholera map, there is nothing more striking than a long strip, deeply tinted, as indicating the severity of the disease, called the Stadtdeich, and which, for the following reasons, is particularly worthy of attention: along the whole length of the back of this range of houses, runs a wide open ditch, originally made for the drainage of the adjoining marsh land, but for a long period of years used as a depository for the *débris* of the dwellings; on the opposite side lie extensive timber ponds, and lands exposed at low water upon which timber is deposited for long periods, thus forming a large surface of decomposing vegetable matter, alternately covered by the river and exposed to the sun.”

The results of the great improvements effected by Mr. Lindley are briefly noticed in the body of the present Report.

10
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REFERENCE,

<i>St. Luke</i>		
Street	16	
Road	40	
Cross Street	50	
Wury	40	
<i>East London</i>		
Wolph	50	
Legate	43	
<i>West London</i>		
London North	208	
London South	101	
<i>London, City</i>		
City South West	109	
City North West	16	
<i>32 Camberwell</i>		
a. Camberwell	182	
b. Peckham	75	
c. St. George	164	
<i>33 Rotherhithe</i>		270
<i>34 Greenwich</i>		
a. St. Paul Deptford	81	
b. St. Nicholas Deptford	49	
c. Greenwich West	186	
d. Greenwich East	104	

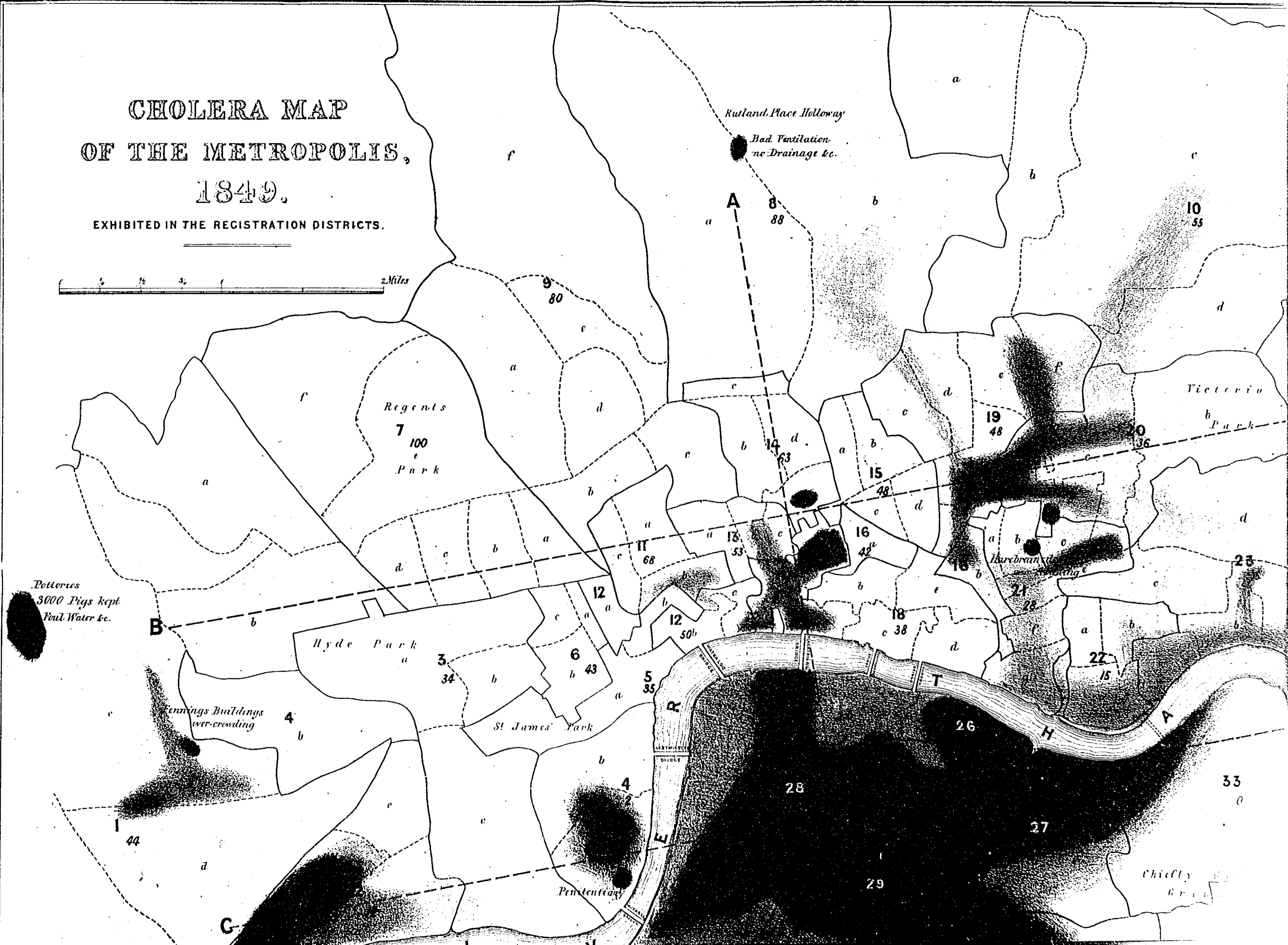
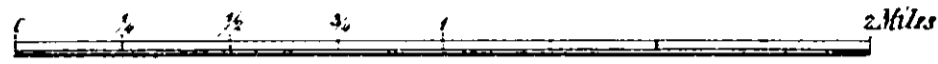
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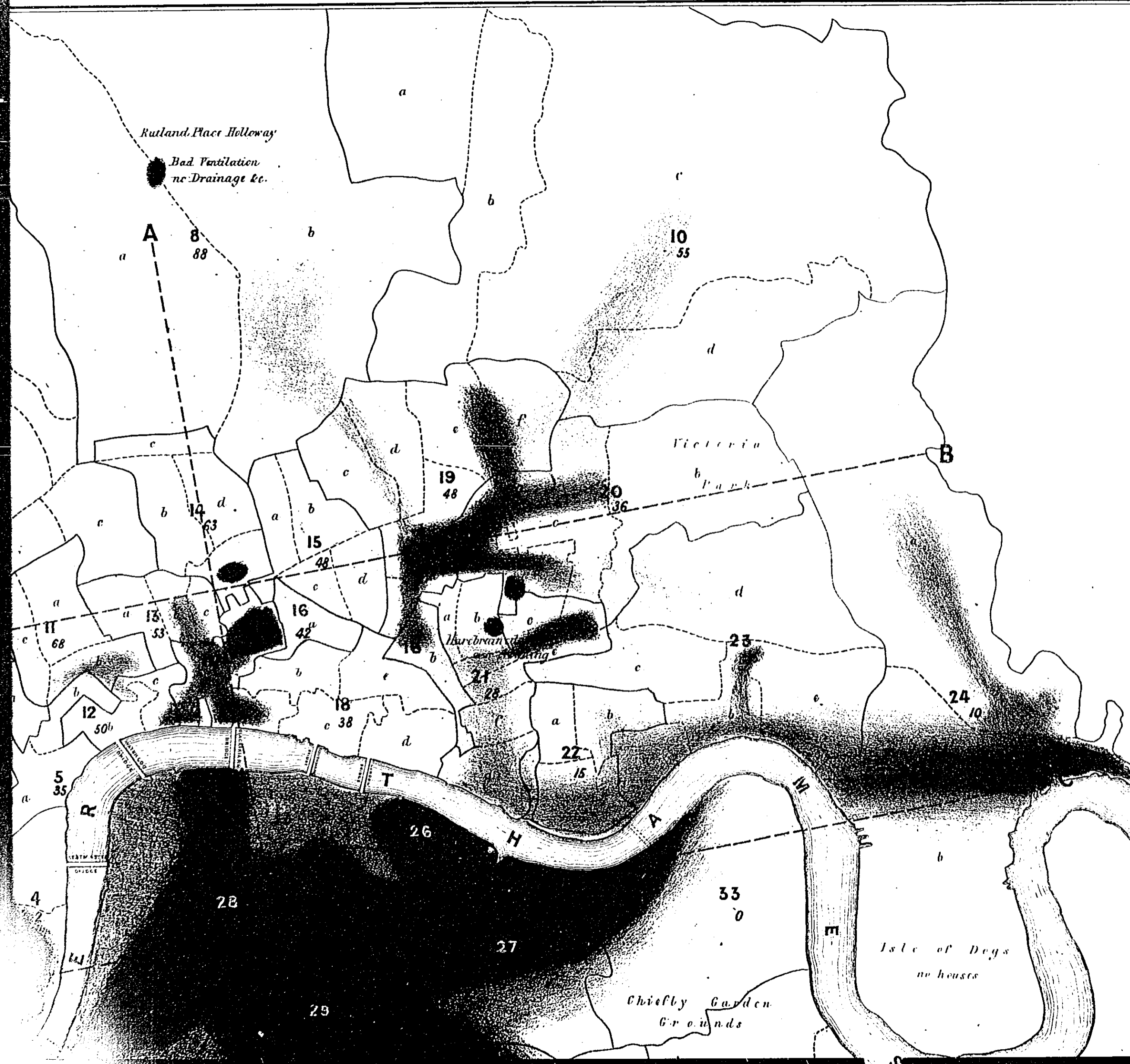
Metropolitan Registrar's districts which are co-extensive with the Poor Law districts are indicated by figures thus 6 9 &c.
Metropolitan Registrar's districts are marked by letters in italics thus a b &c.

