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ANNUAL REPORT

OF THE

COMMITTEE

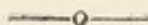
OF THE

MANCHESTER AND SALFORD

ANITARY SSOCIATION,

BEING A

Summary of their Proceedings for the Year 1876.



MANCHESTER:

POWLSON & SONS, PRINTERS, 14, SOUTH KING STREET.

1877.

ANNUAL REPORT

OF THE
MANCHESTER AND SALFORD
SANITARY ASSOCIATION

FOR THE YEAR 1878
AND THE PROCEEDINGS OF THE
ASSOCIATION DURING THE YEAR 1878

BY THE
MANCHESTER AND SALFORD
SANITARY ASSOCIATION

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Summary of their Proceedings for the Year 1878

MANCHESTER AND SALFORD
SANITARY ASSOCIATION

DONATIONS

MANCHESTER

POWELLSON & SONS, PRINTERS, 14 SOUTH KING STREET
1878

MANCHESTER AND SALFORD SANITARY ASSOCIATION.

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The Worshipful the MAYOR of SALFORD.

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T. R. WILKINSON, ESQ.

G. W. RAYNER WOOD, ESQ.

Secretary.

Mr. FRED. SCOTT.

Office:—78, Cross Street, Manchester.

SUB-COMMITTEES.

POLLUTION OF AIR.

V. K. ARMITAGE, Esq.

Dr. HARDIE.

„ HADDON.

„ LEECH.

H. PHILIPS, Esq.

Dr. RANSOME.

Professor ROSCOE.

Dr. R. ANGUS SMITH.

„ SAMELSON.

G. W. RAYNER WOOD, Esq.

POLLUTION OF RIVERS.

V. K. ARMITAGE, Esq.

Dr. LEECH.

COTTAGE DWELLINGS.

V. K. ARMITAGE, Esq.

Rev. St. VINCENT BEECHY.

Dr. HARDIE.

„ HADDON.

J. NEWTON, Esq.

A. G. McBEATH, Esq.

Dr. RANSOME.

T. WORTHINGTON, Esq.

Communications for the Committee may be addressed to—

Dr. NOBLE, Chairman, Ardwick Green.

Dr. RANSOME, Deputy Chairman, 1, St. Peter's Square.

OLIVER HEYWOOD, Esq., Treasurer, St. Ann's Street.

The Honorary Secretaries, { Dr. HARDIE, King Street.
Dr. HADDON, Eccles.
V. K. ARMITAGE, Esq., Ecoles.

OR TO

Mr. FREDK. SCOTT, Secretary, 78, Cross Street.

At the ANNUAL MEETING of the Manchester and Salford Sanitary Association, held at the Royal Institution, Mosley Street, on Friday, July 27th, 1877.

DR. RANSOME IN THE CHAIR.

The Annual Report having been taken as read,

It was moved by Dr. RANSOME; seconded by JOHN CHADWICK, Esq.:

That this Meeting cordially approving the proceedings of the Committee, as set forth in their Report, request that the said Report may be printed and extensively circulated.

Moved by Dr. HADDON; seconded by T. MELLOR, Esq.

That inasmuch as infectious disorders are amongst the most fatal and most readily preventable sources of excessive mortality, this Meeting trusts that the Committee will continue their efforts to promote the regular record of those diseases, and will use every means in their power to secure all possible precautions being taken by the Local Authorities to prevent their spread.

Moved by Mr. Alderman Mc.KERROW; seconded by J. CORBETT, Esq.;

That the practical efforts of the Committee to improve the condition of the poorer classes by directing attention to the sanitary laws, deserve the encouragement and pecuniary support of this Meeting and the public in general.

Moved by Dr. SAMELSON; seconded by O. DEAN, Esq.;

That the best thanks of this Meeting be given to the President, Vice-Presidents, Committee, and Officers for their unwearied attention in promoting the interests of this Association; and that the following Noblemen and Gentlemen be requested to act for the ensuing year. (For the names see third page.)

ARTHUR RANSOME, Chairman.

The Chair having been taken by Dr. HADDON;

It was moved by J. MELLOR, Esq.; seconded by Dr. TATHAM;

That the thanks of the Meeting be given to Dr. RANSOME for presiding on this occasion, and for the interest he evinces in the welfare of the Association; also to Dr. HARDIE for his services as Hon. Sec., which the Association regret to lose.



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REPORT.

The following is a summary of the proceedings of the Manchester and Salford Sanitary Association for the year 1876.

HOSPITAL ACCOMMODATION.

The question of Hospital accommodation for infectious diseases has occupied the attention of the Committee of the Association for many years, and has been the subject of repeated communications to the City Council. In the last Annual Report a letter sent to the Council appeared, recapitulating the recommendations of the Association, and deprecating the continued apathy of the Corporation in a matter of such grave importance to the community. A reply was received simply stating that arrangements had been made with the authorities of Monsall Hospital and the Children's Hospital, for the reception of all cases of infectious diseases occurring in the City. These arrangements being already known to the Committee, the reply of the Corporation was not deemed satisfactory, and accordingly another communication was addressed to the Council (see Appendix A). It is much to be regretted that the Health Committee cannot see the desirability of adopting the plan suggested by the Association for preventing the spread of infection. Infectious diseases continue to show a very high figure in the mortality

tables, in spite of such provision for isolation as the Corporation have hitherto made. With this fact before them, surely it is incumbent upon the authorities, to grapple fairly and strenuously with these fell destroyers of the people, so as to banish them from our midst, and remove from us the reproach which has been with justice brought against us, of acting as a centre from which disease is being continually spread. What the Committee would recommend is, that since infectious cases cannot compulsorily be sent into a hospital, small hospitals should be established in different parts of the town, provided with efficient nurses, &c., where patients could be visited by their own medical attendant if desired, and receive more care and attention than they could at their own homes. Such an arrangement would take away the objection urged against Monsall and the Children's Hospital, and would also tend to make Hospitals popular. Special Wards might be set apart, and any extra comforts provided, for those willing to pay for them.

