[Report of the Medical Officer of Health for Port of London].

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PORT OF LONDON HEALTH COMMITTEE.

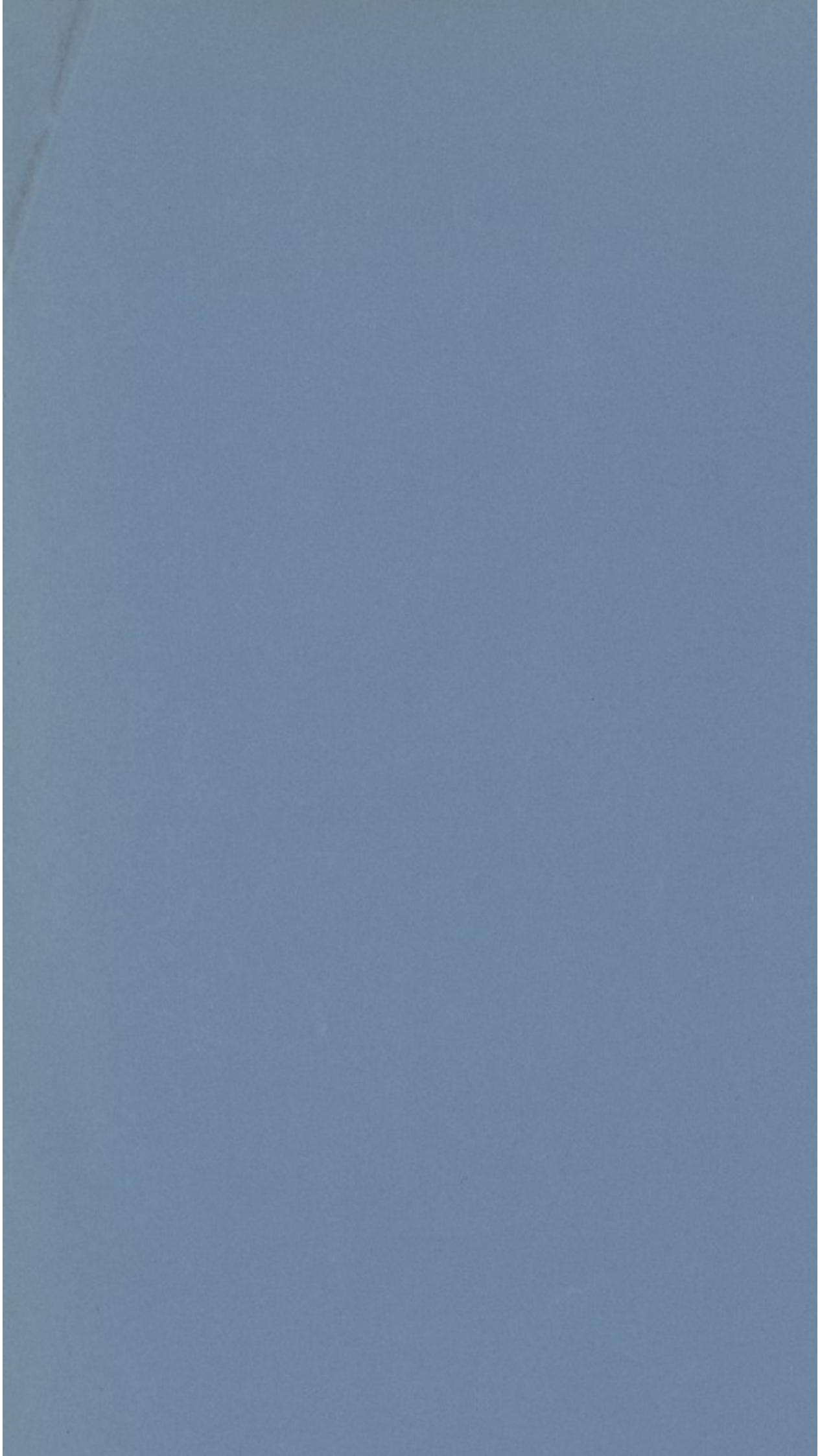
ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

To 31st December, 1938.

Presented 13th July, 1939.



REPORT

For the Year ended 31st December, 1938,

OF THE

MEDICAL OFFICER OF HEALTH

FOR

THE PORT OF LONDON

(MONTAGU TRAVERS MORGAN, M.C., M.D., Ch.B., D.P.H.)

BOWATER, *Mayor.*

A Common Council holden in the Chamber of the Guildhall of the City of *London*, on *Thursday*, the **13***th* day of *July*, **1939**.

THE Port of London Health Committee did this day deliver into this Court a Report in writing under their hands of their proceedings, and submitting the Annual Report of the Medical Officer of Health for the Port to the 31st December, 1938; which was read.

ORDERED—That the Report be printed and a copy sent to every Member of this Court.

ROACH.

To the Right Honourable the Lord Mayor, Aldermen and Commons of the City of London, in Common Council assembled.

WE, whose names are hereunto subscribed, of your Port of London Health Committee, to whom it has been referred to carry into execution the powers assigned to the Corporation, as the Port of London Health Authority, beg to submit for the information of your Honourable Court the Annual Report of the Medical Officer of Health for the Port of London for the year ended the 31st December, 1938, which Report contains a full and detailed account of the work done in the Port during that period by the Medical Officers and Inspectors.

An Account of Income and Expenditure in connection with the Port of London Health Authority for the year ended the 31st March, 1939, is appended, in accordance with the Order of your Honourable Court, for the information of the Court.

All which we submit to the judgment of this Honourable Court. Dated this eighth day of July, 1939.

FRED. WHITTINGHAM.
A. RIDOUT.
HORACE R. HILL.
A. STANLEY BELL.
W. R. NELTHROPP.
RICHARD BRODIE.
C. R. HEISER.
SIDNEY H. GREENAWAY.
GEORGE EDW. WITHERS.
R. S. HEWETT.
JOHN D. LAURIE.
G. GODFREY WARR.
B. S. DUNN.
H. J. GOWER.
FRANCIS J. CAUNTER.
S. GRAVE MORRIS.
HAROLD E. JOWSEY.
H. W. MORRIS.

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Port of London Health Authority,

5, CHURCH PASSAGE, GUILDHALL, E.C. 2.

Telegraphic Address - -	"PORTELTH LONDON."
Telephone No. - - -	METROPOLITAN 3636.

BOARDING STATIONS.

RIVER THAMES - - -	Hulk "Hygeia," Gravesend.
RIVER MEDWAY - - -	Garrison Point, Sheerness.
Telegraphic Address - - - -	"PORTELTH LONDON."
Telephone No. (Hulk "Hygeia") -	GRAVESEND 325.

HOSPITAL FOR INFECTIOUS DISEASES

AT

DENTON, near GRAVESEND.

Telephone No. (Hospital) - - - -	GRAVESEND 257.
,, (Medical Officer) - - -	GRAVESEND 626.

LIMITS OF THE PORT OF LONDON.

The limits of the Port of London as at present defined commence at High-Water Mark in the River Thames at Teddington Lock, in the County of Surrey, and extend down both sides of the River Thames to an imaginary straight line drawn from the Pilot Mark at the entrance of Havengore Creek, in the County of Essex, to the land's end at Warden Point, in the Isle of Sheppey, in the County of Kent, such point being the North-Western limit of the Port of Faversham, and extend up and include both sides of the River Medway to an imaginary straight line drawn from the South-East point of land westward of Coalmouth Creek, thence across the said River Medway to the Westernmost point of the piece of land which forms the Eastern side of the Stangate Creek, or, in other words, the North-West point of Fleet Marsh, and from thence in a Southerly direction to Iwade Church, in the said County of Kent, and thence in a North-Easterly direction to Elmley Chapel in the said Isle of Sheppey, a supposed direct line from Elmley Chapel to Iwade Church, being the Western limit of the Port of Faversham, and the said Port of London includes the Islands of Havengore Creek aforesaid, called Potton and Rushley Islands, and so much of the said Creek and watercourse as extends from it to the town of Rochford, and also includes all other islands, rivers, streams, creeks, waters, watercourses, channels, harbours, docks and places within the before-mentioned limits contained.

STAFF.

List of Officers forming the Staff of the Port of London Health Authority, 31st December, 1938.

Office.	Name of Officer.	Date of entering the Service.	Date of appointment to present position.
MEDICAL OFFICER OF HEALTH	M. T. Morgan, M.C., M.D., Ch.B., D.P.H.	September, 1938	June, 1938.
DEPUTY Do. ...	(Vacant) ‡H. M. Willoughby—(Acting)	—	—
BOARDING MEDICAL OFFICERS— Gravesend	H. M. Willoughby, M.R.C.S., L.R.C.P., D.P.H., D.T.M. & H., R.N.V.R.	May, 1929 ...	May, 1929.
Do. Do. ...	P. B. P. Mellows, L.M.S.S.A., Lond., D.T.M.&H.	October, 1934 ...	June, 1934.
Do. Do. ...	J. A. Jones, M.B., Ch.B., D.P.H.	April, 1935 ...	April, 1935.
Do. Do. ...	†R. H. Barrett. M.R.C.S., L.R.C.P., D.P.H., D.T.M. & H.	March, 1937 ...	March, 1937.
Sheerness	†H. A. Madwar, L.R.C.P., L.R.F.P.S.	December, 1927	February, 1928.
OFFICE STAFF—			
Principal Clerk	E. A. Sorrell, M.B.E.	October, 1894 ...	January, 1929.
Principal Assistant	W. C. Barham	March, 1901 ...	January, 1929.
1st Class „	J. A. Gillis	March, 1914 ...	January, 1929.
2nd „ „	A. W. Moore	January, 1920 ...	January, 1929.
3rd „ „	W. L. McLorg	February, 1927	January, 1929.
„ „ „	R. C. Ratliff	March, 1930 ...	March, 1930.
Junior Clerk	†E. V. Smith	October, 1938 ...	October, 1938.
Charwoman	†Mrs. E. S. Veale	September, 1935	February, 1936.
SANITARY INSPECTORS (Senior) ...	*F. J. Massie	March, 1909 ...	July, 1936.
	*W. J. Berry	February, 1914...	July, 1936.
	*W. Gray	September, 1921	July, 1936.
	*R. Clifford	July, 1925 ...	July, 1936.
	*P. W. Coombe	December, 1924	July, 1936.
	*E. H. Johnson	August, 1929 ...	July, 1936.
	*T. G. Edwards	June, 1929 ...	July, 1936.
SANITARY INSPECTORS (Junior) ...	*D. E. Madeley	September, 1932	July, 1936.
	*C. E. Wright	July, 1931 ...	July, 1936.
	*J. S. Beattie	May, 1931 ...	July, 1936.
	*L. A. R. Hundy	January, 1934 ...	July, 1936.
	*T. L. Mackie, A.M.I.N.A. ...	November, 1934.	July, 1936.
	*L. F. J. McDermott	June, 1934 ...	July, 1936.
	*G. Dring...	February, 1937	February, 1937.
ASSISTANT RAT OFFICERS ...	C. F. Woodrow	November, 1928	December, 1928.
	C. W. Moody	February, 1929	March, 1929.
	E. C. Watkins	June, 1929 ...	June, 1929.
	S. A. Croft	June, 1929 ...	June, 1929.
	G. F. Boult	June, 1929 ...	June, 1929.
	A. Cook	July, 1938 ...	October, 1938.
DENTON HOSPITAL—			
Medical Officer in Charge	(Vacant) H. M. Willoughby (Acting)	May, 1929 ...	March, 1937.
Matron	J. Jackson	February, 1910...	February, 1910.
Staff Nurse	†	—	—
Senior Assistant Nurse	†	—	—
Assistant Nurse	†	—	—
Cook-General	†	—	—
Wardmaid	†	—	—
Do.	†	—	—
Housemaid	†	—	—
Do.	†	—	—
Handyman, &c.	†	—	—
Laundress	†	—	—
Gardener	W. H. James	January, 1931 ...	December, 1930.