Figures denote the elevation in Feet above the Trinity Highwater Mark.

CHOLERA MAP OF THE METROPOLIS, 1849.

EXHIBITED IN THE REGISTRATION DISTRICTS.





REFERENCE,

SHOWING THE MORTALITY FROM CHOLERA
IN EACH REGISTRATION DISTRICT.

District	Deaths in 10,000 Population	District	Deaths in 10,000 Population
1 Kensington		c. Lenden, City South	25
a. Biddington St. Mary	31	d. Lenden, City South East	26
b. Biddington St. John	13	e. Lenden, City North East	31
c. Kensington Town	57		
d. Brompton	31	19 Shoreditch	
e. Fulham	65	a. Helywell	133
		b. St. Leonard	112
2 Chelsea		c. Haxton New Town	79
a. Chelsea South	79	d. Haxton Old Town	26
b. Chelsea North West	51	e. Haggerstone West	149
c. Chelsea North East	58	f. Haggerstone East	41
3 St. George Hanover Square		20 Bethnal Green	
a. Hanover Square	3	a. Hackney Road	115
b. May Fair	13	b. Green	145
c. Belgrave	35	c. Church	54
		d. Town	118
4 Westminster		21 Whitechapel	
a. St. John	65	a. Artillery	27
b. St. Margaret	73	b. Spitalfields	61
		c. Mile End New Town	75
5 St. Martin in the Fields		d. Whitechapel North	95
a. Charing Cross	22	e. Whitechapel Church	162
b. Long Acre	26	f. Guelmans Fields	45
		g. Aldgate	126
6 St. James Westminster		22 St. George in the East	
a. Bevis Street	20	a. St. Mary	35
b. St. James Square	11	b. St. Paul	50
c. Golden Square	16	c. St. John	54
7 Marylebone		23 Stepney	
a. All Souls	26	a. Shadwell	91
b. Grosvenor Square	11	b. Rastall	55
c. Bayswater	34	c. Mile End Old Town upper	51
d. St. Mary	9	d. Mile End Old Town lower	46
e. Christ Church	12	e. Limehouse	60
f. St. John	17		
		24 Peplar	
8 Islington		a. Bow	115
a. Islington West	27	b. Peplar	39
b. Islington East	42		
		25 St. Saviour Southwark	
9 Pancras		a. Christ Church	179
a. Regent Park	25	b. St. Saviour	152
b. Fitz-Alan Court	25		
c. Gray's Inn Lane	47	26 St. Olave Southwark	
d. Seven Town	18	a. St. Olave	152
e. Golden Town	36	b. St. John Horseshoe	152
f. Kentish Town	22		
		27 Bermondsey	
10 Hackney		a. St. James	205
a. St. Andrew's	18	b. St. Mary Magdalen	278
b. West Hackney	22	c. Leather Market	159
c. Hackney	52		
d. South Hackney	30	28 St. George Southwark	
		a. Kent Road	152
11 St. Giles		b. Berrough Road	212
a. St. George Bloomsbury	11	c. Lenden Road	164
b. St. Giles South	97		
c. St. Giles North	41	29 Newington	
		a. French Newington	165
12 Strand		b. St. Peter Walworth	192
a. St. Anne's	51	c. St. Mary	123
b. St. Mary & Strand	16		
c. St. Clement's	59	30 Lambeth	
		a. Waterloo Road 1 st	159
13 Holborn		b. Waterloo Road 2 nd	145
a. St. George the Martyr	11	c. Lambeth Church 1 st	118
b. St. Andrew Holborn	57	d. Lambeth Church 2 nd	238
c. Saffron Hill	21	e. Kenington 1 st	116
		f. Kenington 2 nd	110
14 Clerkenwell		g. Drayton	78
a. St. James	27		
b. Ansell	13		
c. Posternville	32		



Regents
7
100
Park

Victoria
Park

Petteries
3000 Pigs kept
Kul Water Co.

B

Hyde Park

Sennings Buildings
over-crowding

St James Park

Barbican

Chiefly Garden
Grounds

Battersea Fields

Terrace
Barrington Crescent
open Sewer Co.

Peckham
Lunatic Asylum





d. Uxbridge	31	19. She reditch	
e. Fulham	65	a. Helywell	133
2. Chelsea		b. St Leonard	112
a. Chelsea South	79	c. Harten New Town	79
b. Chelsea North West	81	d. Harten Old Town	26
c. Chelsea North East	58	e. Haagersten West	149
		f. Haagersten East	41
3. St George Hanover Square		20. Bethuel Green	
a. Hanover Square	3	a. Harkney Road	118
b. May Fair	13	b. Green	145
c. Belgrave	35	c. Church	54
		d. Town	118
4. Westminster		21. Whitechapel	
a. St John	63	a. Artillery	27
b. St Margaret	73	b. Spitalfields	61
5. St Martin in the Fields		c. Mile End New Town	75
a. Charing Cross	22	d. Mile End Old Town	55
b. Long Acre	26	e. Whitechapel Church	162
6. St James Westminster		f. Goodman's Fields	45
a. Bevis Street	20	g. Aldgate	128
b. St James Square	11	22. St George in the East	
c. Golden Square	16	a. St Mary	35
7. Marylebone		b. St Paul	56
a. All Souls	26	c. St John	64
b. Grosvenor Square	11	23. Stepney	
c. Beccles	34	a. Shadwell	94
d. St Mary	8	b. Rentshill	54
e. Christ Church	12	c. Mile End Old Town upper	31
f. St John	17	d. Mile End Old Town lower	46
8. Islington		e. Limehouse	60
a. Islington West	27	24. Peplur	
b. Islington East	42	a. Bow	112
9. Pancras		b. Peplur	99
a. Regent Park	23	25. St Saviour Southwark	
b. St John Street	23	a. Christ Church	179
c. Gray's Inn Lane	47	b. St Saviour	152
d. St Pancras Town	18	26. St Olave Southwark	
e. Golden Lane	36	a. St Olave	182
f. Kentish Town	22	b. St John Horselydown	162
10. Hockney		27. Bermondsey	
a. Sticks Newington	18	a. St James	205
b. West Hockney	22	b. St Mary Magdalen	278
c. Hockney	62	c. Leather Market	159
d. South Hockney	30	28. St George Southwark	
11. St Giles		a. Kent Road	182
a. St George Bloomsbury	11	b. Berough Road	217
b. St Giles South	97	c. Londen Road	164
c. St Giles North	41	29. Newington	
12. Strand		a. Trinity Newington	169
a. St Anne St	31	b. St Peter Walworth	192
b. St Mary le Strand	16	c. St Mary	125
c. St Clement Danes	59	30. Lambeth	
13. Holborn		a. Waterloo Road 1 st	159
a. St George du Martyr	11	b. Waterloo Road 2 nd	165
b. St Andrew Holborn	57	c. Lambeth Church 1 st	118
c. Sutton Hill	21	d. Lambeth Church 2 nd	258
14. Clerkenwell		e. Kennington 1 st	110
a. St James	27	f. Kennington 2 nd	110
b. Amwell	13	g. Brixton	79
c. Pentonville	52	31. Wandsworth	
d. Goswell Street	17	a. Clapham	99
15. St Luke		b. Battersea	175
a. Old Street	14	c. Wandsworth	137
b. City Road	46	32. Camberwell	
c. White Cross Street	56	a. Camberwell	182
d. Finsbury	46	b. Peckham	75
16. East Londen		c. St George	164
a. St Dunstons	57	33. Retherhithe	
b. Cripple Gate	48		270
17. West Londen		34. Greenwich	
a. West Londen North	268	a. St Paul Deptford	51
b. West Londen South	101	b. St Nicholas Deptford	49
18. Londen City		c. Greenwich West	198
a. Londen City South West	169	d. Greenwich East	104
b. Londen City North West	16		

NOTE

The Superintendent Registrar's districts which are co extensive with the Rec Law Union are indicated by figures thus 6 9 &c.
The Sub Registrar's districts are marked by letters in italics thus a b &c.