The Committee have witnessed with much satisfaction the efforts of the Salford Corporation to provide hospital accommodation *within* the borough for infectious diseases, and hope that their arrangement, made with the Guardians to receive all pauper cases as well, will be instrumental in preventing a recurrence of such another epidemic as has lately visited the borough.

POLLUTION OF AIR.

The Sub-Committee on this subject have continued their work.

Owing to the peculiarly difficult nature of the subject, they have found that they could obtain but very meagre information from independent inquiry, and accordingly sought the aid of the North-Western Association of Medical Officers of Health. That body kindly prepared and presented to the Association an elaborate report. As a contribution to the inquiry this report is of considerable value, but still there is a great dearth of positive information as to the effects of noxious gases upon health, and it is evident that this subject has so far received very little attention. That it is a question of vital importance to the community is evident from the following statistics, prepared by Mr. Joseph Baxendell, of Manchester.

During the five years, 1868-73, the average death rate from diseases of the respiratory organs was 2.27 per 1000 in Westmoreland (one of the healthiest counties in England,) and 2.51 in North Wales. For the whole of England and Wales it was 3.54; for Salford 5.12; and for the Registration district of Manchester 6.10. Taking, however, the township of Manchester alone, it appears that in 1874, the last for which returns have been published by the Registrar General, the death rate from these diseases amounted to 7.7, or three times the average of healthy districts, and more than double the general average for town and country districts—healthy and unhealthy. If, therefore, the rate could be reduced to the average for all England there would be an annual saving of more than 700 lives in Manchester alone.

In 1873 the deaths in Westmoreland from diseases of the respiratory organs were 13.7 per cent of the total deaths from all causes; in North Wales also 13.7 per cent; in all England and Wales 17.2 per cent; in Birmingham 18.2; in Liverpool 18.7; in Sheffield 21.0; and in Manchester 21.6 per cent; but excluding the out-townships, the rates in the township of Manchester alone amounted to 23.2 per cent. It appears, therefore, that Manchester suffers more from diseases of respiratory organs than any other town or city in England; and it may be safely affirmed that if no means can be found of reducing the number of deaths from this class of diseases, it is hopeless to expect that any material improvement can be made in the general state of the public health, or any sensible reduction effected in the general death rate of the city.

Parliament has not yet fully realised the magnitude of the evil arising from a polluted atmosphere. It is hopeful, however, that a Royal Commission has been appointed to inquire into the subject, and that several Associations have been formed throughout the country, including one in Manchester, for securing the exercise of more stringent control over chemical and allied works.

ARTIZANS' DWELLINGS.

The Sub-Committee on this subject have been at work, obtaining information and visiting sundry parts of Manchester with a view to ascertaining whether the Artizans' Dwellings Act might with advantage be enforced in the city. The result of their labours—a Memorial urging the utilization of the Act by the Corporation—will appear in the next Report.

The Committee are glad to know that the Health Committee of the Salford Corporation are about to recommend to the Council of that borough to demolish a block of very old and unsanitary dwellings which at present exists in the neighbourhood of Chapel Street. The Committee hope that this is only the first step in a vigorous campaign against these hot-beds of vice and disease which abound both in Salford and Manchester.

NEW TRACTS.

A Sub-Committee, appointed for the purpose, have prepared a tract on the "Effects of Alcohol upon the System," and it has been published with the authority of the full Committee, who believe that the tract is calculated, as an independent expression of

opinion, by an unprejudiced body, to aid materially the work of temperance reformers. A very large quantity of other tracts has also been issued, and new editions of several of them have been required.

HEALTH LECTURES FOR THE PEOPLE.

The experiment tried last year of printing these lectures for sale has been repeated. The following are the lectures published:—

“On Foul Air and Lung Disease.” By Arthur Ransome, M.A., M.D.

“Indigestion.” By W. J. Sinclair, M.A., M.D.

“On Some Invisible Agents of Heath and Disease.” By Angus Smith, Ph.D., F.R.S.

“The Health of the Household.” By H. Simpson, M.D.

The demand for the lectures is very encouraging, but the price of one penny each charged for them does not pay, and the Association consequently suffers a considerable pecuniary loss by their publication.

TYPHOID FEVER.

An outbreak of Typhoid Fever having occurred at Stretford during the year, the Committee took the opportunity of impressing upon the Local Boards of Health around Manchester, the danger to the city, as well as to the inhabitants of their respective districts of an impure milk supply, and urged upon them the great necessity for systematic inspection of dairy farms. A copy of the letter on this subject will be found in the Appendix (B).

POLLUTION OF RIVERS.

A bill having been introduced to the House of Commons by Mr. Sclater Booth, M.P., the Committee, who have always taken great interest in this subject,

addressed a letter to Lord Salisbury, urging him to move the adoption of certain amendments when the bill reached the Upper House. Copy of the correspondence is given in the Appendix (C).

The Committee regret that the bill which was passed is a very insufficient measure, and its requirements are so modified by provisoes, that it can scarcely be said to be any improvement on its predecessor. Thus the section relating to solid matter merely condemns pollution by "solid refuse, rubbish, cinders or putrid solid matter." Any article which may be shown to have some commercial value, which however, might be insufficient to pay for removal; would not be deemed a polluting article, and solid particles suspended in water are not objected to. Again, the section relating to sewage, protects the offender against proceedings under the Act, if he has used the "best practicable and available means" for rendering the liquids from his works innoxious; and in all cases the responsible party, must be proved to have "knowingly" committed an offence, before being liable to punishment. Thus the usefulness of the Act is practically nullified. The Committee feel, however, that the foundation has been laid for a more efficient measure, and they hope to assist in promoting such improved legislation at the first opportunity.