* These Inspectors possess the Special Certificate of the Royal Sanitary Institute for Inspectors of Food.
† Temporary Staff.
‡ Appointed Deputy Port Medical Officer of Health in April, 1939.

STAFF—*continued.*

List of Officers forming the Staff of the Port of London Health Authority, 31st December, 1938.

Office.	Name of Officer.	Date of entering the Service.	Date of appointment to present position.
LAUNCHES—			
"Howard Deighton"—			
Master	C. A. Strange	December, 1898	December, 1930.
1st Mate	C. H. Price	May, 1912 ...	December, 1930.
2nd Mate	A. J. Humphreys	April, 1931 ...	March, 1931.
Chief Engineer	R. J. Roberts	April, 1931 ...	October, 1931.
Engineer	F. H. Yeo	August, 1932 ...	August, 1932.
"	J. H. Meredith	February, 1936	February, 1936.
Deckhand and Relieving Navigating Officer.	A. F. Clements	January, 1927 ...	September, 1933.
Deckhand	J. R. Steen	March, 1926 ...	December, 1930.
"	H. J. Debnam	April, 1931 ...	April, 1931.
Deckboy	†L. J. Youngs	April, 1931 ...	April, 1931.
"	†D. Potter	October, 1937 ...	October, 1937.
"	†C. R. Simons	August, 1938 ...	October, 1938.
"Alfred Robertson"—			
Master	A. F. Rough	October, 1914.	May, 1938.
Engineer	J. C. Row	December, 1926	May, 1938.
Deckhand	W. J. Reader	November, 1934	May, 1938.
"Frederick Whittingham"—			
Driver	P. J. Wilkins	November, 1928	October, 1934.
Deckboy	†S. H. Strange	November, 1934	November, 1934.
GRAVESEND—Hulk "Hygeia"—			
Shipkeepers	H. A. Clarkson	May, 1912 ...	January, 1927.
	E. W. S. Edmonds	September, 1933	September 1933.
GREENWICH MOORINGS—			
Barge "Ella Vicars"—			
Watchman	E. Ditch	January, 1915 ...	November, 1917.
"	A. E. Howard	February, 1912	February, 1935.

† Temporary Staff.

5, Church Passage,
Guildhall, E.C. 2,
January, 1939.

TO THE WORSHIPFUL THE PORT OF LONDON HEALTH COMMITTEE.

Gentlemen,

I have the honour to submit this my first Annual Report as Medical Officer of Health of the Port of London.

Dr. C. F. White relinquished his duties as Acting Medical Officer of Health of the Port on 31st August.

The tonnage of vessels entering the Port of London during 1938 showed a decrease of 472,545 tons as compared with 1937, the total being 30,776,918 tons. Fourteen thousand, one hundred and forty-two vessels arrived from foreign ports, and of these 2,236 were boarded and inspected by your Medical Officers.

Infectious disease was reported as having occurred during the voyage on 229 vessels, the total number of cases being 443, of which 205 were landed in the Port.

In the Training Ships moored in the River there occurred 11 cases of Scarlet Fever, one case of Pulmonary Tuberculosis, five cases of Diphtheria and one case of German Measles.

One case of Measles occurred on a houseboat moored in the district, and one case of Pneumonia occurred in a residence within the dock area.

One hundred and ninety-nine cases, particulars of which are given in Appendix II, were admitted to your Hospital at Denton.

No case of human Plague occurred during the year on any vessel bound for London.

Of the 2,374 rats examined bacteriologically, 961 were from ships and 1,413 were from shore premises. No rats were reported to be infected with Plague.

One case of Smallpox arrived on a vessel from Bombay and was landed to your Hospital at Denton. Full particulars of this case are recorded on pages 16 and 17.

The Parrots (Prohibition of Import) Regulations, 1930, continued in operation, and the work done thereunder is reported on page 46.

Your Sanitary Inspectors made 13,924 inspections of vessels, and 5,288 inspections of shore premises. Six thousand two hundred and sixty-two defects were reported in 2,611 vessels, in 1,960 of which the defects were remedied. Five hundred and ninety-two nuisances were reported in 588 shore premises, in 587 of which the nuisances were abated.

The number of vessels fumigated for rat destruction under the supervision of your Inspectors was 126; 92 by hydrogen cyanide and 34 by sulphur dioxide. By the former method 802 rats and 249 mice, and by the latter 408 rats, were destroyed.

Of the 126 vessels fumigated for the destruction of rodents, 79 produced a negative result. The remaining 47 vessels fumigated accounted for the destruction of 1,210 rats and 249 mice.

In addition 3,523 rats were trapped in ships and 4,714 on shore in the Port.

Intimation notices were served in respect of four cases of infringement of the Bye-laws relating to Offensive Cargoes.

Nuisances from smoke were reported in seven vessels; in only two cases was it necessary to serve a Statutory Notice.

The number of water barges in use in the Port remained at 12. As heretofore, the registration of these craft by the Port of London Authority was made conditional upon the report of your Officers as to the fitness of the barges for the carriage of drinking water. These arrangements continued to work smoothly.

No action of any importance was taken to apply the existing Houseboat Bye-laws to the houseboats coming within the jurisdiction of the Port Health Authority, for the reason that the Bye-laws are under revision, and new draft Bye-laws are in course of preparation.

The situation as regards the houseboats moored in the various creeks—their grouping, the sanitary and hygienic condition of the majority of them and generally the impossibility of effecting a reasonable control—is nothing less than deplorable, and it is hoped that the coming into force of new and more suitable Bye-laws capable of being properly and impartially administered to the benefit of all concerned, will not be long delayed.

A new launch, the " Alfred Robertson " was taken into commission in May, and has given very satisfactory service, as have also the two other launches of the Authority, the " Howard Deighton " and the " Frederick Whittingham."

The crisis of last September necessitated the urgent protection of Denton Hospital against air raids, and the preparation of a scheme of air-raid precautions for the Port Health Services. The details of the work carried out at Denton Hospital and of the joint scheme of air-raid precautions with the Port of London Authority are given on pages 57-60 of this Report, and in Appendix XXX.

During the year 7,508 tons of foodstuffs were condemned as unfit for human consumption and were either destroyed or disposed of for industrial purposes under guarantee.

The proportion of carcases of mutton examined for *Caseous Lymphadenitis* remained at five per cent. throughout the year, while pieces of mutton continued to be subjected to 100 per cent. examination. Evidence of this disease was found in only 19 of the 26,782 carcases examined by your Inspectors. A proportion of frozen ox-tongues imported from South America was examined on arrival, the percentage found to be affected with *Actinobacillosis* being 0.72.

Special attention continued to be paid during the year under review to the inspection of canned foodstuffs for metallic contamination. The analyses showed a reduction in the number of consignments of sardines containing lead and in the quantity of lead present. Many consignments of canned tomatoes and tomato products continued to contain an excessive amount of copper, though here again the total number of consignments containing copper and the quantity of that metal has shown a very satisfactory reduction. Following consultations with the Ministry of Health a memorandum was prepared by that Department to serve as a basis for the practical application by Port Health and other Authorities of the Regulations concerning metallic contamination. The Memorandum suggested that a content of not more than 50 parts of copper or copper compounds per million of the dried contents should be adopted on and after 1st January, 1940, and that in the meantime proportions in excess of that figure up to 100 parts should indicate the sending of a warning to the importers, while an excess of 100 parts should result in the seizure of the goods.

No complaints were received during the year as to pollution of the River by sewage discharged from the Northern and Southern Outfalls.

I have pleasure in recording that all grades of your Staff carried out their duties in an entirely satisfactory manner.

The health work of so large a Port could not be carried out efficiently without the co-operation of the Officers of H.M. Customs and of the Port of London Authority, the Pilots and the Members of the Staffs of the Shipping Companies and Merchants whose assistance and courtesy are gratefully acknowledged.

I have the honour to be,

GENTLEMEN,

Your obedient Servant,

M. T. MORGAN.

I.—AMOUNT OF SHIPPING ENTERING THE PORT DURING THE YEAR 1938.

TABLE A.

		Number.	Tonnage.	Number Inspected. By the Medical Officer of Health.	Number Inspected. By the Sanitary Inspector.	Number reported to be Defective.	Number of Vessels on which Defects were Remedied.	Number of Vessels reported as having or having had, during the voyage Infectious Disease on Board.
Foreign	Steamers ...	8,956	16,010,281	1,817	9,829	1,783	1,388	229
	*Motor ...	5,129	6,480,991	418				—
	Sailing ...	57	30,087	1	8	—	—	—
	Fishing ...	—	—	—	—	—	—	—
Total Foreign ...		14,142	22,521,359	2,236	9,837	1,783	1,388	229
Coastwise	Steamers ...	9,997	7,347,701	3	2,647	704	469	3
	*Motor ...	3,723	800,051	—				—
	Sailing ...	1,421	107,807	—	421	28	28	—
	Fishing ...	—	—	—	—	—	—	—
Total Coastwise ...		15,141	8,255,559	3	3,068	732	497	3
Total Foreign and Coastwise		29,283	30,776,918	2,239	12,905	2,515	1,885	232
Inland Navigation ...		—	—	—	1,019	96	75	10

* Includes mechanically propelled vessels other than Steamers.
See also Appendix I.