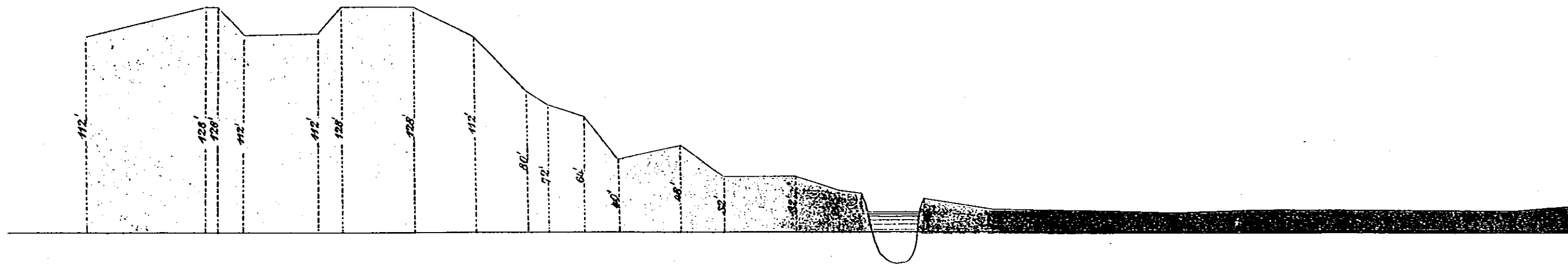
The Red Figures denote the elevation in Feet above the Trinity Highwater Mark.

SECTIONS

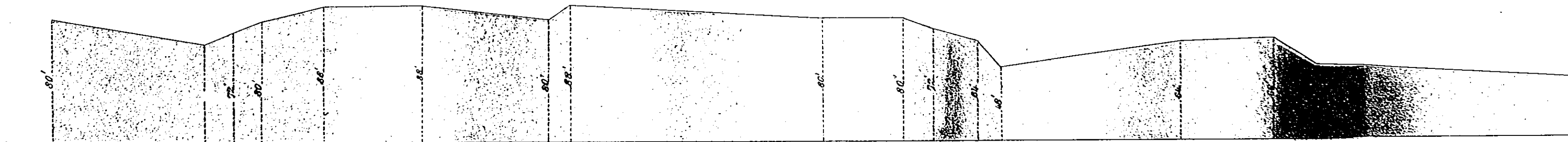
*Shewing the relative intensity of the attack of Cholera at
the various levels along the lines marked on*

THE CHOLERA MAP.

Section on Line AA.



Section on Line BB.



Section on Line CC.



SECTIONS

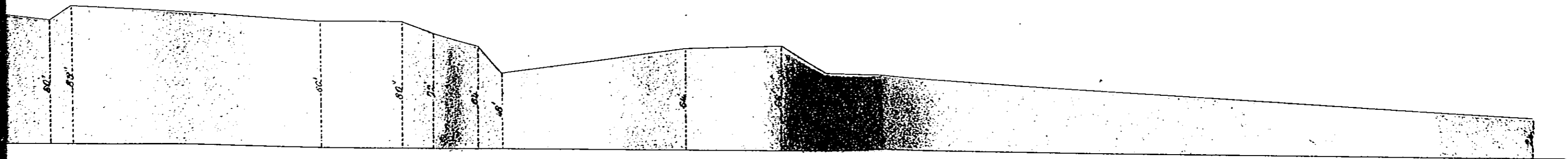
Shewing the relative intensity of the attack of Cholera at
the various levels along the lines marked on

THE CHOLERA MAP.

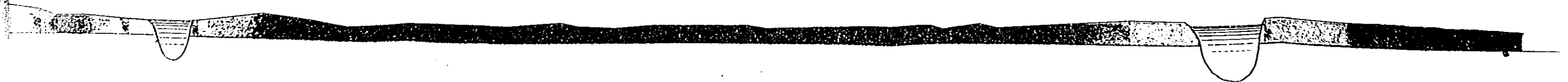
Section on Line AA.



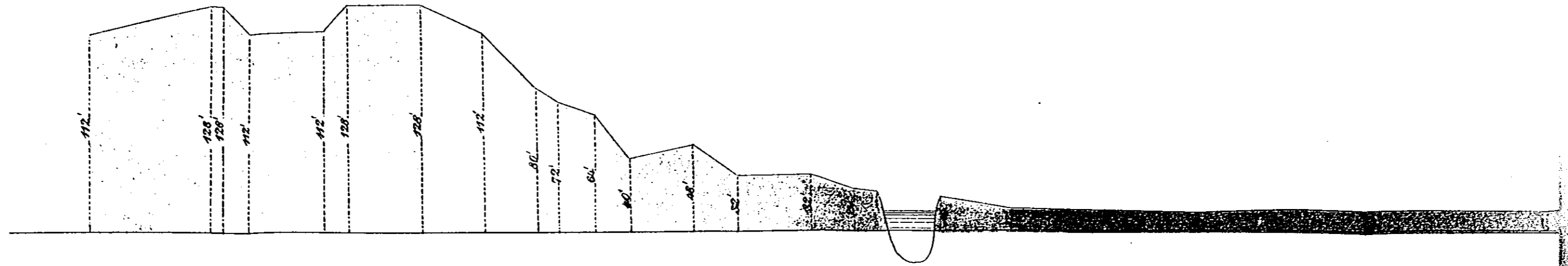
Section on Line BB.



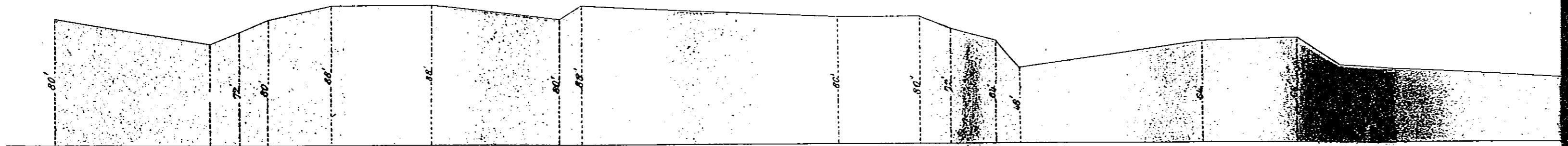
Section on Line CC.



Section on Line A A .



Section on Line B B .



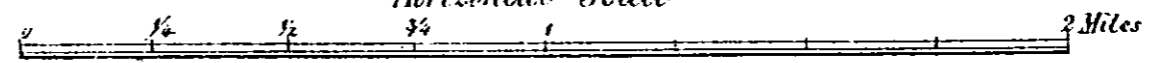
Section on Line C C .