FINANCIAL POSITION.

Owing to the increased expenditure necessitated by the publication of Winter Lectures, and the loss of several subscriptions through death, removal, &c., the Committee have been obliged to issue an appeal

for new subscriptions. The response has not been satisfactory, and the usefulness of the Association will be curtailed if increased support be not forthcoming. The Committee earnestly appeal to present subscribers and others, into whose hands this report may fall, to use their influence in obtaining the pecuniary support necessary to carry on the work of the Association efficiently.

HEALTH OF MANCHESTER.

On examining our table of new cases in public practice, marked variations from the figures of last year are seen in *Measles*, *Small Pox* and *Typhus Fever*.

MEASLES—The number of cases has fallen from 1008 in 1875 to 659 in 1876, while from the table of mortality it may be seen that in 1875 it caused 338 deaths in the former year, and 362 in the latter, so that although the cases have diminished the mortality has increased.

SMALL POX—The cases have risen from 304 in 1875 to 2,223 cases in 1876, and from 39 to 445 deaths. A table is annexed showing the progress of the Epidemic. The highest number of cases, 782, occurred during the June quarter, the highest of the weekly records being 96, which took place during the week ending 26th May. As to the course of the Epidemic little need be said.

TYPHUS FEVER—Our table, besides such an increase in Small Pox, shows a rise in cases of Typhus Fever, from 68 in 1875, to 215 in 1876. Typhus is a disease generated by overcrowding, and is of a most

infectious nature. There have been comparatively few cases for several years, but unless those in authority exercise all possible vigilance in finding out and isolating the cases as they occur, we may anticipate its spread, as a scourge which spares no class of the community.

Although Small Pox has prevailed to such an extent, and caused so much alarm, it will be seen by examining the mortality table that it has not caused as many deaths as Scarlet Fever, which though comparatively little spoken of, is always amongst us, and annually causes a large number of deaths. To give some idea of the comparative mortality of different diseases, it may be stated, that in the ten years 1867 to 1876 inclusive, Scarlet Fever caused 6,166 deaths, while 1,245 were due to Small Pox. During the same period Measles caused 3,240 deaths, and Whooping Cough 3,985. Taking the sum of these figures we find we have had 14,636 deaths from diseases which are preventable. We have humanitarian enthusiasts who waste their energies on trifles, we would commend to them as an object worthy the attention of the most exalted of our species, the extinction of those diseases, and the saving of mankind from their ravages.

Comparing the total number of cases of diseases of all kinds in 1875 and 1876, with the number of deaths, we observe that in 1875 there were 2,800 more cases, while in 1876 there were 260 more deaths, showing that in 1876, though there were fewer cases of disease, more deaths occurred.

Quarterly Return of New Cases of Disease in public practice in Manchester and Salford in the year 1876.

DISEASES.	March.	June.	Sept.	Dec.	Total.	Correspond- ing Totals for 1875.
Small Pox	533	782	509	399	2,223	304
Measles	132	153	141	233	659	1,008
Scarlet Fever ..	101	102	140	171	514	497
Diphtheria	2	3	2	6	13	14
Whooping C'gh.	474	398	199	194	1,265	1,715
Croup	4	10	1	5	20	42
Diarrhœa	421	390	1,542	495	2,848	3,257
Dysentery	—	1	3	3	7	13
Malignant Chol.	—	—	—	—	—	—
Erysipelas	110	114	112	100	436	539
Continued Fever	30	17	30	19	96	190
Typhus	27	25	43	120	215	68
Typhoid	39	21	51	71	182	258
Febricula	262	236	295	285	1,078	1,706
Ague	2	—	—	1	3	5
Rheumatic Fever	227	210	205	199	841	836
Puerperal Fever	6	6	3	9	24	16
Bronch., Catarrh	2,971	2,244	1,820	2,575	9,610	12,207
Influenza	23	22	10	51	106	130
Pleurisy and } Pneumonia }	256	283	230	230	999	1,457
Phthisis	748	659	659	576	2,642	3,207
Const. Syphilis	1,068	1,066	1,195	1,191	4,520	3,502
Other diseases..	10,281	10,671	11,501	10,459	42,912	42,406
Accidents	3,185	3,565	4,391	3,377	14,518	15,154
Total	20,902	20,978	23,082	20,769	85,731	88,531
Deaths in Public Practice	947	888	794	809	3,438	3,178

*Quarterly Return of Deaths and Births in Manchester
and Salford in the year 1876.*

DISEASES.	March.	June	Sept.	Dec.	Total.	Corresponding Totals for 1875.
Small Pox	68	136	125	116	445	39
Measles	75	108	68	111	362	338
Whooping C'gh.	197	130	66	37	430	428
Scarlatina	178	105	96	157	536	561
Fever	72	50	55	82	259	280
Diarrhœa	44	50	603	83	780	776
Dis. of Lungs..	1,165	930	575	839	3,509	3,944
Other causes ..	1,889	1,729	1,790	1,616	7,024	7,025
Total Deaths ..	3,688	3,238	3,378	3,041	13,345	
Correspondg. } No. last year }	3,923	3,034	3,110	3,324	..	13,391
Deaths under } 5 years.... }	1,708	1,531	1,862	1,460	6,561	6,419
Average death } rate	31.9	27.9	26.2	26.3	28.0	28.5
Births	5,438	5,325	5,437	4,199	20,399	19,501

TABLES SHOWING THE PROGRESS OF THE LAST
EPIDEMIC OF SMALL POX.