NOTE.—British Fishing Vessels are excluded from the Returns of the Navigation of the United Kingdom. Foreign Fishing Vessels are included, but not separately distinguished.

II.—CHARACTER OF TRADE OF PORT.

TABLE B.

(*a*) PASSENGER TRAFFIC DURING 1938:—

TO AND FROM NON-EUROPEAN COUNTRIES.

Number of Passengers.	1st Class.	2nd Class.	3rd Class.	Tourist.
Inward	19,119	6,372	4,361	15,833
Outward	19,950	5,510	1,142	20,687

TO AND FROM CONTINENT OF EUROPE.

Inward	62,159 (all classes).
Outward	56,808 (all classes).

Countries from which passengers principally arrive: North America, Australia, Europe, British South Africa, New Zealand, India and the Far East.

(*b*) CARGO TRAFFIC:—

Principal Imports—Merchandise of all kinds, principally Provisions, Fruit, Grain and Flour, Hides and Skins, Meat, Oil and Fats, Rubber, Textile Materials, Tobacco, Wood and Wool.

Principal Exports—Manufactured Goods of all kinds.

Countries with which the Port principally trades—The Port of London trades with all parts of the world.

III.—SOURCE OF WATER SUPPLY.

(*a*) For the Port:—

In all the docks, except Tilbury, water is supplied by the Metropolitan Water Board. Tilbury Docks take water from the South Essex Water Company. The majority of wharves are supplied by the Public Water Companies within whose areas of distribution they are situated, but several have their own deep wells and some have no water available for ships, in which case any water required may be obtained from water boats.

(*b*) For Shipping:—

Ships usually obtain water from the shore supplies as indicated above, but where no water is available at the berth or if a ship is lying at moorings in the river, supplies are obtained from water boats.

(*c*) Number of water barges and their sanitary condition :—

There are twelve water boats working in the Port. All these boats must be registered annually with the Port of London Authority, and before a certificate is granted they must be inspected as to their fitness for navigation in the river and docks. The Port of London Authority notify the Port Health Authority when water boats are coming up for re-registration, and will not issue a certificate to any water boat until your Medical Officer has certified that it is fit for the carriage of drinking water. This arrangement has now worked quite smoothly for several years, and has enabled your Officers to get repairs and improvements carried out without difficulty.

Your Medical Officer proposes, during the coming year, to exercise a closer supervision over the quality and purity of the water supplied by the water boats, and to that end to take frequent periodic samples for chemical and bacteriological analysis.

IV.—PORT SANITARY REGULATIONS, 1933.

Circular No. 1745 of the Ministry of Health, dated 31st October, 1938, instructed that :—

> " Any permanent arrangements which have been fully described in previous Annual Reports and have not been altered may be omitted from the Report of 1938."

Since my predecessor, Dr. C. F. White, described in detail, in his Annual Report for 1937, the permanent arrangements in force under the above-mentioned Regulations, and since the arrangements have not been altered during the year, there is no need to repeat them in this Report.

Arrangements for Dealing with Declarations of Health.

These remain the same as described in the Report for 1937.

Boarding of Vessels on Arrival.

These remain the same as described in the Report for 1937, save that the new launch " Alfred Robertson " was brought into commission during the year.

This launch will normally be used by the Sanitary Inspector for the inspection of vessels in the Middle River District (Greenwich to Erith), but is so designed as to be suitable for use as a boarding launch, and will thus, to some extent, obviate the necessity of depending upon the assistance of H.M. Customs when the regular boarding launch, the " Howard Deighton," is out of commission.

The " Alfred Robertson " was built by Messrs. James Pollock, Sons, & Co., Ltd., of Faversham, to the plans and specifications prepared by your Chief Engineer, Mr. R. J. Roberts.

The hull is of steel and the dimensions are as follows : length over all, 54 ft. 9 in. ; breadth, 12 ft. ; depth mld., 6 ft. 6 in.

The engine is an 8L3 Gardner Diesel of 136 b.h.p., with Gleniffer reversing and reducing gear. The draught of the launch is about 4 ft. 6 in., and the speed about $9\frac{3}{4}$ knots.

The after cabin is fitted with locker seats arranged for the carrying of ambulance stretchers.

The crew quarters are situated forward, and are fitted with locker seats, folding cots and a portable folding table.

Notifications to the Authority of Inward Vessels requiring special Attention.

The arrangements described in detail in the Report for 1937 have been in operation throughout the year, and continue to work satisfactorily.

Mooring Stations designated under Article 10.

(*a*) Within the docks ; (*b*) Outside the Docks.

These remain as reported in detail last year. There has, so far, been no occasion to make use of them.

PARTICULARS OF ANY STANDING EXEMPTIONS FROM THE PROVISIONS OF ARTICLE 14.

None have been made save those described in the Report for the year 1937.

EXPERIENCE OF WORKING ARTICLE 16.

(1) Since ships are cleared in the River immediately on arrival, no difficulty has been experienced in preventing the embarkation or disembarkation of unauthorised persons.

(2) The arrangements for the surveillance of contacts have again been facilitated by the use of the " Business Reply Card " system, described in detail in the Report for 1937.

WHAT ARRANGEMENTS HAVE BEEN MADE FOR :—

(*a*) Premises and waiting rooms for medical examination ?

(*b*) Cleansing and disinfection of ships, persons and clothing, and other articles ?

(*c*) Premises for the temporary accommodation of persons for whom such accommodation is required for the purposes of the Regulations ?

(*d*) Hospital accommodation available for Plague, Cholera, Yellow Fever, Smallpox and other Infectious Diseases ?

The arrangements remain as described in the Report for the year 1937.

(*e*) Ambulance Transport.

The boarding launch " Howard Deighton," and the Upper River launch " Frederick Whittingham," have continued to give excellent service. The new launch " Alfred Robertson " was put in commission during May, and has been used principally for the routine inspection of ships lying in the Middle River District. The vessel is, however, capable of taking over the work of the boarding launch " Howard Deighton " when she is laid up for overhaul or is for any reason temporarily out of commission.

(*f*) Supervision of Contacts.

No changes have been made in the arrangements described in the Report for the year 1937.

ARRANGEMENTS FOR THE BACTERIOLOGICAL OR PATHOLOGICAL EXAMINATION OF RATS FOR PLAGUE.

ARRANGEMENTS MADE FOR OTHER BACTERIOLOGICAL OR PATHOLOGICAL EXAMINATIONS.

Both remain as reported in detail in 1937.

ARRANGEMENTS FOR THE DIAGNOSIS AND TREATMENT OF VENEREAL DISEASES AMONGST SAILORS.

The importance of the early and skilful treatment of Venereal Disease is such that no apology is made for repeating here, *in extenso*, the following information, which gives in detail the clinics and times of attendance at which skilled treatment, free of charge and under conditions of secrecy, can be obtained.

LONDON.

Seamen's Hospital, King William Street, Greenwich, S.E. 10.	Syphilis—Monday and Wednesday, 7 p.m. Gonorrhœa—Tuesday, 6 p.m. ; Friday, 7 p.m. (Merchant Seamen may attend at any other time.)
Miller General Hospital, Greenwich Road, Greenwich, S.E. 10.	Daily, 8 a.m. to 8 p.m.
Seamen's Hospital, Royal Albert Dock, E. 16.	Monday, Tuesday, Thursday, Friday, 9 a.m. to 6 p.m. ; Wednesday 9 a.m. to 2 p.m. ; Saturday, 9 a.m. to 12.30 p.m. (Merchant Seamen may attend at any other time.)
London Hospital (Whitechapel Clinic), Turner Street, Mile End, E. 1.	Daily, 8 a.m. to 9 p.m. ; Sunday, 10 a.m. to 1 p.m. and 4 p.m. to 7 p.m.

Guy's Hospital, St. Thomas Street, Borough, S.E. 1.	Daily, 9 a.m. to 8 p.m.
St. Thomas's Hospital, Westminster Bridge, S.E. 1.	Daily, 8 a.m. to 10 p.m.; Sunday, 10 a.m. to 12 noon.
St. Paul's Hospital, Endell Street, Covent Garden, W.C. 2.	Daily, 8 a.m. to 10 p.m.; Sunday, 10 a.m. to noon and 6 p.m. to 8 p.m.
St. Bartholomew's Hospital, 20, Golden Lane, E.C. 1.	Monday, 5 p.m. to 7 p.m.; Thursday, 12 noon to 2 p.m.
GRAVESEND.	
22, Cobham Street, Gravesend.	Tuesday, 11 a.m. to 12.45 p.m.; Thursday, 4.45 p.m. to 6.30 p.m.

The Sanitary Inspectors carry with them copies of this notice and leave one, in the appropriate language, on every ship they visit. By courtesy of the Port of London Authority this notice is also posted in all the latrines on the dock estate. It is the duty of the Sanitary Inspectors to see that the notices are in the languages of the seamen on board ships in the vicinity, and also that they are renewed when necessary.

PORT WELFARE.

The Port of London Health Authority continue to be represented on the Port Welfare Committee which was started in 1935 to promote the welfare of seamen ashore in the Port of London.

A great deal of valuable work on behalf of the seamen is carried out by the Mission to Seamen and other voluntary organisations, but there remains a wide field of welfare work which is outside their scope and, indeed, beyond their powers. It is in this field that the Port Welfare Committee hopes to be able to extend its activities.

ARRANGEMENTS FOR THE INTERMENT OF THE DEAD.

These remain the same as reported in detail in 1937.

TABLE C.

Cases of Infectious Sickness landed from Vessels.

Disease.	Number of Cases during the Year. Passengers.	Crew.	Number of Vessels concerned.	Average Number of Cases for previous 5 years.
Typhus Fever	—	—	—	0·2
Smallpox	1	—	1	—
Scarlet Fever	3	11	3	3·6
Diphtheria	—	7	3	4·8
Enteric Fever	2	8	6	12·8
Measles	18	5	8	15·6
German Measles	2	5	7	0·8
Erysipelas	—	4	4	0·6
Pulmonary Tuberculosis	41	22	49	90·4
Tuberculosis (other kinds)	1	—	1	2·0
Pneumonia	3	8	11	7·8
Influenza	—	—	—	5·4
Cerebro-spinal Meningitis	—	—	—	0·4
Dysentery	2	3	5	9·0
Malaria	3	21	19	12·4
Chickenpox	5	22	12	13·4
Mumps	4	3	6	4·8
Polio-myelitis	1	—	1	—

NOTE.—The following cases of infectious disease occurred on Training Ships moored in the Thames:—

Scarlet Fever 11. Pulmonary Tuberculosis 1.
Diphtheria 5. German Measles 1.