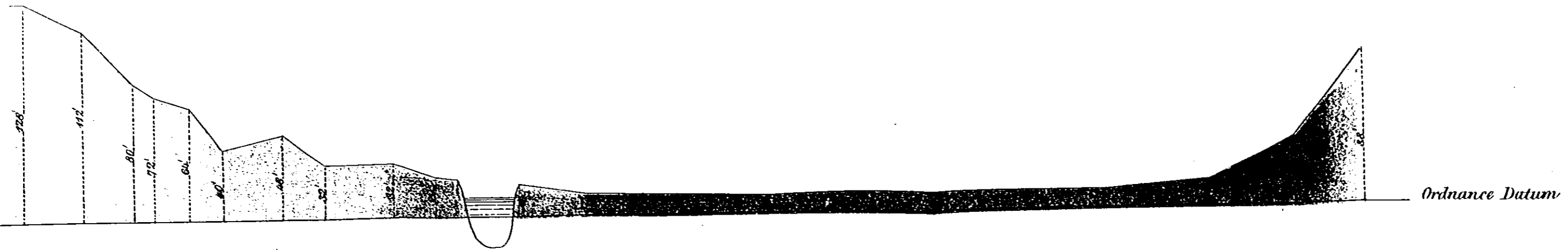
Vertical Scale



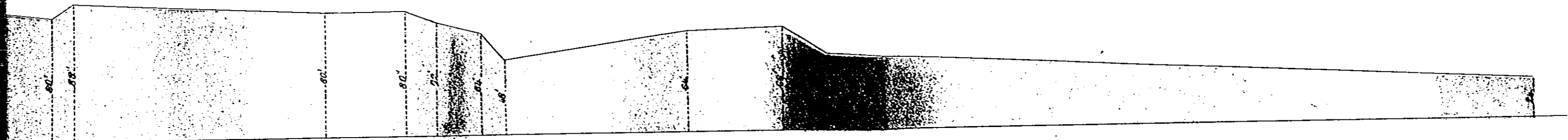
Horizontal Scale



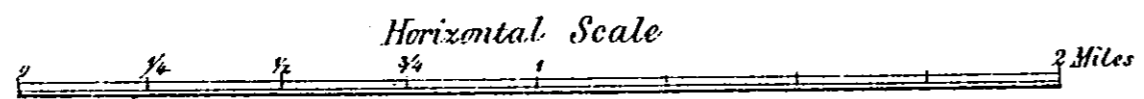
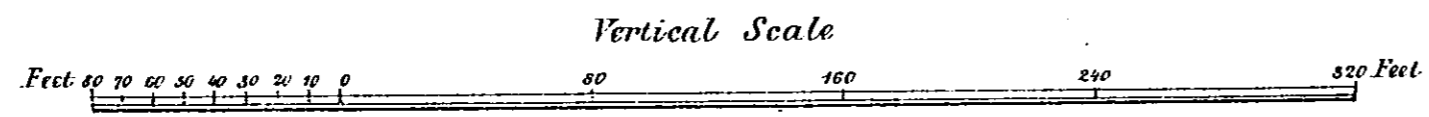
Section on Line A A .



Section on Line B B .

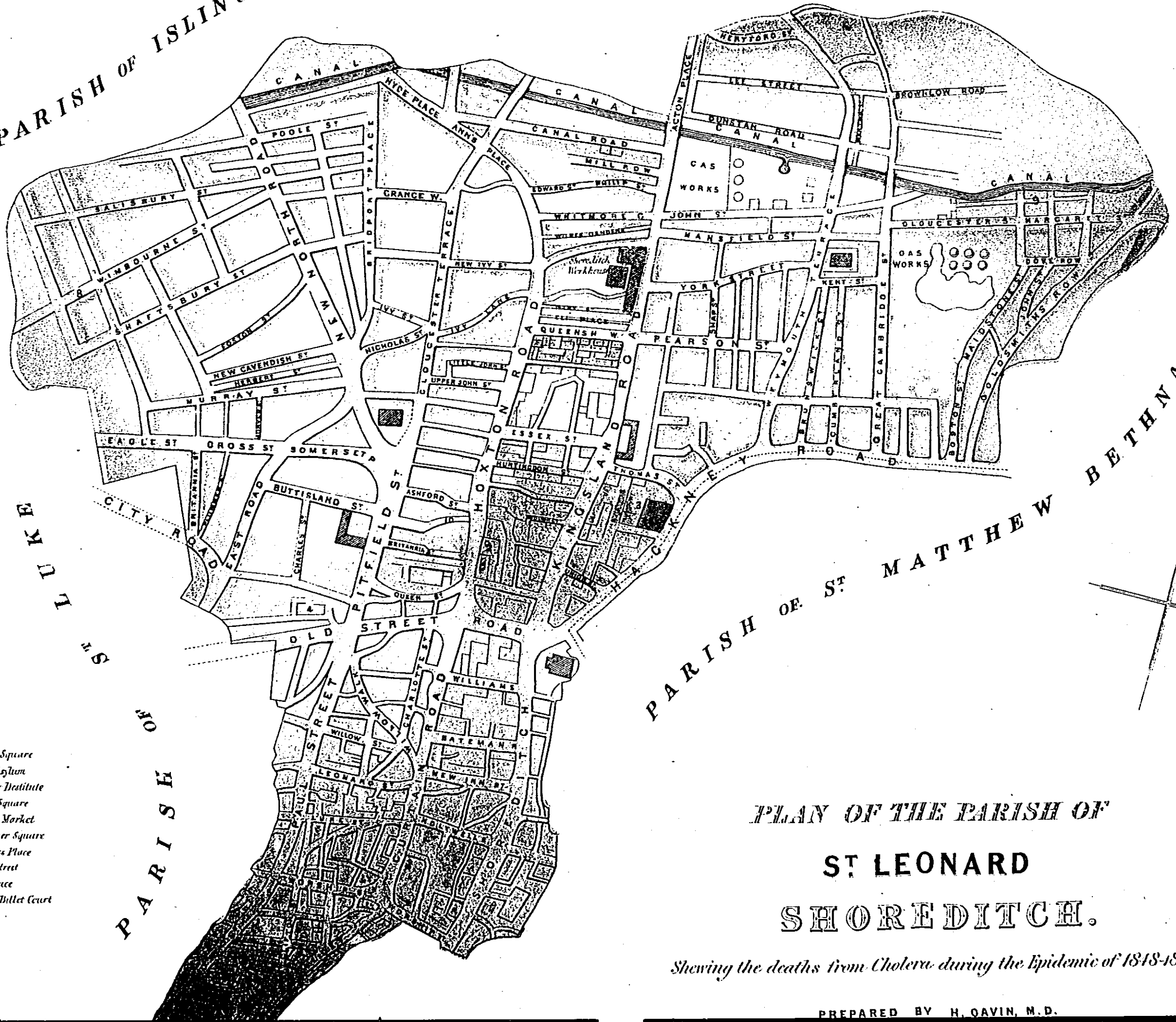


Section on Line C C .