*Quarterly Return showing the New Cases and Deaths in public practice
in Manchester and Salford.*

	1875.					1876.				
	Mar.	June.	Sept.	Dec.	Total.	Mar.	June.	Sept.	Dec.	Total.
Cases..	22	52	60	170	304	533	782	509	399	2,223
Deaths..	2	5	3	37	47	94	125	74	69	362

Deaths in the whole population according to the returns of the Medical Officers of Health.

	1875.					1876.				
	Mar.	June.	Sept.	Dec.	Total.	Mar.	June	Sept.	Dec.	Total.
Exclusive of Hospitals (Manchester)* ..	2	5	8	24	39	68	136	127	116	447
Total Deaths	2	6	8	30	46	87	156	132	128	503

* These figures do not include the Manchester Hospitals which often admit patients from out-districts. The total deaths include the Hospitals.

METEOROLOGY AND DISEASE.

Diagrams have been prepared from Mr. Mackereth's figures, showing the height of the Barometer and Thermometer, and amount of moisture in the atmosphere, night and morning; as well as diagrams of the amount of ozone, rainfall, direction of wind, and horizontal movement of the air, for each day. By comparing the Weekly Returns of disease in diagrammatic form, with the meteorological diagrams, an endeavour has again been made to discover any connection that may exist between the weather and sickness.

I. DIARRHŒA.—This is the most regular epidemic we have, and the connection between it and a high temperature is, as usual, well marked.

In the week ending June 17th the highest day temperature in the shade was 67°, and the lowest temperature in the night was 44°.

During the week ending June 24th a decided rise took place, making the highest day temperature

84° , and the lowest night 57° , that is, a rise of 17° for the day and 7° for the night temperature.

Again, looking at the diagram of mean hourly temperature, night and day, we find that in the week ending June 24 it rose from 54° to 64° , that is, a rise of 10° . On July 1st, just a week later, the increase of Diarrhœa cases begins.

The curve of the highest day temperature in the shade falls on July 1st and 8th, rises again on July 15th and 22nd, falls again on July 28th, August 5th and 12th, and then rises to August 19th.

The lowest night temperature is pretty steady about 50° , from June 24th to August 12th, it then rises suddenly to 58° in the week ending August 19th.

The mean hourly temperature, night and day, was pretty stationary about 60° , from June 24th to August 12th. In the week ending August 19th it rose to 68° .

From August 19th, which is the acme of the three diagrams of (1) highest temperature in day, (2) lowest in night, and (3) mean hourly temperature, each shows a sudden fall to about the point from which it rose on June 24th.

The Diarrhœa curve shows a continuous rise from July 8th to August 5th, when there were 157 cases, it rests at this number till August 19th, but on August 26th, exactly the week following the acme of the temperature curves, it rises to its highest record, 192, and then falls as suddenly as it rose.

Thus it is evident that the temperature curve and that of Diarrhœa vary directly; but the diagram

of humidity of the atmosphere has also a resemblance to it. From July 8th to 24th, when the Diarrhœa curve was ascending, the moisture in the atmosphere was gradually descending. It rose during the week ending August 5th, and kept steady till the 19th, during which time there was a pause in the ascent of the Diarrhœa curve. During the week ending August 26th there was a decided fall in the moisture, exactly coincident with the sudden rise in Diarrhœa, while during the week ending September 2nd, when such a sudden fall in Diarrhœa took place, the moisture rose most markedly.

In making these remarks we are not ignorant of the general relation between temperature and humidity, nevertheless, in addition to temperature, the moisture of the atmosphere seems to influence the Diarrhœa Epidemic, so that it may be said, a high temperature and a dry atmosphere are coincident with the occurrence of Diarrhœa, whereas a moist atmosphere lessens the Diarrhœa producing power of a high temperature.

MEASLES.—Comparing the high and low points in the curve with the corresponding dates in the meteorological charts it is found that the curve is high when there is—

1. Little rain and
2. A low temperature,

whereas it is low when there is —

1. Much rain and
2. A high temperature.

SCARLATINA.—By a similar comparison it is found that the curve is high when—

1. The Barometer is steady.
2. Temperature is high.
3. More than average humidity.
4. There is much rain.

and the curve is low when—

1. The Barometer is varying.
2. Temperature is low.
3. Atmosphere is of average humidity.
4. There is little rain.

Looking back on previous Epidemics they seem to reach their acme very regularly in the month of October or November.

WHOOPIING COUGH.—Shows a high curve in the first four months of the year, but nothing special can be noted as coincident in the meteorology. When Epidemics of this disease do occur, they begin in Autumn and decline in Spring with great regularity.

SMALL POX.—Shows a curve highest in May and June, but no connection can be traced between it and the weather.

BRONCHITIS.—Shows a high curve in January and October, and a very low one in the Summer months. The only coincidence noticeable between the highest points and the meteorology is that each follows a heavy fall of rain on one day—with a low temperature.

In issuing this Report the Committee express a hope that they may experience more liberal support from the public.

APPENDIX.

(A)

HOSPITAL ACCOMMODATION.

Manchester and Salford Sanitary Association,

78, Cross Street, Manchester, March 31st, 1876.

SIR,

We are requested by the Committee of this Association to state to the City Council that they have considered the letter of Mr. Leigh, the Medical Officer of Health, dated December 22nd, 1875, in reply to a Memorial from the Association to the Council praying for the provision of small Fever Hospitals in various parts of the town out of the rates.