One case of Measles occurred on a Houseboat.

One case of Pneumonia occurred at The Cottage, Limehouse Basin.

TABLE D.

Cases of Infectious Sickness occurring on Vessels during the Voyage, but disposed of prior to arrival.

Disease.	Number of Cases during the Year. Passengers.	Crew.	Number of Vessels concerned.	Average Number of Cases for previous 5 years.
Cholera	—	1	1	0·2
Plague	—	—	—	—
Typhus Fever	—	—	—	0·2
Smallpox	—	2	2	5·4
Scarlet Fever	—	2	2	2·8
Diphtheria	—	2	2	3·4
Enteric Fever	9	17	22	12·4
Measles	16	9	18	20·0
German Measles	1	17	6	4·6
Erysipelas	—	—	—	1·2
Pulmonary Tuberculosis	10	2	12	31·4
Tuberculosis (other kinds)	1	1	2	0·6
Pneumonia	6	8	14	10·8
Influenza	16	25	6	37·4
Cerebro-spinal Meningitis	—	—	—	0·6
Dysentery	1	7	8	7·6
Malaria	3	46	16	33·8
Chickenpox	11	12	15	15·0
Mumps	8	5	12	7·2

SMALLPOX.

(1) On Thursday, 3rd March, 1938, the Boarding Medical Officer at Plymouth telephoned the Port of London Boarding Station at Gravesend to say that he had that morning seen a case of alleged Measles on board a ship returning from the Far East, that he had allowed the case to proceed to London but that he was not happy about it, he would like confirmation of the provisional diagnosis, and he suspected the possibility of Smallpox.

The development of the case since the time of examination at Plymouth and arrival at Gravesend was such that on inspection at the latter point it was obvious that the case was one of Smallpox.

He was a young Australian aged 20 years coming to join the Royal Air Force. He had not been vaccinated in infancy, and an attempt to vaccinate him before leaving Australia had been unsuccessful. He went ashore at Bombay on 12th February and visited the native city. On 24th February he was taken ill, and on 27th February the eruption appeared.

The patient was landed to Denton Hospital with his bedding and effects. His cabin companion and two native stewards who had attended him were taken to Denton for bathing and disinfection of their effects. All the passengers and crew were inspected and all those who did not appear to be protected were urged to be vaccinated, though it was too late to give assurance of protection. The names and addresses of the passengers and white crew were carefully checked, and arrangements were made to have the native crew inspected daily on the ship.

The whole of the tourist section of the ship was disinfected.

As the addresses of the passengers who landed at Marseilles and Plymouth were not known beyond the somewhat vague addresses given in the ship's passenger manifest, the Ministry of Health decided to appeal by radio broadcast and through the Press for such passengers to report to their local Medical Officers of Health at once.

All the addresses of the passengers and white crew landing in London were posted to the Medical Officers of Health of the districts of destination before 6.0 p.m. on the day of arrival of the ship.

The patient was very ill indeed, and it seemed almost impossible that he could live through the disease although, having a magnificent physique, he was making a great fight for it. He died suddenly at 5.0 p.m., on Monday, 7th March.

The greatest care was taken in the disposal of the body to prevent the spread of infection by the undertaker and the Port Health Staff who assisted him.

One of the London Port Health Authority's Boarding Medical Officers who saw the patient when the ship arrived, subsequently developed a very mild attack of modified Smallpox, and one other case occurred in Gravesend.

The disease in the case of the Medical Officer was not quite typical of Smallpox. The incubation period was very short, seven days instead of twelve ; and though some of the spots had the characteristics of the eruption of Smallpox, others had not. It was thought that the condition might have been due to vaccination, to inoculated Smallpox, or to Smallpox greatly modified by vaccination. The decision was finally in favour of the latter.

As regards the Gravesend case of Smallpox, the patient lived opposite to the engineer on duty on the boarding launch at the time the case was landed from the ship. The Engineer helped the patient on and off the stretcher, and also handled his bedding and effects, but he was dressed in a white boiler suit, and before he went home he stripped and bathed and his clothing was disinfected at Denton Hospital. The Engineer knew the Gravesend case, but had not seen him since Christmas. Two brothers of the patient did, however, visit the engineer shortly after he had handled the case.

This was very slender evidence on which to base the source of infection, but nothing more convincing could be ascertained.

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(2) On the 8th August the Ministry of Health reported having received the following telegram from Aden on the 4th August :—

> " Steamship —— bound Liverpool landed Aden 2nd August case proved mild modified Smallpox Stop Unprotected crew revaccinated against Smallpox. Porthealth."

It was ascertained that the vessel would be calling at London before proceeding to Liverpool.

On 20th August at 7.30 p.m., the vessel arrived at Gravsend, and was boarded by the Assistant Port Health Officer.

A native crew had been signed on in Calcutta on 12th July, all having been vaccinated on the preceding day (11th July).

The vessel had left Calcutta homeward bound on 15th July, calling at the following ports :—

> Colombo, 23rd July ; Aden, 2nd August ; Suez, 7th August ; and Port Said, 8th August.

On 25th July the patient, a native coal trimmer, reported sick with a profuse eruption on face, arms, body and legs, and later on his hands and feet. No history of prodromal symptoms was obtained, and in the absence of a doctor on board the precise distribution of the rash and its detailed character could not be obtained. The patient was isolated in the hospital cabin on 26th July. On 2nd August the vessel arrived at Aden, and the patient was seen by the Port Medical Officer, who removed him for observation with all his bedding and effects. On 4th August the vessel received a radio " Case proved mild modified Smallpox."

The patient had occupied a room with five other members of the crew. This room had been scrubbed out and thoroughly cleansed with lysol. The hospital had been fumigated with sulphur dioxide, the cot frame cleaned with lysol, and the cabin and fittings subsequently painted throughout.

On arrival of the vessel at Gravesend the European crew (12 in number) were personally interrogated, inspected, vaccinal state noted and their home addresses checked.

The native crew (58 in number) were all carefully examined, and no secondary case was discovered.

The circumstances and action taken in London, together with a list of the names and addresses of the crew, were forwarded for the information of the Medical Officer of Health of Liverpool, to which port the vessel proceeded on the 24th August.

The names and addresses of those members of the European crew who were proceeding to addresses outside of Liverpool were forwarded, with a brief history of the occurrence, to the Medical Officers of Health of the districts to which they were proceeding.

Daily contact with the ship was maintained during her stay in the Port of London. No other cases occurred.

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(3) On the 24th August the Ministry of Health reported having received the following telegram from Aden dated 19th August :—

> " Steamship —— bound Liverpool landed Aden to-day case modified Smallpox Stop Native crew recently protected Stop Officers revaccinated where necessary. Porthealth."

It was ascertained that the vessel would call at London before proceeding to Liverpool.

The vessel arrived at Gravesend at 6.30 a.m. on the 6th September, and was boarded by the Assistant Port Health Officer.

A new native crew (74) had been signed on in Calcutta on the 29th July, all of whom had been vaccinated or revaccinated on the previous day (28th July).

The vessel left Calcutta on the 1st August, calling at the following ports :—

Colombo, 10th August ; Aden, 18th and 19th August ; Suez, 23rd August ; Port Said, 24th August ; and London, 6th September.

On 17th July the patient, a native fireman, reported sick with a rash on his body and arms. He was at once isolated in a spare cabin, the cabin first being stripped of its furnishings, *i.e.*, cushions, carpets, curtains, mattresses, &c. The patient used his own bedding.

Seventeen days had elapsed since leaving Calcutta before the appearance of the rash on the patient, no prodromal symptoms were noticed. The patient himself first noticed the rash, and then felt ill. He was working in the stokehold up to the time of the appearance of the rash. The result of his vaccination in Calcutta on 28th July was not known.

On the arrival of the vessel at Aden on the 18th August the case was seen by the Port Medical Officer, who diagnosed " modified variola," and removed the patient to hospital ashore.

Five of the European crew who were unable to produce a certificate of vaccination within the previous twelve months were vaccinated at Aden on 18th August.

After the patient had been landed the cabin occupied by him was cleansed with strong lysol and entirely repainted. The patient's bedding and clothing were burned in the ship's furnace.

On arrival at Gravesend each member of the native crew was carefully examined. The members of the European crew (15) were personally interrogated, examined, their vaccinal state noted and home addresses checked.

The circumstances and action taken in London, together with a list of the names and addresses of the crew, were forwarded for the information of the Medical Officer of Health for Liverpool, to which port the vessel proceeded on 9th September.

The names and addresses of those members of the European crew who were proceeding to addresses outside of Liverpool were forwarded, with a brief history of the occurrence, to the Medical Officers of Health of the districts to which they were proceeding.

Daily contact with the ship was maintained during her stay in the Port of London No other cases occurred.

DYSENTERY.

A vessel arrived off Gravesend at 11 p.m. on the 28th February, the ports of call for the round voyage being :—

Port	*Date of arrival.*	*Date of Departure.*
Antwerp	4/12/37	5/12/37
Rotterdam	6/12/37	7/12/37
Hamburg	9/12/37	11/12/37
London	13/12/37	17/12/37
Las Palmas	23/12/37	23/12/37
Ascension	30/12/37	30/12/37
St. Helena	1/ 1/38	2/ 1/38
Capetown	8/ 1/38	10/ 1/38
Mussel Bay	11/ 1/38	11/ 1/38
Port Elizabeth	12/ 1/38	12/ 1/38
East London	13/ 1/38	14/ 1/38
Durban	15/ 1/38	17/ 1/38
Laurenco Marques	18/ 1/38	19/ 1/38
Beira	21/ 1/38	23/ 1/38
Dar-es-Salaam	27/ 1/38	28/ 1/38
Zanzibar	28/ 1/38	29/ 1/38
Tanga	29/ 1/38	30/ 1/38
Mombasa	31/ 1/38	2/ 2/38
Aden	8/ 2/38	8/ 2/38
Port Sudan	10/ 2/38	10/ 2/38
Suez	13/ 2/38	13/ 2/38
Port Said	14/ 2/38	14/ 2/38
Genoa	19/ 2/38	20/ 2/38
Marseilles	21/ 2/38	22/ 2/38
Gibraltar	24/ 2/38	24/ 2/38
Tangier	24/ 2/38	24/ 2/38

In view of Press reports in regard to this vessel, two Assistant Port Health Officers, a Food Inspector, a Sanitary Inspector and two of the clerical staff boarded the ship when she arrived off Gravesend. The staff remained on board all night and continued their investigations on 1st March.