PARISH OF ISLINGTON

PARISH OF ST JOHN HACKNEY

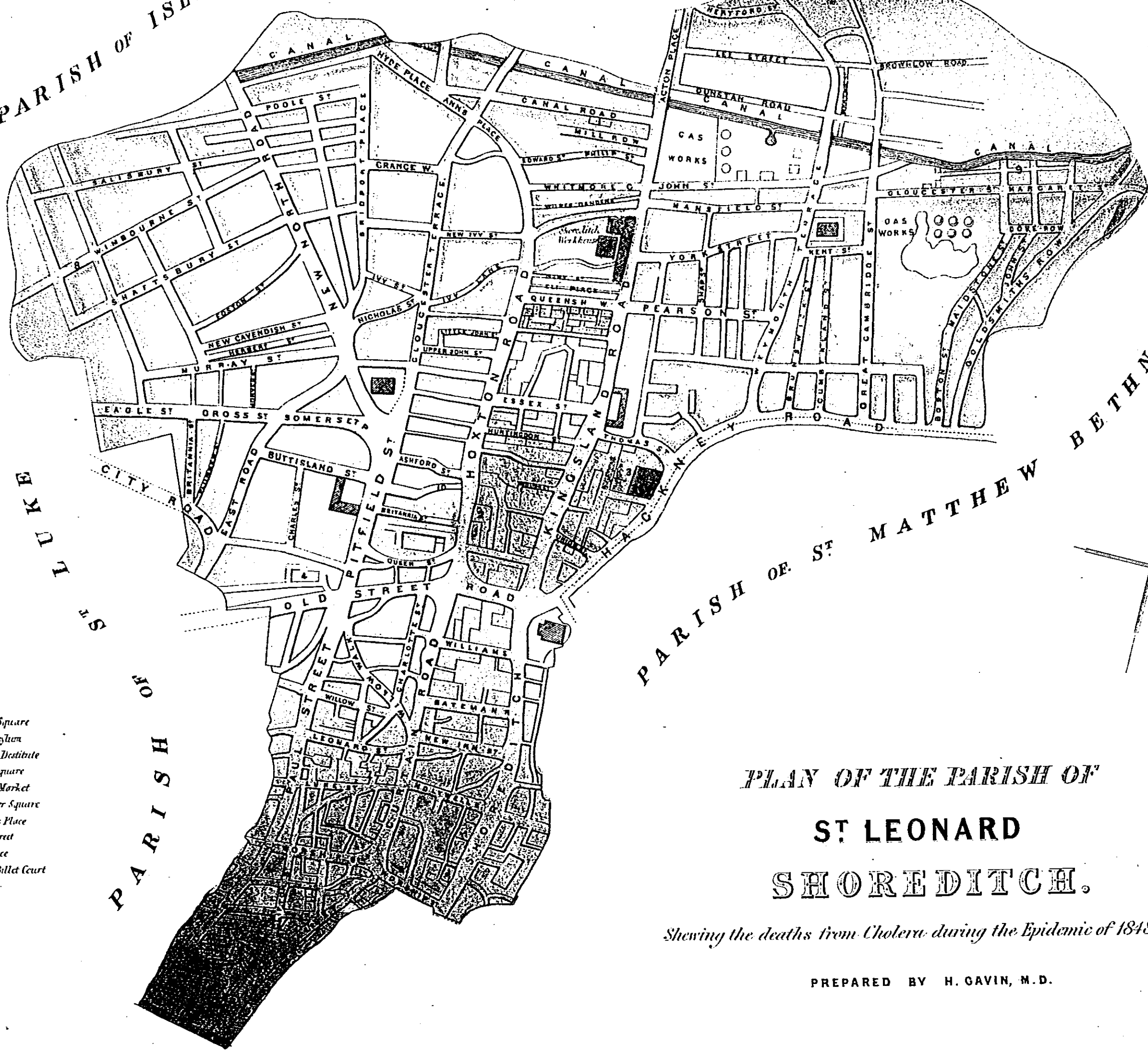


- 1 Windmill Square
- 2 Lunatic Asylum
- 3 Refuge for Destitute
- 4 Charles Square
- 5 Finsbury Market
- 6 Christopher Square
- 7 Whitecross Place
- 8 Nipper Street
- 9 Park Place
- 10 Crooked Billet Court

PLAN OF THE PARISH OF
ST LEONARD
SHOREDITCH.

Shewing the deaths from Cholera during the Epidemic of 1848-1849

PARISH OF ISLINGTON



- 1 Windmill Square
- 2 Lunatic Asylum
- 3 Refuge for Destitute
- 4 Charles Square
- 5 Fowls Market
- 6 Christopher Square
- 7 Whitecross Place
- 8 Napier Street
- 9 Park Place
- 10 Orchard Billet Court

PARISH OF ST. MATTHEW

BETHNAL GREEN

PLAN OF THE PARISH OF
ST. LEONARD
SHOREDITCH.

Shewing the deaths from Cholera during the Epidemic of 1848-1849.

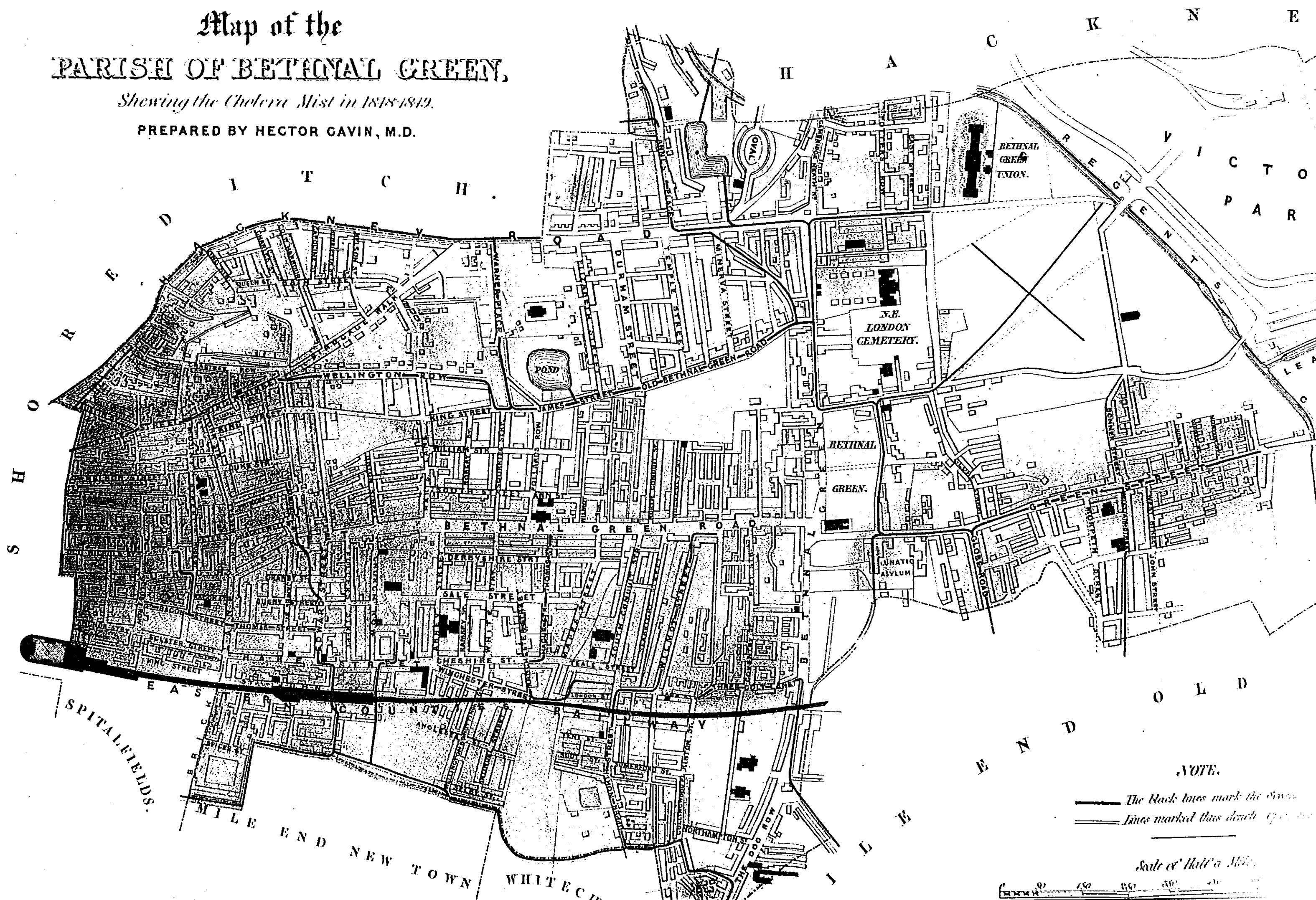
PREPARED BY H. GAVIN, M.D.



Map of the PARISH OF BETHNAL GREEN.

Showing the Cholera Mist in 1818-1819.

PREPARED BY HECTOR GAVIN, M.D.



NOTE.

- The black lines mark the Cholera Mist.
- Lines marked thus denote the boundaries of the Parish.