From this letter it would appear that arrangements have been made by the Council with the Boards of the Royal Infirmary and the Children's Hospital at Pendlebury, for the reception of cases of fever which may be sent there by the officers of the Corporation.

We are directed to state in reply, that as regards the case of adults, this Committee are of opinion that such arrangements may probably be sufficient to meet the end in view, viz: the prevention of the spread of infectious fevers. That as regards the case of children, on the other hand, the Committee are of opinion that the arrangements will prove totally inadequate for the protection of the public. The Committee would draw attention to the fact that of the deaths from "fever" by far the larger proportion is occasioned by one particular form of fever, viz: Scarlatina, which is essentially a disease of childhood. During the eight years of the Health Committee's existence the average annual mortality from this disease in the City of Manchester has been 485, representing perhaps 2,910 cases of illness.

The Council have admitted that they are responsible for the means which shall be taken to diminish this annual total of death and disease, but we would point out that it is scarcely to be expected that it would be possible to remove more than a

minute fraction of such cases as may come under the notice of the Health Committee to an Hospital at Pendlebury.

The Committee believe that in a large City such as Manchester it will not be possible to carry out a protective system of isolation of cases of fever, except by the maintenance of reception houses in various districts within easy reach of those who are expected to make use of them.

They would also urge as most desirable that the reception houses which they contemplate should be established on such a basis that, besides receiving patients for gratuitous treatment, medical men should be encouraged to use them for private patients under their own care whenever they may be in doubt as to their ability to isolate them properly in their own homes.

It is felt that disease must be frequently propagated from families in comfortable circumstances who, from various causes, are yet unable to give full attention to sanitary requirements.

The Committee would appeal to the Council, on the ground of humanity, to take an enlightened view of this question so as to place themselves more in accord with medical opinion and the spirit of modern legislation.

We are, Sir, your obedient Servants,

(Signed,) DANIEL NOBLE, M.D., Chairman.

ARTHUR RANSOME, M.D., Deputy Chairman.

JAMES HARDIE, M.D., }
JOHN HADDON, M.D., } Hon. Secs.

(B)

DAIRY FARMS AND TYPHOID FEVER.

Manchester and Salford Sanitary Association,

78, Cross Street, Manchester, October 14th, 1876.

To the Chairman of the Local Board of Health, _____

TYPHOID FEVER.

SIR,

The attention of the Committee of this Association has been drawn to the prevalence of Typhoid fever in some of the

districts near Manchester, and they deem it right to point out the necessity which there is for guarding against one of the causes sometimes leading to the spread of this fever.

The water supply of farms is not uncommonly impure, being derived from sewage polluted brooks or surface wells placed near drains or accumulations of refuse. Recent experience has shown that a polluted water supply at a single dairy farm may lead to a wide spread epidemic of Typhoid fever, and this without it being possible to prove intentional admixture of the water with the milk. Fever may in this way be conveyed amongst dense populations around as well as in the district in which the dairy farms are situated.

The Committee of the Manchester and Salford Sanitary Association wish to urge upon your Board the necessity for provision being made for the inspection of all dairy farms within the limits of your district, in order to prevent the ill consequences which may at any time follow the use of impure water at such farms.

They wish further to point out that the inspection ought to be systematic, since under some conditions a water supply which is pure at one time may be polluted at another.

We are, Sir,

Yours faithfully,

JAMES HARDIE, M.D.,

JOHN HADDON, M.A., M.D.,

V. K. ARMITAGE, M.A., LL.B.,

} Hon. Secs.

(C)

POLLUTION OF RIVERS.

Manchester and Salford Sanitary Association,

78, Cross Street, Manchester, August 2nd, 1876.

MY LORD,

The Pollution of Rivers Bill having passed through the House of Commons without amendment, and being a very retrograde measure as compared with your Lordship's amended bill of last year, the Committee of this Association desire us to

submit for your Lordship's consideration some amendments which they deem necessary to render the measure really effective, and to express the hope that your Lordship may see your way to moving the adoption of all or any of the amendments of which your Lordship may approve when the Bill comes before the House of Lords.

The following are the suggested amendments :—

- 1.—The omission of the word “knowingly” in clauses 3, 4, and 5, such omission having been assented to by Government in the amended Bill of last year—the onus of disproof of guilty knowledge to be thrown on the defendants.
- 2.—The addition to clause 3 of provisions making it an offence to deposit solid refuse, &c., in such a position on the banks of a stream that it is liable to be carried into the stream by flood or otherwise. This was also provided for by the amended bill of last year.
- 3.—The addition to clause 7 of power to riparian owners to take proceedings under part 3 of the Act, and the omission of the provision making consent of the Local Government Board necessary.
- 4.—An addition to clause 8 enabling local authorities absolutely to refuse to admit into their sewers any polluted or other waters exceeding in temperature 80° degrees, also all waters having in suspension solid matter which would have a tendency to block up the sewers.
- 5.—In clause 14 the substitution of two years for five years as the maximum limit to the duration of a certificate.
- 6.—The restriction in clause 15 to apply only to proceedings taken under the second and third parts of this Act.
- 7.—Power to be given to local authorities and conservancy authorities, where constituted, to appoint inspectors, who shall be entitled to have access to any land, mill, manufactory, or other works or buildings on or near the bank of a stream in order to ascertain—(a) whether such land, mill, &c., has any means whereby any solid or liquid matter

can be cast, &c., or permitted to be cast, &c., into any such river;—(b) whether any solid or liquid matter has been or can be placed in such a position on or near the banks of any such stream as to render such matter liable to be washed into such stream by flood or otherwise.