Every person on board was seen and the addresses of their destinations obtained. At the same time they were interrogated as to whether they had suffered from any symptoms of gastro-intestinal disturbance during the voyage.

The ship's company consisted of :—

First-class Passengers	84
Tourist Passengers	84
Crew	241
Total	409 souls.

Of these, a total of 83 persons—23 first-class passengers, 9 tourist passengers, 41 stewards, 3 deck department and 7 engine room department—reported that they had had some diarrhœa or vomiting, or both, during the voyage. None of them was seriously ill and all had recovered on arrival in London.

Five deaths occurred during the voyage (1 passenger and 4 crew ratings), but none of them appeared to have been associated with the outbreak of gastro-enteritis.

Three of the crew ratings were reported from Port Sudan to have died from malignant malaria, and this diagnosis must be accepted. The fourth crew rating was reported to have died on board from dysentery and liver abscess, but in view of the reports on the cases landed at Port Sudan it is possible that he, too, suffered from malignant malaria.

The passenger was reported to have died from malignant endocarditis and septicæmia, and this diagnosis was accepted.

The cause of the gastro-enteritis may have been due to food poisoning or a mild form of dysentery. A search was made for possible carriers of dysentery and food poisoning organisms, but in all the cases examined both blood and fæces were negative.

Two samples of sterilised milk, one taken on board in London on 17th December, 1937, and oue at Durban on the 15th January, 1938, were examined and found to be bacteriologically satisfactory.

Samples were drawn of the ship's water, and the Bacteriologist commented as follows :—

(1) Water from fore peak tank through pump in firemen's washroom (said to be London water)—" A bad water and not fit for drinking purposes."

(2) Water from tap on boat deck after passing through filter No. 8 D.B. (Genoa water)—" The bacterial count is too high for this water to be passed as fit for drinking purposes."

(3) Water taken direct from No. 4 Starboard D.B., not filtered (Laurenco Marques water)—" Poor quality water. The bacterial count is high, but the absence of pathogenic organisms such as B. Coli, Streptococci, &c., would allow of it being passed for drinking purposes."

(4) Water taken from ice tap at gun port door after passing through filter No. 8 D.B.—" The bacterial count is too high to allow of this water being passed as fit for drinking purposes."

In spite of these unsatisfactory results, the water was not thought to be responsible for the outbreak. It is notable that there were comparatively few cases amongst the tourist passengers and the deck and engine room departments, the principal incidence being amongst the catering department and the first-class passengers.

As a precaution, however, all the drinking water tanks were emptied and cleansed and refilled while the vessel was in dock.

The difficulties of investigating on 1st March an outbreak of gastro-enteritis which apparently began on the 19th December, 1937, and finished about the 16th February, 1938, will be appreciated, but one may assume that the sickness was probably a mild type of dysentery which spread amongst the catering department and from them to the first-class passengers *via* the foodstuffs, particularly such things as galantines, ham in aspic, and other prepared foods which, it was noted, appeared very regularly on the menu for the first-class saloon during the hot weather.

It was suggested to the shipping company that it should be a rule that any member of the catering staff who had diarrhœa should be put into hospital until he had recovered, and that the importance of thoroughly washing the hands after defæcation or urination be impressed upon all members of the catering staff.

OUTBREAK OF FOOD POISONING.

An oil tanker arrived in the Port of London on Saturday, the 26th November, from Abadan, via the Suez Canal.

The Assistant Port Health Officer who boarded her found four cases of diarrhœa with colic and fever (one case with a temperature of 104 deg.), and promptly sent them to the Authority's Isolation Hospital at Denton.

Further examination of the crew revealed a number of other cases with the same symptoms in varying degree, and finally 17 further cases were removed to hospital, making a total of 21 cases in all.

The first case took ill three days before arrival with diarrhœa, colicky pains, headache and feverishness. The other cases suffering from the same train of symptoms took ill on the 26th and 27th November.

As to the possible cause of the outbreak, the ship took on fresh vegetables (lettuce and tomatoes) at Port Said on the 12th November, and they were consumed daily until the 19th November.

Water was taken in at Birkenhead, Port Said, Abadan and again at Port Said, all tanks being " topped up " on each occasion.

An inspection of the vessel on its arrival in London revealed the refrigerating chamber in a dirty condition, the temperature on opening the door being 40 deg. F. Some of the food inside, consisting of liver and mutton, was found in semi-thawed condition, mouldy, and the liver slightly affected with distoma.

The decision to isolate the cases in hospital was due to the fact that the date of onset and the date of the first consumption of fresh vegetables taken on at Port Said coincided approximately with the incubation period of Enteric Fever.

A letter was addressed to the owners of the vessel calling their attention to the conditions on board.

All the patients' bedding and effects were removed to Denton Hospital for steam disinfection, and the necessary disinfection on board the vessel carried out.

The vessel sailed from London on 28th November bound for Jarrow, and the Tyne Port Health Authority was advised of the circumstances.

CASES TREATED IN THE AUTHORITY'S PORT ISOLATION HOSPITAL AT DENTON.

I am indebted to Dr. Hugh Willoughby, Acting Deputy Medical Officer of Health for the following report on the cases treated at Denton Hospital during the year 1938 :—

" One hundred and ninety-nine patients were admitted to Denton Hospital during 1938, this being the greatest number in the recent history of the hospital.

" The following table gives the total admissions for the last ten years :—

Year	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Total patients	86	56	49	53	53	56	52	66	115	199

" Apart from 25 cases of minor importance—mostly skin diseases—admitted for observation and diagnosis, the diseases treated, and the number suffering from each infection were as shown in the following table :—

Disease.	*No.*	*Remarks.*
Smallpox	2	1 fatal.
Chickenpox	28	
Typhoid Fever	13	1 fatal.
Diphtheria	5	
Measles	28	3 fatal from Intercurrent Broncho-pneumonia (infants).
German Measles	7	
Scarlet Fever	14	1 had Chickenpox also.
Mumps	4	
Erysipelas	1	
Pulmonary Tuberculosis	2	
Dysentery	22	2 found to have Malaria also.
Malaria	16	1 Blackwater fever included.
Tonsillitis	29	1 fatal. Cardiac failure and extreme toxæmia.
Pneumonia	2	
Kala Azar	1	
Miscellaneous	25	Skin Diseases, &c.

" Of the above cases the fatal case of smallpox will be remembered for the intensity of the infection, the eruption becoming rapidly confluent, followed by his death 3½ days later.

" The high number of tonsillitis, scarlet fever and dysentery cases are partly accounted for by a small epidemic in training ships in the case of the first two named, and by an outbreak of acute food poisoning in a tanker in the last named.

" One case of malaria was admitted with Blackwater Fever and by means of rapid alkalinisation made a quick and uneventful recovery. This patient was admitted in July, and was grateful enough to report at monthly intervals, informing us of his continued good health.

" He was still well and back at work as recently as December, 1938.

" The case of Kala Azar was of unusual interest. The patient was a member of the International Brigade fighting in South-East Spain, who deserted after being wounded, and found his way to England for repatriation to Canada.

He was admitted as a suspected case of Typhoid Fever, but after close observation and exhaustive tests over several days, showed typical signs of Kala Azar, which, though known in Spain, is so rare as to be quite exceptional. The patient was transferred to the Hospital for Tropical Diseases for treatment and post-graduate teaching purposes, and later returned to Canada quite recovered.

"I should like to express my thanks to our Consulting Physician, Dr. James Crawford, and our Consulting Surgeon, Mr. J. Dawson Hartley, for their ready assistance and advice on several occasions during the year, and to Dr. P. Manson Bahr, of the Hospital for Tropical Diseases, W.C. 1, and Mr. S. Levy, of the Seamen's Hospital, Tilbury, who so readily co-operated in accepting the transfer of tropical and surgical cases respectively for special and urgent treatment."

V.—MEASURES AGAINST RODENTS.

The routine measures remain as described in the Report for 1937. The results shown in Tables "E," "F," "G" and "H" do not call for special comment. The following incident is, however, recorded as affording special interest :—

A Case of Excessive Mortality among a heavy Rat Population.

A vessel left Port Adelaide fully loaded with grain and flour in sacks on 2nd April.

Her voyage continued as follows :—Banbury, 8th to 10th April ; Mauritius, 30th April, and Durban, 8th to 11th May.

On the 22nd May, while at sea, the vessel broke her main crankshaft, and she drifted until 27th May, when temporary repairs were effected. On 6th June she arrived at Lagos, leaving on 16th June in tow of a Dutch tug. Her voyage from then on was as follows :—Dakar, 7th and 8th July ; Madeira, 20th and 21st July ; Gravesend, 3rd August ; Bellamy's Wharf, Lower Pool, 4th August.

On opening the hatches at Bellamy's Wharf on the 5th August, the Chief Officer reported by telephone the finding of four dead rats on top of the cargo, and that live rats had been seen running about.

The four dead rats recovered, one each from Nos. 1, 2, 3 and 4 holds, were forthwith sent to Seamen's Hospital for bacteriological examination. Later in the day it was reported that these rats on examination were found to be negative for plague.

On the following day, August 6th, two dead rats were sent for examination and found to be negative.

The vessel continued discharge on Monday, 8th August, and pronounced evidence of rat infestation was observed throughout the holds.

On investigation it was found that the vessel had been fumigated by Hydrogen Cyanide at Barry on the 25th October, 1937, and a Deratisation Certificate issued to that effect.

This certificate had been extended for one month on 8th May at Durban to enable the vessel to reach this country. At Lagos, on the 13th June, a further two months' extension had been given owing to the delay caused by the breakdown of the crankshaft.

A rat-catcher was employed on board during the discharge of cargo and immediately on completion of the discharge, on 10th August, the vessel was towed to Gravesend Buoys, where a complete Hydrogen Cyanide fumigation was carried out on the 12th August.

A summary of the rats found and destroyed is as follows :—

Found Dead - -	59	(30 of these were thrown overboard.)
Trapped - -	10	
Fumigation - -	102	
Total - -	171	

Twenty-four rats were submitted for bacteriological examination, of which 23 were found to be negative for plague. One rat was too decomposed to be examinable.