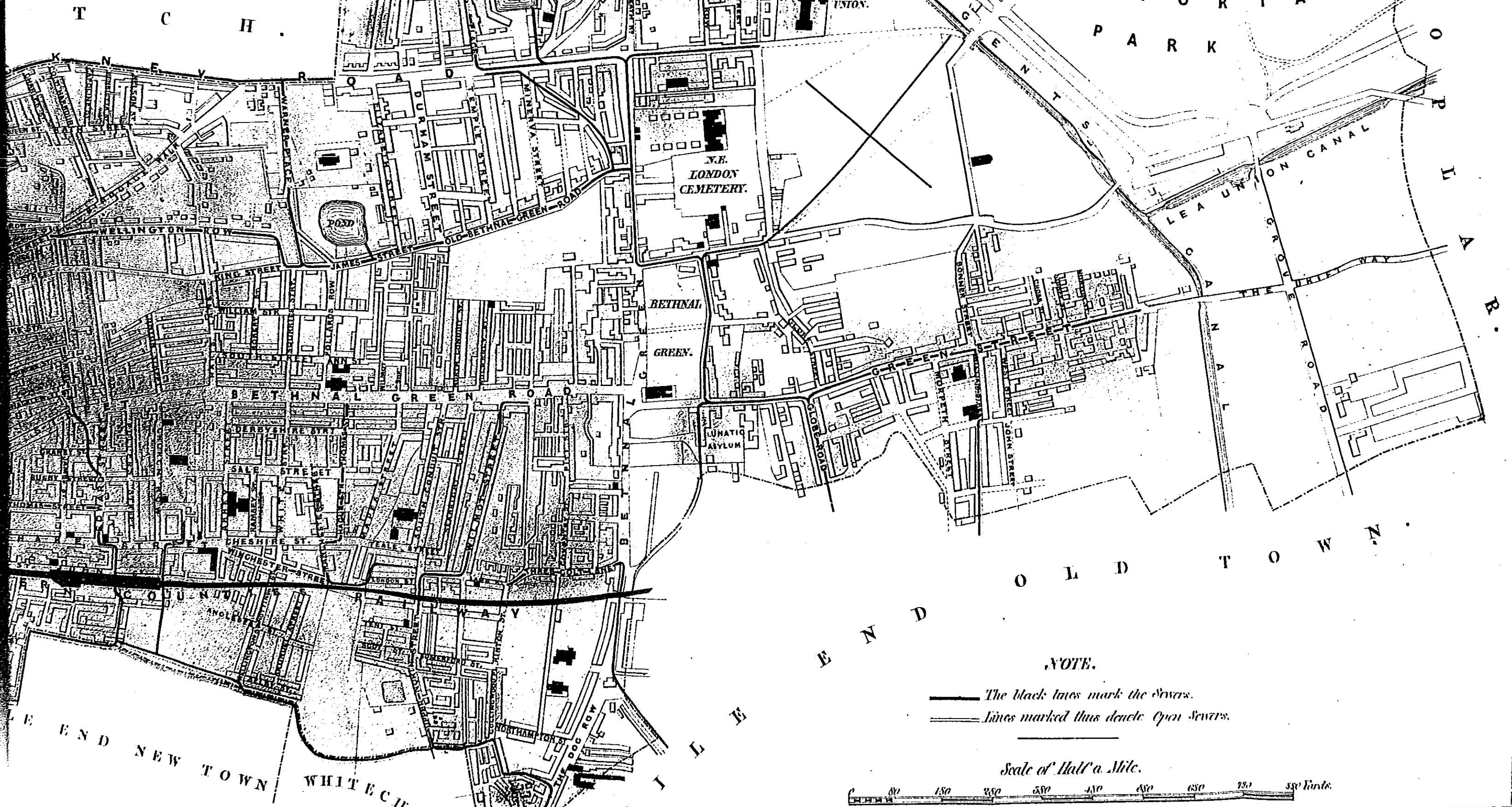
Scale of Half a Mile.



Map of the BETHNAL GREEN.

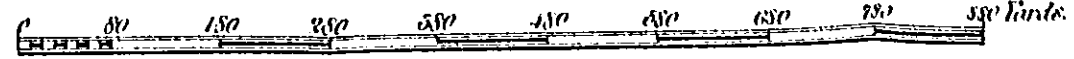
Cholera Mist in 1848-1849.

BY HECTOR GAVIN, M.D.



- The black lines mark the cwers.
- Lines marked thus denote Open Sewers.

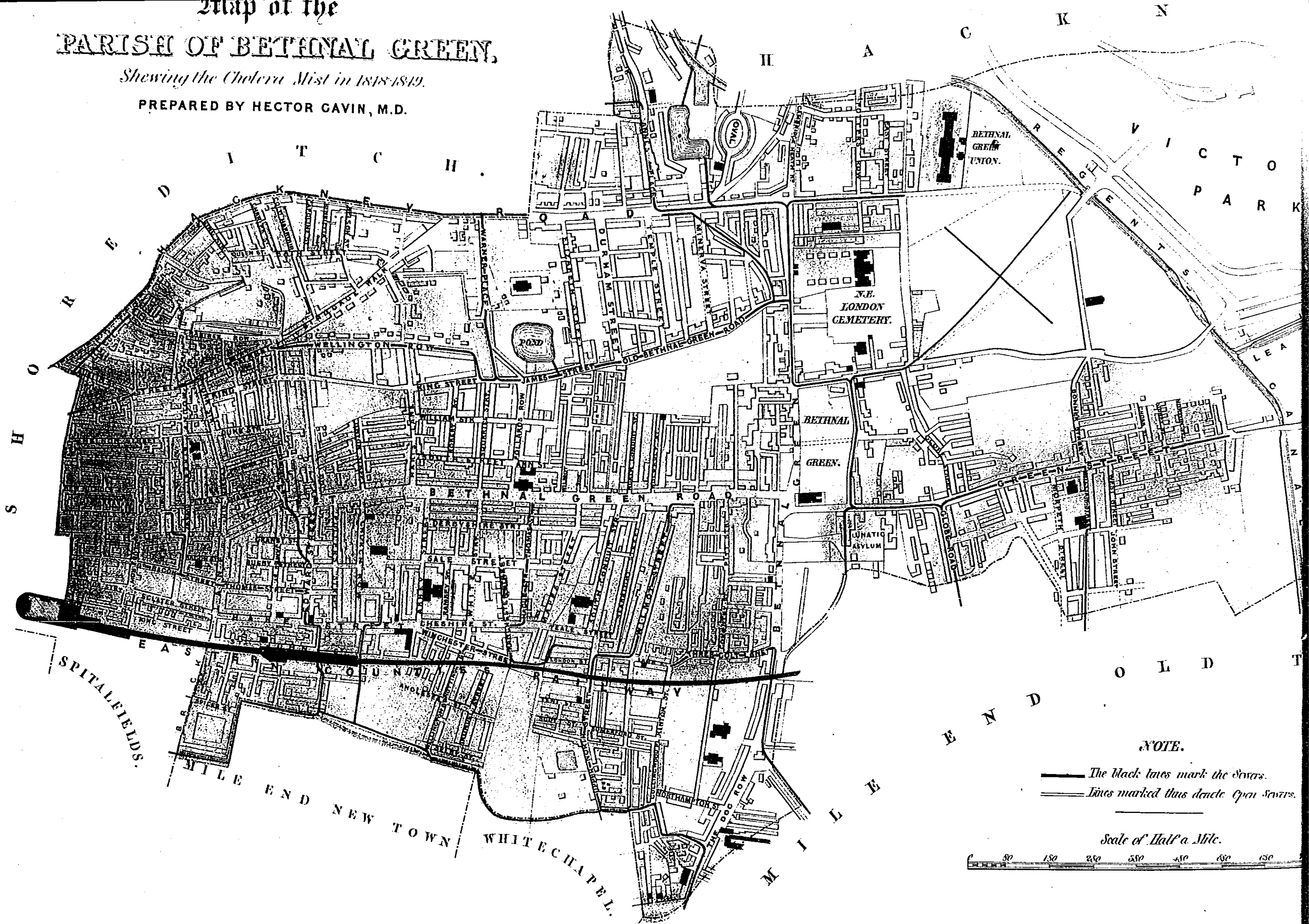
Scale of Half a Mile.



Map of the PARISH OF BETHNAL GREEN.

Shewing the Cholera Mist in 1848-1849.

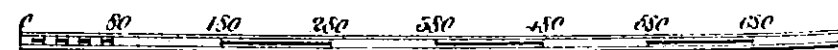
PREPARED BY HECTOR GAVIN, M.D.



NOTE.

- The black lines mark the sewers.
- Lines marked thus denote Open Sewers.