The Committee of the Association knowing the interest your Lordship takes in this question, desire us to submit the foregoing amendments to your Lordship, so that your Lordship may decide whether an attempt to embody them in the Bill would or would not endanger its passing into law; and they trust that in the event of your Lordship being of opinion that the Bill may with safety be amended, it will not be out of place for your Lordship, as a member of the Government, to use your influence in that direction. We may add that the Committee attach special importance to the suggested amendments marked 1 and 3 (re-word “knowingly” and “powers of riparian owners.”)

We have the honour to be, my Lord,

Your Lordship's obedient very humble Servants,

(Signed,) JAMES HARDIE, }
V. K. ARMITAGE, } Hon. Secs.

*To the most Noble the Marquis of Salisbury, &c.,
Her Majesty's Principal Secretary of State for India.*

R E P L Y.

*India Office,
August 4th, 1876.*

GENTLEMEN,

Lord Salisbury desires me to acknowledge the receipt of your letter of the 2nd instant upon the Pollution of Rivers Bill.

In reply I am to inform you that his Lordship will give his best consideration to the proposed amendments, and will confer with Mr. Selater Booth upon the subject.

Faithfully yours,

(Signed,) HORACE WALPOLE.

The Hon. Secretaries,

Manchester and Salford Sanitary Association.

The Treasurer in Account with the Manchester and Salford Sanitary Association.

Dr.

JANUARY 1ST TO DECEMBER 31ST, 1876.

Cr.

1876.			1876.		
	£	s. d.		£	s. d.
Jan. 1. To Balance in Bank	28	5 6	Dec. 31. By Secretary's Salary	50	0 0
Do. in hand	10	0 3	Collector's Commission	8	19 10
Dec. 31. Annual Subscriptions	38	5 9	Rent and Taxes	36	5 11
Donations	173	8 0	Hire of Rooms	7	17 6
Publications	6	0 0	Printing, Engrossing, &c.	41	1 7
Bank Interest	14	3 2	Advertising	5	12 5
	0	5 0	Coal, Gas, &c.	1	14 10
			Office Cleaning	4	1 0
			Postages	11	17 1
			Boy's Wages	14	11 0
			Books, &c.	2	13 1
			Office Furniture	5	1 9
			Sundries	1	14 11
			Balance in Bank	36	13 0
			Do. in hand	3	18 0
				40	11 0
				£232	1 11

Examined and found correct,
JOHN CHADWICK, AUDITOR.

Assets and Liabilities.

1877.			1877.		
	£	s. d.		£	s. d.
Jan. 1—To Balance in Bank, &c. as above	40	11 0	Jan. 1—By Printing	42	9 3
Balance (deficiency)	17	11 2	Rent	7	16 3
			Salaries	4	6 8
			Sundries	3	10 0
				£58	2 2

Donations in former Years.

	£	s.	d.
Armistead William, Esq., M.B.....	10	0	0
Atherton Miss	50	0	0
A Friend, per Dr. Morgan.....	50	0	0
A Friend, per T. Turner, Esq.	10	0	0
Barbour Robert, Esq.	10	0	0
Bazley T. Sebastian, Esq., Little Grove, East Barnet, Herts.	5	5	0
Binyon Miss, Clifton	5	0	0
Brooks Samuel, Esq.	50	0	0
Callender W. R., Senr., Esq.....	5	0	0
Ditto ditto second donation.....	5	0	0
Chadwick R., Esq.	20	0	0
Cheetham John, Esq., Stalybridge	5	0	0
Coultate E., Esq.	5	0	0
Ellesmere, The Earl of	5	0	0
Gardner Robert, Esq.	3	5	0
Geldart, Mrs. C., Cambridge.....	5	0	0
Gillibrand P., Esq.	5	0	0
Heywood E. S., Esq.....	20	0	0
Heywood Oliver, Esq.	15	0	0
Heywood James, Esq.	5	5	0
Heywood Sir B., Bart.	5	5	0
Heywood Arthur H., Esq.	5	0	0
Houldsworth Henry, Esq.	10	0	0
Jones R. Jennings, Esq.	5	0	0
Jones W. C., Esq.....	5	0	0
Manchester, the late Lord Bishop of	10	0	0
Mackintosh Messrs. C., and Co.....	5	5	0
Philips H., Esq., Manchester.....	5	0	0
Plant James, Esq.....	5	0	0
Potters & Norris, Messrs.	5	5	0
Spafford George, Esq.	5	5	0
Schunk, Souchay & Co., Messrs.	5	0	0
Taylor J. E., Esq.....	5	5	0

	£	s.	d.
Todd and Coston, Messrs.	5	0	0
Tootal, Broadhurst, Lee, and Co., Messrs., Manchester	5	0	0
Turner J. Aspinall, Esq., M.P.	5	0	0
Watkin W. B., Esq.	10	0	0
Wood W. Rayner, Esq.	5	0	0
Wood G. W. Rayner Esq., Singleton	5	5	0

DONATIONS IN 1876.

	£	s.	d.
Eckroyd W. & Son, Messrs.	1	0	0
Hinners William, Esq.	5	0	0

SUBSCRIBERS 1876.