Rats Destroyed during 1938.

TABLE E.

(1) On Vessels.

Number of	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year
Black Rats	87	88	58	77	61	46	96	63	111	81	117	65	950
Brown Rats	nil	nil	nil	2	nil	3	nil	nil	4	nil	1	1	11
Species not Recorded ...	330	225	207	199	103	322	277	256	189	141	145	168	2,562
Rats examined	87	88	58	79	61	49	96	63	115	81	118	66	961
Rats infected with Plague ...	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil

See also Appendices XXIII. and XXIV.

TABLE F.

(2) In Docks, Quays, Wharves and Warehouses.

Number of	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total in Year.
Black Rats	57	55	59	43	90	37	45	55	73	84	106	65	769
Brown Rats	30	30	43	59	67	31	61	88	71	54	55	55	644
Species not Recorded	299	243	219	394	253	226	271	188	245	329	249	385	3,301
Rats examined ...	87	85	102	102	157	68	106	143	144	138	161	120	1,413
Rats infected with Plague	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil	nil

RATS EXAMINED—Vessels, Docks, Quays, &c. 2,374

TABLE G.

Measures of Rat Destruction on Plague "Infected" or "Suspected" Vessels or Vessels from Plague Infected Ports arriving in the Port during the Year.

Total Number of such Vessels arriving.	Number of such Vessels fumigated by SO_2.	Number of Rats Killed.	Number of such Vessels fumigated by HCN.	Number of Rats Killed.	Number of such Vessels on which Trapping, Poisoning, &c., were employed.	Number of Rats Killed.	Number of such Vessels on which measures of Rat Destruction were not carried out
1.	2.	3.	4.	5.	6	7.	8.
2,532	32	381	81	692 (15 mice.)	1,202	1,997	1,330

TABLE H.

Deratisation Certificates and Deratisation Exemption Certificates issued during the Year.

Net Tonnage.	Number of Ships.	Number of Deratisation Certificates Issued. After Fumigation with HCN.	Sulphur.	HCN. and Sulphur.	After Trapping, Poisoning, &c.	Total.	Number of Deratisation Exemption Certificates issued.	Total Certificates issued.
1.	2.	3.	4.	5.	6.	7.	8.	9.
Ships up to 300 tons	295	—	—	—	—	—	295	295
„ from 301 „ to 1,000 tons	283	3	1	—	—	4	279	283
„ „ 1,001 „ „ 3,000 „	198	8	11	—	—	19	179	188
„ „ 3,001 „ „ 10,000 „	311	52	22	—	—	74	237	311
„ over 10,000 „	49	29	—	—	—	29	20	49
Totals	1,136	92	34	—	—	126	1,010	1,136

VI.—HYGIENE OF CREWS' SPACES.

TABLE J.—Classification of Nuisances.

Nationality of Vessels.	Number inspected during the year.	Defects of original construction.	Structural defects through wear and tear.	Dirt, Vermin and other conditions prejudicial to health.
British ...	8,544	2,032	1,340	1,327

For details of defects see Appendix XXVII.

CREW ACCOMMODATION.

The Port Health Authority has continued to enjoy a close and constructive collaboration with the Inspectors of the Board of Trade; a collaboration which is quite essential if the objects in view, the general improvement in the living conditions of crews, are to be brought about.

VII.—FOOD INSPECTION.

Public Health (Imported Food) Regulations, 1937.

These Regulations came into force on the 1st April, 1938, and the Minister of Health has now issued a number of Circulars (particulars of which are given below) containing in the Schedules thereto descriptions of certain certificates, labels, marks and stamps which are to be recognised as " Official Certificates " for the purposes of the Regulations.

The definition of " Official Certificate " under the Regulations is :—

" A certificate, label, mark, stamp or other voucher which is affixed by a competent authority to any oversea meat or meat product or to a package containing such meat or meat product, and is for the time being recognised by the Minister as showing :—

" (*a*) that the meat to which it relates or the meat from which the meat product to which it relates was prepared, was derived from animals inspected ante and post mortem, and passed in accordance with criteria satisfactory to the Minister ; and

" (*b*) that all necessary precautions for the prevention of danger to public health were taken in the dressing or preparing and packing of the meat or meat product."

Under the Regulations of 1925 and 1933 the importation of certain classes of meat was prohibited by the First Schedule and official certificates were required with classes of meat specified in the Second Schedule as " Conditionally Admissible Meat." Other classes of meat, including the whole carcase (with the head attached), bacon, ham and similarly prepared pig meat, sausages and other products prepared or manufactured from meat, sausage casings, oleo oil, oleo stearine and premier jus, have been admissible without the Official Certificate.

The new Regulations remove the exemption given to these articles, and the effect of the Regulations will be not only to prohibit the importation of the kinds of meat specified in the First Schedule, but also of any meat or meat product as defined in the Regulations, unless it is accompanied by an Official Certificate.

The Schedules are as follows :—

FIRST SCHEDULE.

Prohibited Meat.

(*a*) Scrapmeat, that is to say meat which consists of scraps, trimmings or other pieces (whether with or without bone) of such shape or in such condition as to afford insufficient means of identification with a definite part of a carcase.

(*b*) Meat comprising the wall of the thorax or abdomen from which there has been detached any part of the pleura or (except in the case of meat derived from a pig) the peritoneum, other than a part necessarily removed in preparing the meat.

(*c*) Meat from which a lymphatic gland, except a gland necessarily removed in preparing the meat, has been taken out.

(*d*) The head of an animal without the submaxilliary gland.

SECOND SCHEDULE.

MEAT PRODUCTS.

(*a*) Meat packed in air-tight containers.

(*b*) Cooked or dried meats.

(*c*) Intestines and other parts prepared in the form of sausage casings.

(*d*) Rendered animal fats except in margarine.

(*e*) Pies, sausages and other prepared or manufactured articles of food containing any meat or cooked or dried meat other than fat.

Circular No. 1,639, dated 11th August, 1937; Circular No. 1,675, dated 24th March, 1938; Circular No. 1,707, dated 10th June, 1938; Circular No. 1,719, dated 25th July, 1938; Circular No. 1,727, dated 15th August, 1938; and Circular No. 1,741, dated 17th October, 1938; authorise the recognition of the Official Certificates of the following Governments*:—

America, United States of.
Argentine, Republic of.
Australia, Commonwealth of.
Bechuanaland Protectorate.
Belgium, Kingdom of.
Brazil, United States of.
Bulgaria, Kingdom of.
Canada, Dominion of.
Chili, Republic of.
Czechoslovakia, Republic of.
Danzig, The Senate of the Free City of.
Denmark, Kingdom of.
Estonia, Republic of.
Finland, Republic of.
France, Republic of.
French West Africa, Government of.
German Reich.
Hong Kong, Government of.
Hungary, Kingdom of.
Iceland, Kingdom of.
Italy, Government of.
Kenya Colony, Government of.
Latvia, Republic of.
Lithuania, Republic of.
Madagascar and Dependencies, Government of.
Netherlands, Kingdom of.
New Zealand, Dominion of.
Norway, Kingdom of.
Paraguay, Government of.
Poland, Republic of.
Roumania, Kingdom of.
Shanghai International Settlement.
South Africa, Union of.
South West Africa, Territory of.
Southern Rhodesia, Colony of.
Sweden, Kingdom of.
Switzerland, Confederation of.
Uruguay, Republic of.
Yugoslavia, Kingdom of.

In accordance with Article 11 (4) of the above-mentioned Regulations, Notices were served for the exportation of the following material :—

Description and Quantity of Meats, Fats, &c.	Where from.	Number of Notices served.
6,340 casks, &c.	New Zealand	103
1,941 „	Australia	32
4 „	South America	1
590 „	Other countries	69

The short period of the year 1938 following the coming into force of the Regulations does not permit judgment of their efficiency and sufficiency, and a full account and review of the working of the Regulations must remain over for next year's Report.

These Regulations do not remove a serious defect in the administrative machinery for the control of imported foods entering the Port of London. Contrary to the view widely held by those who might be better acquainted with the hierarchy of the Port of London, the control of imported foodstuffs is not vested in a single Authority, but in the Port of London Health Authority and five Riparian Authorities, the latter having obtained, at various times, by Orders made by the Minister of Health, powers to administer the Imported Food Regulations.

This purely administrative division of control does not tend to promote efficiency, and it is hoped that some change will take place in the near future.

PUBLIC HEALTH (PRESERVATIVES, &C., IN FOOD) REGULATIONS, 1925-1927.

Conversations have been taking place for some time past between Port Medical Officers of Health, in which Dr. White has taken a leading part, and Officers of the Ministry of Health, with regard to the control, and eventually the elimination, of copper contamination of foodstuffs.

Thus a discussion on copper in tomato purée and other tomato concentrates was held at the Ministry of Health on the 21st January, 1938. It was then decided that copper in tomato purée was traceable to three sources :—

(*a*) Copper naturally present in tomatoes ;

(*b*) Copper introduced from sprays and dusting powders ;

(*c*) Copper derived from processing vessels in the manufacture of purée.

* Received up to the 31st December, 1938.

Source (*a*) accounted for the presence of 1·0 parts per million ;

Source (*b*) accounted for the presence of 0·25 parts per million ;

Therefore sources (*a*) and (*b*) accounted for the presence of 1·25 parts per million, or 18·7 parts per million dry weight.

It was therefore agreed that 20 parts per million dry weight should be a reasonable content in respect of copper present naturally or derived from sprays.

With regard to source (*c*) it was decided that from 1st January, 1939, consignments containing more than 50 parts of copper per million of dried total solids should be rejected, but that eventually a further reduction in this amount would be required.

Trade Representatives and Dr. Macara, of the British Food Manufacturers' Research Association, called to discuss the matter with Dr. White.

Their suggestions were :—

(*a*) That until 31st December, 1939, the maximum permissible amount of copper should be from 80-100 parts per million (dry weight).

(*b*) That from 1st January, 1940, a new standard, possibly lower than 50 parts per million (dry weight) should be called for.