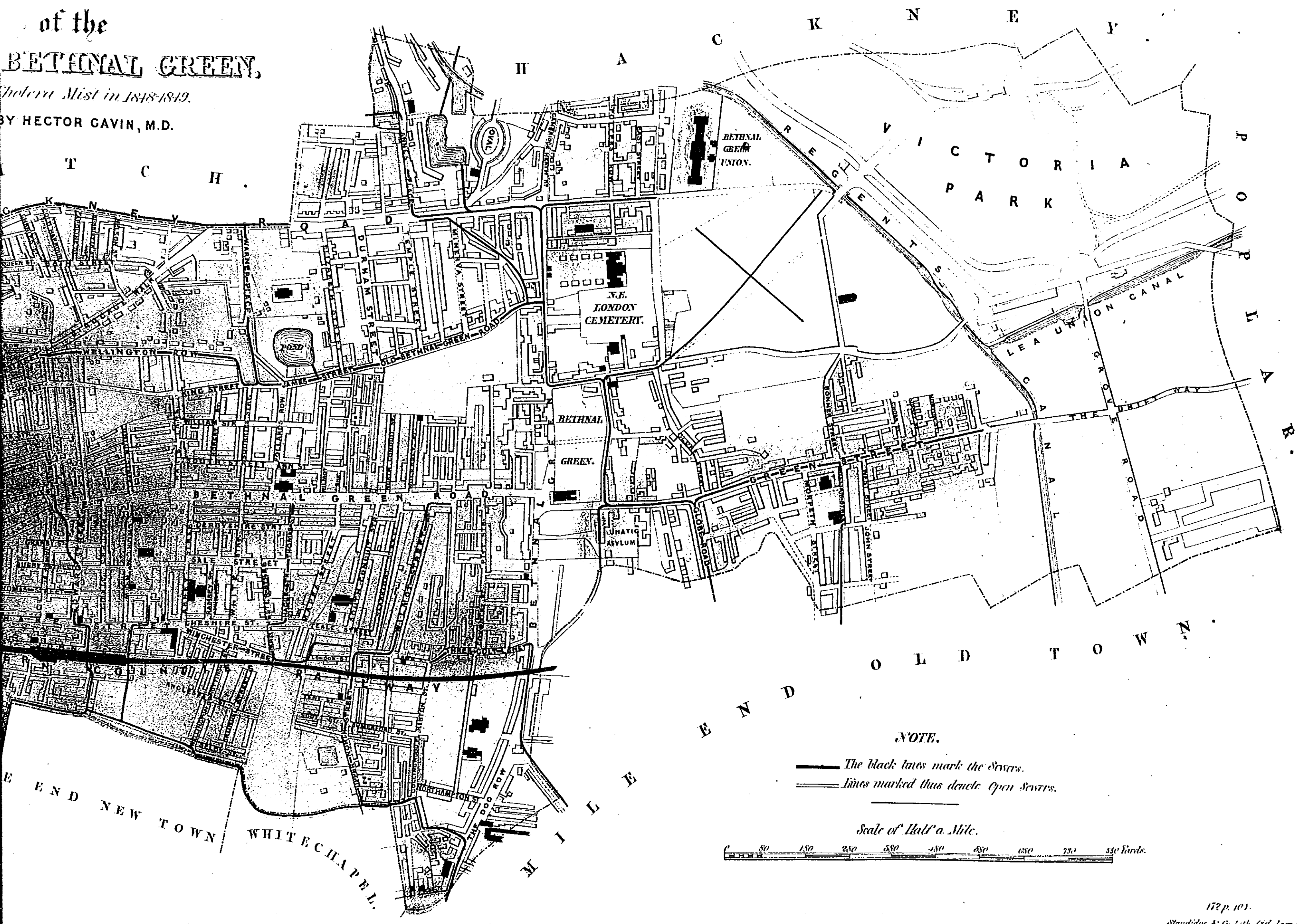
Scale of Half a Mile.



of the
BETHNAL GREEN.

Cholera Mortalis in 1848-1849.

BY HECTOR GAVIN, M.D.



- The black lines mark the drains.
- Lines marked thus denote Open Sewers.

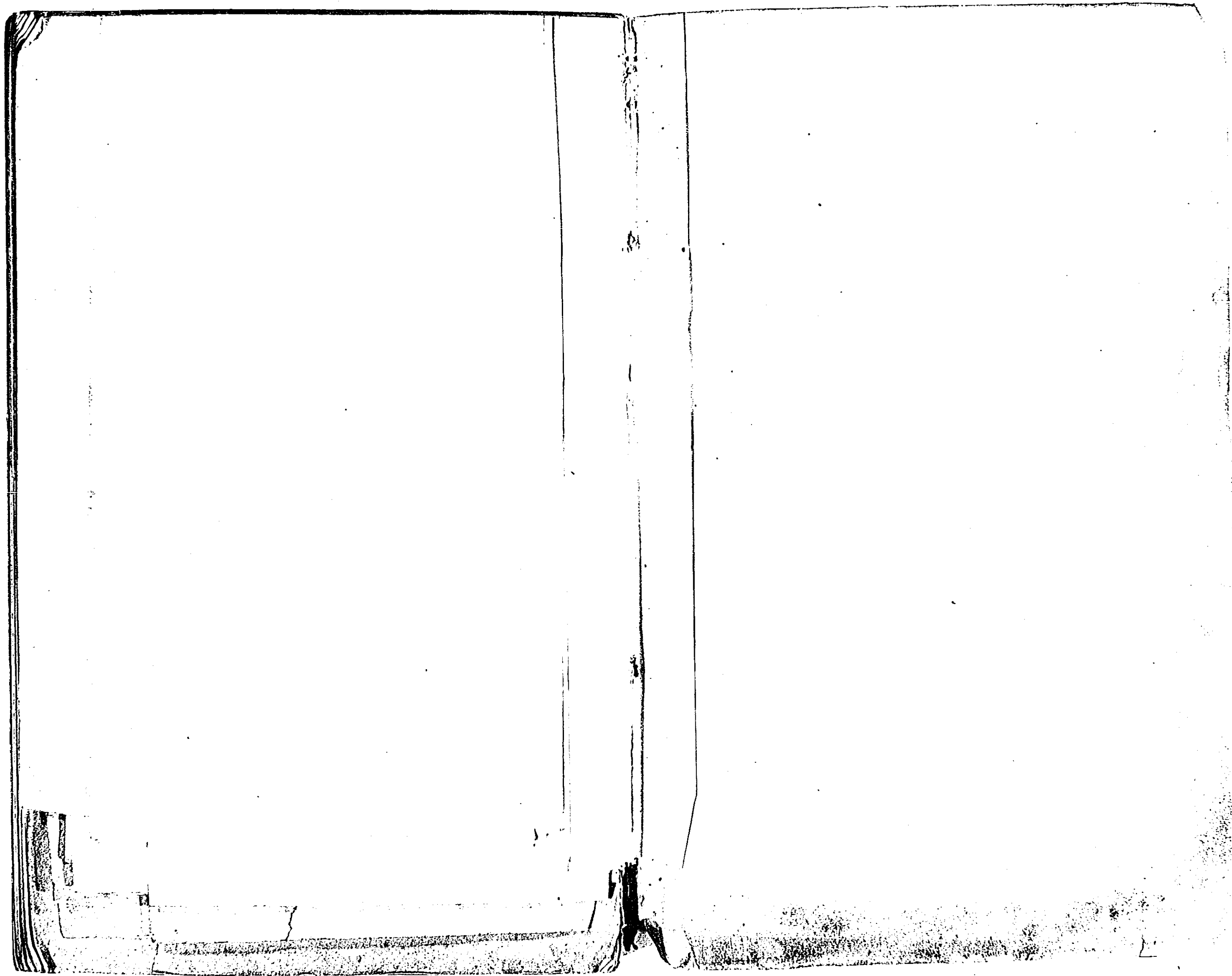
Scale of Half a Mile.