	£	s.	d.
Armitage V. K. Esq., Eccles.....	2	2	0
Aspland A. Esq., J.P., Dukinfield.....	1	1	0
Atkinson and Gould, Messrs., 6, Mosley-street	1	1	0
Attwell G. H., Esq., 18, Church-street, Altrincham.....	1	1	0
Barbour, Messrs. R., and Brother, Aytoun-street.....	2	2	0
Behrens, Messrs. S. L., and Co., 22, Oxford-street	2	2	0
Bellhouse Messrs. Jas. and W., Mynshull Mills, Old Garratt	2	2	0
Brooks William Cunliffe, Esq., M.P., the Bank, King-st. ...	2	2	0
Butterworth and Brooks, Messrs., Charlotte-street.....	2	2	0
Bardsley Sir James L., M.D., 1, Sidney-street	1	1	0
Bank of England, King-street	1	1	0
Bannerman J. A., Esq., 33, York-street	1	1	0
Bazley Sir Thomas, Bart., M. P.	1	1	0
Binyons, Robinson, and Co., Messrs., St. Ann's-square	1	1	0
Boddington Messrs. H. and Co., Strangeways	1	1	0
Booth William, Esq., 52, Church-street	1	1	0
Bradshaw Messrs. J., and Co., Artillery-street	1	1	0
Bremner J. A., Esq., Albert-street.....	1	1	0
Bright Messrs., and Brothers, Spring-Gardens.....	1	1	0
Browne Dr. Henry, 244, Oxford-street.....	1	1	0
Barker N., Esq., Rusholme.....	0	10	6
Beechy Rev. St. Vincent, M.A., Church House, Mayes-street	0	10	6

	£	s.	d.
Behrens Louis, Esq., 41, Portland-street	0	10	6
Bromily Messrs. and Sons., 3, Cateaton-street.....	0	10	6
Chadwick John, Esq., Great Bridgewater-street	2	2	0
Carver, Brothers, and Co., Messrs., 7, Lower Mosley-street..	1	1	0
Cawley C. E., Esq., M.P., Carlton Buildings, Cooper-street.	1	1	0
Charlewood H., Esq., 5, Clarence-street	1	1	0
Chadwick Miss, Dunham, Altrincham.....	1	1	0
Chamberlain, Donner & Co., Messrs., Aytoun-street	1	1	0
Collins Edward, Esq., Corn Mills, 35, Long Millgate	1	1	0
Cooke Thomas, Esq., District Bank, Spring Gardens	1	1	0
Cowlshaw, Nicol, and Co., Messrs., Portland-street	1	1	0
Crum Walter, and Co., Messrs., Portland-street	1	1	0
Cunliffe and Sons, Messrs., Bond-street, Ardwick.....	1	1	0
Curtis John, Esq., Roseleigh, Heaton Chapel	1	1	0
Carlisle, Douglas, and Co., Messrs., 85, Mosley-street.....	1	0	0
Carver William, and Co., Messrs., 15, Mosley-street	1	0	0
Corbett J., Esq., 24, Barton Arcade.....	0	10	6
Dods, Ker & Co., Messrs., Albert-square.....	0	10	0
Dugdale Messrs. John, and Brothers, 17, Cooper-street	1	1	0
Ellinger A., Esq., Dale-street.	1	1	0
Estcourt C., Esq., F.C.S., St. James's Square	1	1	0
Farbridge Holliday, and Co., Messrs., 57, King-street.....	1	1	0
Fildes James, Esq., 44, Spring Gardens, Manchester	1	1	0
Findlater and Mackie, Messrs., Bank-street	1	1	0
Galloway Messrs. W. and J., Chester-road, Hulme	2	2	0
Gibbs H. S., Esq., Wharf-street Mill, Ancoats	2	2	0
Grafton F. W., Esq., Portland-street	2	2	0
Greg, Brothers, and Co., Messrs., Booth-street.....	2	2	0
Greg Francis, Esq., Booth-street	2	2	0
Gaddum and Co., Messrs., South-street	1	1	0
Galloway Messrs. J., and Co., 7, Mosley-street.....	1	1	0
Gaskell Rev. William, 46, Plymouth-grove	1	1	0
Gibson Rev. Canon, Polygon, Ardwick	1	1	0
Goldschmidt Philip, Esq., Albert-square.....	1	1	0
Graham Messrs. William, and Co., 86, Major-street	1	1	0
Graham William Esq., 18, Aytoun-street....	1	1	0
Grover J. B. K., Esq., 1, Elm-street, Water-street	1	1	0

	£	s.	d.
Heywood Arthur H., Elleray, Windermere	2	2	0
Heywood E. S., Esq., M. & S. Bank, St. Ann's-street	2	2	0
Heywood Oliver, Esq., „ „ „	2	2	0
Hall, Mc.Kerrow & Co., Messrs. Manchester	1	1	0
Harvey, A. C., Esq., Chapel-walks	1	1	0
Helm S. L., Esq., Grove House, Lincoln-grove	1	1	0
Heywood Rev. K. R., Swinton	1	1	0
Higgin W. H., Esq., Q.C., Prestwich	1	1	0
Hadfield George, Junr., Esq., 32, Fountain-street	0	10	6
Heyman H. S., Esq., Hall-street, Oxford-street	0	10	6
Herod Mr. M., 1, Friday-street.....	0	2	6
Ireland Messrs. Alexander & Co., Pall Mall	1	1	0
Jackson Messrs. E. & J., Portland-street	1	0	0
Jackson J. W., Esq., L. & Y. Engineer's Office, Hunt's Bank	1	0	0
Joule Dr., Lower Broughton	0	10	6
Kershaw, Sidebottom & Co., Messrs., Portland-street.....	1	1	0
Kirkman W. W., Esq., Solicitor, John Dalton-street	1	1	0
Kolp & Co., Messrs., George-street	1	1	0
Kessler, William, Esq., 33, Dale-street	1	0	0
Langton Wm., Esq., Manchester & Salford Bank, Mosley-st.	2	2	0
Lee Messrs. Daniel, & Co., Fountain-street	2	2	0
Leisler John, Esq., Messrs. Du Fay & Co., Booth-street.....	2	2	0
Langworthy Brothers & Co., Messrs., Charlotte-street	1	1	0
Lamb James, Esq., John Dalton-street	1	1	0
Leech Dr., 96, Mosley-street	1	1	0
Lund Edward, Esq., St. John-street, Manchester	1	1	0
Lyon, Lord & Co., Messrs., David-street	1	1	0
Macintosh Messrs. Charles & Co., Cambridge-street	2	1	0
M'Connel W., Esq., Henry-street, Ancoats	2	2	0
M'Laren Messrs. James & Nephew, 18, George-street.....	2	2	0
Munn Messrs. John & Co., 52, Fountain-street.....	2	2	0
Makin Messrs. J. & Son, 17, Mosley-street.....	1	1	0
Manchester, the Right Rev. the Lord Bishop of	1	1	0
Mellor Thomas, Esq., 204, Clairville, Oxford-street.....	1	1	0
M'Clure Messrs. John & Son, Cross-street	1	1	0
M'Niven Charles, Esq., Godston, Surrey	1	1	0
Martin Dr., Embden-street, Hulme.....	0	10	6
Morell J. C., Leyland, near Prestou.....	0	10	0