Results of sampling since the date of that Conference showed :—

Date. 1938.	Sample.	Copper, parts per million (dry weight).	
Feb. 11	Tomato purée (Hungarian)	8	
„ 24	Tomato paste	64	
„ 25	Tomato purée (Hungarian)	2	
Mar. 7	Tomato paste (Italian)	110	
„ 10	Tomato purée (Hungarian)	14	
„ 24	Tomato purée	120	
„ 28	Tomato purée	85	
„ 28	Tomato purée	6	
April 8	Tomato purée	78·8	Both from same consignment.
„ 13	Tomato purée	78·8	
„ 13	Tomato purée	31·4	
„ 20	Tomato purée	90	
July 15	Tomato paste	72	
„ 27	Tomato sauce	139	
„ 27	Tomato sauce	41	
Aug. 17	Tomato purée (Hungarian)	27	
„ 17	Tomato paste	28	

A new element of contamination has, however, been discovered by recent analyses of foodstuffs other than tomato purée for copper, thus :—

Date. 1938.	Sample.	Copper, parts per million (dry weight).	
Feb. 28	Gherkins	138	
Mar. 3	Runner beans	450	
May 20	Brisling in tomato	5	
June 11	Drained cherries	4·8	
Aug. 4	Drained cherries	4·6	
„ 22	Beans	6	
„ 29	Spinach	16	(Zinc 285 p.p.m.)
Sept. 2	Canned celery	80	
„ 2	Lettuce hearts	185	
„ 13	Spinach	23	(Zinc 15 p.p.m.)
„ 13	Spinach	67	(Zinc 8 p.p.m.)
„ 30	Haricot beans	383	
Oct. 4	Haricot beans (3 tins)	678 average	

This new element of contamination has as its object the fixation of the chlorophyll by copper in green vegetables, thus producing a bright, fresh colour. In the case of the runner beans samples examined on the 10th March and 4th October, the copper content clearly showed added copper and the probable explanation of the arrival of the consignments in this country with so much copper was due to an error in consignment ; the tins in question were intended for export to countries which permit added copper.

The consignment of the 2nd September of canned celery and the lettuce hearts of the same date, showed an unexpected amount of copper, but it is suggested that these vegetables, from the nature of their growth and shape, are particularly prone to catch copper from spraying—possibly they are grown in drills between vines or other fruiting bushes that must be sprayed—since it is clear that there is little, if any, advantage in adding copper to lettuce hearts and, *a fortiori*, to a celery stick, which should be white, or nearly white, in colour.

In conclusion, it is believed that the situation has improved very materially since the previous discussion. It is known that a number of firms have reconstructed their processing plants at great expense in order to render them " copper proof," and that the practice of repeated sampling of consignments entering this country, a very rich market for this kind of produce, will eventually have the effect of forcing producers to render their foodstuffs free from copper contamination.

The green vegetable trade will want watching, and it is suggested that since there is no question here of concentration, as in the case of tomato purée, the criterion of copper content should be particularly strict and should not exceed, even for cooked green vegetables such as beans, spinach, etc., 15 parts per million, unless reasonable cause can be shown.

A further conference between Port Medical Officers of Health and Officers of the Ministry of Health took place at the Ministry on the 19th October, 1938, at which it was agreed that the toleration of not more than 100 parts per million of copper in the dried total solids should be allowed from the 1st January, 1939, to the 1st January, 1940, and that meanwhile where the dry total solids were found to contain between 50 to 100 parts per million, the Port Authorities should inform the importers and warn them that, after the 1st January, 1940, such goods would be liable to be refused admission.

It was, nevertheless, considered desirable to collect further data during 1939 with a view to considering the appropriateness of the limit of 50 parts per million of copper which for the present would be adhered to. Results might be considered at a future Conference if any modification of the adopted arrangement was found necessary and it was suggested that particulars should be noted of the exact kind of sample, of the Trade designation and the results given of the copper content on the dry basis.

Acting on these decisions your Medical Officer sent the following circular to all merchants and importers of tomato purée and other tomato concentrates :—

" Dear Sirs,

" COPPER IN CANNED TOMATOES AND TOMATO PRODUCTS.

" At a Conference of Officers of the Ministry of Health and Port Medical Officers of Health, held at the Ministry in October last, it was decided that a tolerance of not more than 100 parts per million of copper in the dried total solids of canned tomatoes and tomato products should be allowed from the 1st January, 1939, until the 1st January, 1940.

" Meanwhile, where the dried total solids were found to contain between 50 and 100 parts per million, importers should be so informed and warned that, after the 1st January, 1940, such goods would be liable to be refused admission, and that the standard of 50 parts per million in the dried total solids would be enforced on and after the 1st January, 1940.

" Consequently it will be the policy of this Authority to continue the careful examination of consignments entering the Port of London, and particulars will continue to be noted of the precise nature and type of the material from which samples are taken, with the trade designation and the results of the copper content given on the dry basis.

" Yours faithfully,

" (Signed) M. T. MORGAN,

" *Medical Officer of Health, Port of London.*"

An examination of the results of analyses of tomatoes and tomato concentrates given on pages 35-42 shows that in only four instances during the year was it found necessary to reject consignments owing to an excessive copper content, and it may here be said that, at the time of writing this Report, the results for the early part of 1939 are even more satisfactory.

Caseous Lymphadenitis.—During the year the proportion of carcases of imported mutton examined for *Caseous Lymphadenitis*, irrespective of the country of origin, remained at 5 per cent., and that for pieces of mutton at 100 per cent.

The results of examination during the year of mutton and lamb, weighing 43 lbs. and over, from Australia, New Zealand, South America and Iceland, were as follows :—

Where from.	Carcases examined.	Carcases found to be diseased.	Carcases found to have Lymphatic Glands missing.
Australia	5,947	8	—
New Zealand ...	11,232	3	—
South America ...	9,540	8	—
Iceland	63	—	—
Totals	26,782	19	—

	Percentage condemned.
From Australia...	0·13
,, New Zealand	0·03
,, South America	0·08
,, Iceland	Nil

Pig Carcases.—A careful examination was made of a percentage of pig carcases arriving in the area of the Port Health Authority, the number of carcases examined being 2,986. Four carcases were found to be diseased.

Actinobacillosis in Ox Tongues.—A percentage examination was made of every consignment of frozen ox tongues arriving in the area of the Port Health Authority. Two hundred and eighty-seven consignments were put into dock store, where a careful examination was made by your Officers of 13,085 tongues, and 105 were found affected with *Actinobacillosis*, a percentage of 0·72.

Action taken under the Public Health (Imported Food) Regulations, 1937, resulted in 7,508 tons 9 cwt. 0 qrs. 18 lb. of unsound food being destroyed or disposed of for purposes other than human consumption.

Disposal of Condemned Foods :—

	Tons.	cwts.	qrs.	lbs.
Boiling Down (recovery of Fats, &c.)	141	0	3	13
Cattle and Poultry Foods	356	3	1	18
Refining	3,637	1	1	8
Exportation	403	2	0	7
Soap-making	35	17	0	0
Removed to other districts	14	10	0	0
Reconditioning	37	8	3	18
Technical purposes	—	11	3	7
Distillation	9	17	2	20
Destroyed—Buried	2,835	8	0	11
,, —Burnt	37	8	0	0
Total weight	7,508	9	0	18

Foodstuff Condemned :—

Dock.	Quantity. Tons.	cwts.	qrs.	lbs.	No. of seizures.
Royal Albert Dock	360	16	2	20	263
Royal Victoria Dock	690	9	3	15	313
King George V. Dock	89	10	1	7	149
East India Dock	272	11	1	4	62
West India Dock	5,256	19	2	8	256
Millwall Dock	443	19	3	2	78
Surrey Commercial Dock	28	8	3	17	96
London Dock	85	2	0	11	190
St. Katharine Dock	74	7	2	16	8
Regent's Canal Dock	164	18	3	18	47
Tilbury Dock	41	4	0	12	140
Total weight	7,508	9	0	18	1,602

The approximate weight of goods condemned and the number of detentions and seizures made annually during the last ten years were as follows :—

Year.	Approximate weight. Tons.	cwts.	qrs.	lbs.	No. of seizures.
1929	1,743	5	3	19	1,569
1930	2,572	10	3	1	1,574
1931	1,408	8	1	17	1,375
1932	2,654	13	1	16	1,593
1933	1,303	17	2	23	1,359
1934	1,825	14	2	10	1,567
1935	2,368	13	3	20	1,454
1936	3,288	14	0	26	1,588
1937	4,776	6	3	1	1,545
1938	7,508	9	0	18	1,602

Foodstuffs disposed of as unfit for human consumption :—

	Tons.	cwts.	qrs.	lbs.
MUTTON AND LAMB—1,855 carcases, parts ex 1,360 carcases and 10 bags	35	19	3	27
BEEF—928 hinds, crops, &c., parts ex 217 hinds, crops, &c., 235 bags and a quantity of trimmings	78	19	3	12
BACON—2 fores	—	—	1	12
PORK—199 carcases and parts of 304 ...	10	17	3	15
POULTRY—5 cases and 107 loose chickens ...	—	12	1	19
VEAL—6 bags and parts of 7	—	7	2	6
HAM—1 case and 2 hams	—	1	0	4
MEAT PRODUCTS—6 cases	1	0	1	12
Total weight	127	19	1	23

MEATS (Tinned) :—

	Tons.	cwts.	qrs.	lbs.
Ox tongues—3 cases, 26 tins	—	3	1	14
Pork—4 cases, 2 tins	—	2	0	6
Veal—8 cases	—	2	2	0
Hams—24 packages, 100 tins	1	14	3	27
Sausage—1 tin	—	—	—	12
Total weight	2	3	0	3

FATS :—

	Tons.	cwts.	qrs.	lbs.
Tallow and fat	2	1	1	4
Suet—ex 2 cases	—	—	1	1
Total weight	2	1	2	5

OFFAL :—

	Tons.	cwts.	qrs.	lbs.
Ox tongues—196 diseased, 4 bags	1	7	2	3
Ox cheeks—1 bag and ex 1	—	—	2	16
Ox skirts—2 bags and ex 1	—	2	1	27
Ox hearts—14 bags and ex 19, 290 loose	1	3	2	26
Ox livers—101 bags, &c., ex 57 bags, 45 loose	3	4	3	5
Ox tails—ex 8 bags and 17 loose	—	2	0	18
Ox kidneys—26 packages and ex 7	—	6	3	20
Sheep kidneys—6 boxes	—	—	2	0
Sheep hearts—1 bag	—	—	1	19
Tripe—22 tripes and trimmings	—	3	1	5
Calf tongues—10 bags	—	7	2	25
Calf sweetbreads—28 tins and ex 32	—	1	1	1
Calf kidneys—5 bags and quantity	—	1	3	12
Lamb hearts—60 bags and 780 loose	—	16	3	27
Lamb livers—100 packages and ex 10	1	2	1	19
Lamb tongues—1 bag	—	1	0	0
Lamb sweetbreads—23 packages	—	6	3	4
Pig hearts—52 hearts	—	—	—	26
Pig kidneys—1 box	—	—	1	0
Pig heads—1 head	—	—	—	12
Casings—20 casks	4	1	2	27
Total weight	13	12	3	12