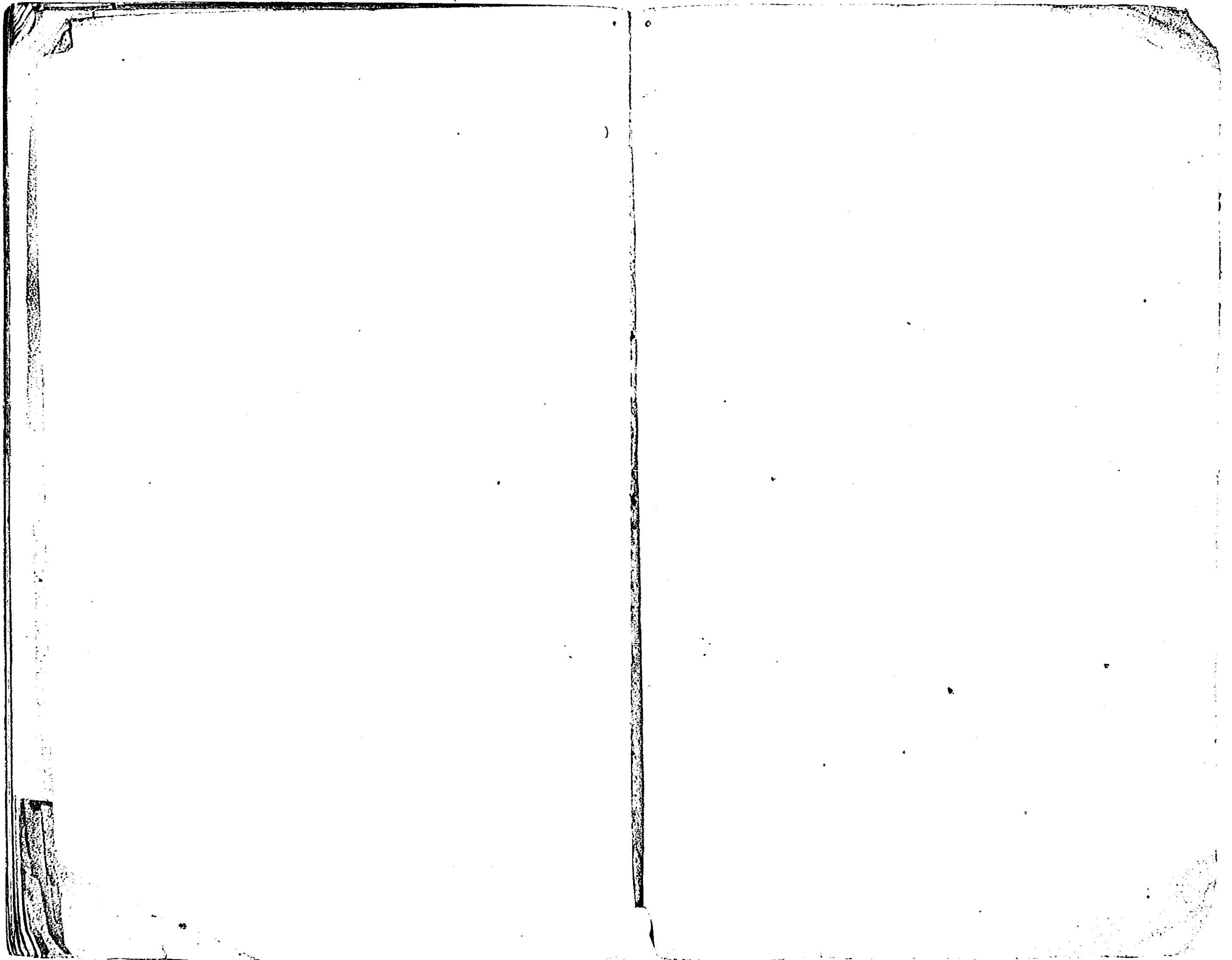


17	8	St. Mary	20714
35	12	Christchurch	21988
31	17	St. John	28911
			18356
		<i>Pancras.</i>	
9	9	Hampstead	10093
61	23	Tottenham-court	26800
103	47	Grays-inn-lane	22149
52	48	Somers-town	28140
54	36	Camden-town	15018
62	23	Regent's-park	26188
23	22	Kentish-town	10398
		<i>Islington.</i>	
68	27	Islington, West	25396
127	42	,, East	30294
		<i>Hackney.</i>	
77	52	Hackney	11634
17	33	Stamford-hill	5140
21	30	South Hackney	6889
21	22	West Hackney	11108
8	18	Stoke Newington	4490
		<i>St. Giles.</i>	
190	97	St. Giles, South	19634
72	41	,, North	17677
18	11	St. George, Bloomsbury	16981
		<i>Strand.</i>	
92	59	St. Clement Danes	15386
19	16	St. Mary-le-Strand	11732
49	30	St. Anne, Soho	16180
		<i>Holborn.</i>	
20	11	St. George the Martyr	17407
110	87	St. Andrew, Holborn	12613
31	21	Saffron-hill	14441
		<i>Clerkenwell.</i>	
30	32	Pentonville	9474
18	13	Amwell	13190
24	17	Goswell-street	14327
53	27	St. James	19417
		<i>St. Luke.</i>	
49	40	Finsbury	12314
65	50	Whitecross-street	12963
14	14	Old-street	9841
59	40	City-road	14711
		<i>East London.</i>	
103	50	St. Botolph	20494
82	43	Cripplegate	19161
		<i>West London.</i>	
266	101	West London, South	16460
166	208	,, North	12682
		<i>London City.</i>	
36	30	London City, North-east	12103
20	16	,, North-west	12427
96	109	,, South-west	8839
30	25	,, South	11954
27	26	,, South-east	10597
		<i>Shoreditch.</i>	
125	79	Hoxton New Town	15751
36	26	,, Old Town	13994
223	133	Holywell	16722
203	112	St. Leonard	17976
180	41	Haggerstone, East	6976
29	149	,, West	12013
		<i>Bethnal Green.</i>	
242	145	Green	16766
94	54	Church	17293
234	118	Town	19998
237	118	Hackney-road	20031
		<i>Whitechapel.</i>	
93	61	Spitalfields	15121
17	27	Artillery	6221
91	75	Mile-end New Town	12141
117	95	Whitechapel, North	12296
71	102	,, Church	6990
42	43	Goodman's-fields	9548
117	128	Aldgate	9148
		<i>St. George-in-the-East.</i>	
89	50	St. Paul	17721
56	35	St. Mary	15875
65	81	St. John	7751
		<i>Stepney.</i>	
116	60	Limehouse	19337
104	88	Ratcliffe	11874
134	94	Shadwell	14168
80	31	Mile-end Old Town, Upper	25570
91	46	,, Lower	19738
		<i>Poplar.</i>	
203	99	Poplar	20342
129	119	Bow	10780
		<i>St. Saviour, Southwark.</i>	
286	152	St. Saviour	18359

30	61	94	62	45	37	55	49	40	35	15	9	10	4	5	2	1	1	4	3	1	5	9	22	42	49	124	152	339	678	783	926	823	1230	1272	1003	1256	1632	839	134	288	110	11	25	11	6	8	2	14,590																																																																																																																																																																																																																														
56	65	116	104	134	80	91	203	129	286	261	168	195	243	270	258	286	321	265	153	449	325	202	251	219	552	191	155	81	2	256	94	183	1	372	152	34	70	45	136	325	105	120	8	160	117	15	4	35	38	5																																																																																																																																																																																																																												
35	81	60	88	94	31	46	99	119	152	179	182	182	189	278	208	182	217	164	125	192	160	159	145	118	238	110	110	79	7	182	75	164	5	270	81	49	52	36	104	196	137	99	17	182	175	27	17	51	70	5380	2915																																																																																																																																																																																																																											
		<i>Stepney.</i>		Limehouse W		19337			Ratcliffe W		11874			Shadwell W		14168			Mile-end Old Town, Upper . . . W		25570			, , Lower W		19738			<i>Poplar.</i>		Poplar W		20342			Bow W		10780			<i>St. Saviour, Southwark.</i>		St. Saviour II		18359			Christchurch W		14616			<i>St. Olave, Southwark.</i>		St. Olave II		9172			St. John, Horsleydown W		10665			<i>Bermondsey.</i>		Leather-market		12775			St. Mary Magdalen W		9721			St. James		12451			<i>St. George, Southwark.</i>		Kent-road		15671			Borough-road WP		14794			London-road LP		16179			<i>Newington.</i>		St. Mary		12243			St. Peter, Walworth W		23299			Trinity P		19064			<i>Lambeth.</i>		Waterloo-road, 1st		12767			, , 2nd		17319			Lambeth Church, 1st		18446			, , 2nd W		22931			Kennington, 1st		17235			, , 2nd		14054			Brixton		10175			Norwood W		2961			<i>Camberwell.</i>		Camberwell WL		14176			Peckham W		12563			St. George		11225			Dulwich		1904			<i>Rotherhithe.</i>		Rotherhithe W		13917			<i>Greenwich.</i>		St. Paul, Deptford		18664			St. Nicholas, Deptford		6953			Woolwich Arsenal		13367			, , Dockyard		12418			Greenwich, East W		13043			, , West H		16552			<i>Wandsworth.</i>		Wandsworth L		7614			Clapham		12106			Putney		4634			Streatham		8834			Battersea W		6617			<i>Lewisham.</i>		Plumstead		5471			Eltham		2310			Lee		6938			Lewisham Village WW		5380			Sydenham		2915

are situated. P denotes prison, L lunatic asylum in the sub-district. The Millbank Penitentiary and the Westminster House of Correction suffered from cholera; so did the hulks on the river and the lunatic asylums of Camberwell and Bethnal-green; but more particularly the house of Drouet for pauper children, in Tooting, Streatham, Wandsworth.





APPENDIX (B)

TO THE

REPORT of the GENERAL BOARD of HEALTH

ON THE

EPIDEMIC CHOLERA

OF

1848 & 1849.

REPORT BY MR. GRAINGER.

Presented to both Houses of Parliament by Command of Her Majesty.



LONDON :

PRINTED BY W. CLOWES & SONS, STAMFORD STREET,

FOR HER MAJESTY'S STATIONERY OFFICE.

1850.