	£	s.	d.
Novelli and Co., Messrs., Chorlton-street	2	2	0
Newton John, Esq., Carlton-buildings, Cooper-street	1	1	0
Nield Alfred, Esq., Parker-street	1	1	0
Noble Dr., 32, Ardwick Green	1	1	0
Oxley Edwin, Esq., 43, Port-street.	0	10	0
Philips Herbert, Esq., Church-street	3	0	0
Peel, Messrs. John, and Co., 11, Peel-street, Duke-street ...	2	2	0
Philips Messrs. J. N., and Co., Church-street.....	2	2	0
Pearce, Dickinson, and Co., Bale-street, Lower Mosley-st. ...	1	1	0
Peatson, Dr. J. C., Mount-street.....	1	1	0
Potter Messrs, Edmund, and Co., 10, Charlotte-street.....	1	1	0
Prescott C. J. C., Esq., Charlotte-street.....	1	1	0
Parlane James, Esq., Victoria Park	1	1	0
Peiser, J., Esq., 491, Oxford-street Manchester.....	1	1	0
Potters and Martin, Messrs., George-street.	1	1	0
Reiss, Brothers, Messrs., Quay-street.....	2	2	0
Ralli, Brothers, Messrs., Peter-street	1	1	0
Ransome Dr. Arthur, Bowdon.....	1	1	0
Ross Edward, Esq., London-road Station	1	1	0
Ross Malcolm, and Co., Messrs., Cromford-court.	1	1	0
Ryder T. D. Esq., M.A., 7, St. James's Square.....	1	1	0
Rylands and Sons, Messrs., New High-street.....	1	1	0
Robertson Charles, Esq., Alexandra-road.....	1	1	0
Roberts Dr. John, Oxford Road.....	1	1	0
Roscoe Professor, Owens College	1	0	0
Rodger George and Son, Messrs., Chorlton-street.....	1	0	0
Roberts J. Lloyd, Esq., Denbigh	0	10	6
Rice J., Esq., Consolidated Bank, Pall Mall.	0	5	0
Sharp, Stewart & Co., Limd., Messrs., Atlas Works, Oxford-st.	2	2	0
Slater W., Esq., Princess-street.	2	2	0
Strines Printing Co., Messrs., The, George-street.....	2	2	0
Schuster, Fulda, and Co, Messrs., 12, Sackville-street.....	1	1	0
Samelson Dr., 15, St. John-street, Deansgate.....	1	1	0
Schofield Thomas, Esq., Cornbrook.....	1	1	0
Schunk, Souchay, and Co., Messrs., Peter-street.....	1	1	0
Slagg Messrs. John, and Co., 12, Pall Mall.....	1	1	0
Stoehr Messrs. E. M. and Co., Deansgate.	1	1	0
Standring John, Esq., 18, Fountain-street.....	1	1	0
Samson & Leppoc, Messrs., St. Peter's-square	1	1	0

	£	s.	d.
Sutcliffe, A. E., Esq., Chorlton Lodge, Stretford-road.....	1	1	0
Schloss, D., Esq., Brook-street	1	1	0
Simpson, Dr., 3, Oxford-street	0	10	6
Stowell, Rev. T. A., M.A., 27, Crescent	0	10	6
Taylor, Garnett, and Co., Messrs., Cross-street.....	2	2	0
Turner Wright, Esq., Brindle-heath, Pendleton.	1	1	0
Thorburn Dr., 333, Oxford-road.....	0	10	6
Trapp S. Clement, Esq., 88, Mosley-street.....	0	10	0
Vernon, Freemantle, and Co., Messrs., Piccadilly Mills,	2	2	0
Whitworth Messrs. B., and Brother, 11, Cross-street.	2	2	0
Wadkin and King, Messrs., 12, Chepstow-street	1	1	0
Waters Messrs. J. and E., and Co., 31, Portland-street.....	1	1	0
Watts Sir James, Portland-street.....	1	1	0
Whitehead Dr., 87, Mosley-street.....	1	1	0
Whittaker, W. Wilkinson, Cornbrook	1	1	0
Wilkinson, Dr. M. A. E., Greenheys.....	1	1	0
Williams Messrs. L. and E., Upton-street, London-road.....	1	1	0
Worthington Thomas, Esq., King-street.....	1	1	0
Woodhouse Rev. Canon., 6, Ardwick Green.....	1	1	0
Wilkinson T. R. Esq., Manchester and Salford Bank.....	0	10	6
Wright Rev. F. B., M.A. Bury New-road.....	0	10	6