FISH :—

	Tons.	cwts.	qrs.	lbs.
Anchovies—4 cases, 12 tins	—	4	1	19
Lobster—11 cases	—	5	3	12
Sardines—17 cases, 13 tins	—	14	2	11
Various—156 cases, 79 tins	2	18	2	13
Fresh fish—3 cases	—	5	3	16
Bottled fish—1 case	—	—	1	0
Total weight	4	9	2	15

FRUIT :—

	Tons.	cwts.	qrs.	lbs.
Cherries—55 boxes	—	9	1	20
Apples—700 cases	16	11	3	0
Bananas—22,965 stems and a quantity loose collected	1,140	8	1	1
Oranges—32,650 cases and a quantity loose collected	1,123	3	2	24
Currants—2 boxes	—	—	—	20
Citrons—1 cask	—	—	3	2
Grapes—517 bags, &c.	7	5	3	12
Lemons—422 cases	11	14	1	26
Mandarines—24 cases	—	4	2	0
Melons—718 cases, etc.	27	10	1	1
Pears—5,957 cases, etc.	133	7	1	19
Tomatoes—1,373 baskets, etc.	17	8	3	1
Dates—816 cases	21	15	2	5
Prunes—87 boxes	1	1	3	12
Raisins—33 packages, &c.	—	8	0	12
Sultanas—33 cases	—	3	2	5
Various—2,618 packages	82	8	3	8
Total weight	2,584	3	1	0

FRUIT (Tinned and Bottled) :—

	Tons.	cwts.	qrs.	lbs.
Tomatoes—42 cases, 1,472 tins	2	4	1	2
Olives—1 tin	—	—	—	5
Various—856 cases, 117 tins	10	10	0	21
Total weight	12	14	2	0

FRUIT PULP, &C. :—

	Tons.	cwts.	qrs.	lbs.
Apricot pulp—178 cases, 163 tins	14	14	3	15
Tomato purée—216 cases, 225 tins	9	0	2	12
Tomato paste—26 cases, 173 tins	1	8	0	2
Tomato pulp—253 cases, 912 tins	11	2	2	19
Tomato juice—24 tins	—	—	—	24
Tomato powder—14 cases	—	5	0	12
Tomato soup—29 cartons, 88 tins	—	8	1	27
Tomato sauce—1 case, 2 tins	—	—	3	26
Blackcurrant pulp—1 cask, 20 tins	—	6	2	24
Grapefruit pulp—1 cask	—	3	1	15
Greengage pulp—1 barrel	—	4	1	23
Damson pulp—14 tins	—	3	2	0
Strawberry pulp—1 barrel	—	2	0	18
Orange pulp—5 casks	1	1	3	10
Grape Juice—100 casks, 1 carton	35	0	2	0
Orange juice—1 carton, 88 tins, 9 jars	1	3	2	20
Grapefruit juice—2 barrels, 39 tins	—	16	0	26
Orange peel—18 casks	4	6	0	25
Lemon peel—2 pipes	1	0	0	0
Total weight	81	9	2	18

VEGETABLES :—

	Tons	cwts.	qrs.	lbs.
Cucumbers—27 casks	—	12	3	3
Gherkins—9 cases	—	6	2	22
Various—445 bags, &c.	14	4	1	24
Onions—3,626 bags	91	17	2	20
Beans—19 sacks and quantity	12	10	0	3
Peas—21 packages	1	15	3	0
Potatoes—272 bags	13	9	0	0
Total weight	134	16	1	16

VEGETABLES (Tinned) :—

	Tons.	cwts.	qrs.	lbs.
Peas—34 cartons	1	11	0	0
Beans—50 cases, 108 tins	2	16	2	22
Various—30 tins	—	—	1	10
Total weight	4	8	0	4

NUTS :—

	Tons.	cwts.	qrs.	lbs.
Almonds—804 cases	12	11	0	0
Groundnuts—8 bags	—	13	0	0
Cocoanuts (desiccated)—1 case	—	1	1	12
Walnuts, shelled—178 cases	4	9	0	17
Chestnuts—16 bags	1	1	0	0
Various—Quantity	—	17	3	8
Total weight	19	13	1	9

PROVISIONS :—

	Tons.	cwts.	qrs.	lbs.
Sugar sweepings—994 bags	102	8	0	26
Butter—1 case	—	1	0	14
Margarine—5 cases	—	6	0	11
Cheese—620 packages	15	10	0	21
Coffee—7 bags	—	14	0	0
Cocoa—5 casks	—	5	3	0
Chicory—1 bag	—	1	0	0
Marmalade—4 cases	—	1	1	13
Biscuits—3 cases, 1 carton, 5 tins	—	1	1	10
Sugar—27,915 bags	3,923	2	1	6
Tea—3 cases	—	9	0	14
Milk, Evaporated—714 tins	—	6	2	25
Cream—15 cartons	—	1	3	0
Milk, Condensed—87 cases, 41 tins	2	0	2	0
Cream, Condensed—190 cases	3	0	0	0
Eggs—4 cases	—	3	0	24
Total weight	4,048	12	2	24

GRAIN, FLOUR, &c. :—

	Tons.	cwts.	qrs.	lbs.
Wheat	307	15	3	7
Barley	93	6	3	2
Flour	—	1	1	0
Oats	3	7	1	24
Rice	18	5	0	23
Maize	18	6	2	18
Cereals	6	10	2	24
Total weight	447	13	3	14

PREPARED FOODS :—

	Tons.	cwts.	qrs.	lbs.
Macaroni—58 packages, etc.	1	13	1	10
Various—49 packages	—	19	1	4
Total weight	2	12	2	14

SUNDRIES :—

	Tons.	cwts.	qrs.	lbs.
Soya beans—quantity	1	6	3	4
Mustard—2 casks	—	3	1	8
Vinegar—24 bottles	—	—	2	0
Various—527 packages, etc.	20	7	2	17
Total weight	21	18	1	1

PUBLIC HEALTH (IMPORTED MILK) REGULATIONS, 1926.

No importation of milk requiring action under these Regulations was reported during the year.

PUBLIC HEALTH (PRESERVATIVES, &c., IN FOOD) REGULATIONS, 1925-1927.

For action under these Regulations, reference is directed to the list of foodstuffs submitted for analysis.

SHELLFISH.

Shellfish taken from the North side of the Estuary of the Thames between Shoeburyness and Holehaven are subject to an Order under the Public Health (Shellfish) Regulations, 1934, made by the Port of London Health Authority on the 11th April

1934, prohibiting the sale or exposure or distribution or offer for sale for human consumption of such shellfish unless they have been :—

(1) Subjected to a satisfactory process of cleansing at an establishment which is for the time being approved by the Minister of Health for the purpose ; or

(2) Relaid in pure water for such period and in such places as may from time to time be approved for the purpose by the said Port Health Authority ; or

(3) Subjected to a process of sterilisation by steam under pressure for at least six minutes in an apparatus which is for the time being approved by the said Port Health Authority.

Shellfish taken from such portion of the River Medway as is within the district of the Port Health Authority are controlled by the Medway (Shellfish) Regulations, 1935.

There are in addition shellfish layings in the River Roach and in Paglesham, Potton and Yokefleet Creeks, but there has, up to the present time, been no occasion to make an Order relative to these layings.

(3) SAMPLES OF FOOD EXAMINED DURING THE YEAR.

(*a*) Bacteriologist—

Date. 1938.	Sample.	Result of Analysis.	Action taken.
Jan. 10	Drinking water ... ... Ex ss. "Rangitiki."	The sample was bright and clear, with no deposit. 1. Number of micro-organisms developing on Yeastral agar (aerobically) at 68° F. (3 days) averaged 55 per c.c. 2. Number of micro-organisms developing on agar (aerobically) at 98° F. (48 hours) averaged 41 per c.c. 3. Bacillus Coli absent from 50 to 1 c.c. of sample. 4. Streptococci not present. B. Welchi not present. Remarks—a satisfactory drinking water.	None.
Mar. 4	Sterilised Milk ... ... Ex ss. "Llanstephan Castle." Taken on board at Durban—15th January, 1938.	Milk tastes good ... ... Number of Bacteria per c.c. 3,556. *a*. 1/10 c.c. ... 17 *b*. 1/100 c.c. ... 15 *c*. 1/1,000 c.c. ... 9 Presence of Bacillus Coli—48 hours—No change. Presence of Bacillus Coli—3 days—No change. Remarks—A good milk. Milk centrifuged and plated on McConkey—no growth on cultures. Rats fed on milk, remained alive and well.	See Special Report, page 19.
,, 4	Sterilised Milk ... ... Ex ss. "Llanstephan Castle." Taken on board at London—17th December, 1937.	Milk tastes good. Number of Bacteria per c.c 1,490. *a*. 1/10 c.c. ... ... 7 *b*. 1/100 c.c. ... 4 *c*. 1/1,000 c.c. ... 4 Presence of Bacillus Coli—48 hours—No change. Presence of Bacillus Coli—3 days—No change. Remarks—A good milk. Milk centrifuged and deposit plated on McConkey. No growth on cultures. Rats were fed on milk and remained alive and well.	Ditto.
,, 4	ss. "Llanstephan Castle." From Fore peak tank through pump in firemen's washroom. (London water.)	Condition of sample—Cloudy, opalescent rust coloured water with definite brown deposit. Number of micro-organisms developing on Yeastral agar (aerobically) at 68° F. (3 days) averaged 10,800 per c.c. Number of micro-organisms developing on Yeastral agar (aerobically) at 98° F. (48 hours) averaged 9,720 per c.c. Bacillus Coli absent from 50 to 0·001 per c.c. of sample. Coliform organisms—present in 10 c.c bile salts. Streptococci not present. B.Welchi present in 50 c.c. of water. B.Pyocaneous isolated from 50 c.c. of water. Water precipitated and plated on McConkey. Plates negative for typhoid groups. Remarks—A bad water and not fit for drinking purposes.	Ditto.

Date. 1938.	Sample.	Result of Analysis.	Action taken.
Mar. 4	ss. "Llanstephan Castle." From Ice water tap at Gun port door after passing through filter. (Genoa water.)	Condition of sample—Bright and Clear. Slight deposit. Number of micro-organisms developing on Yeastral agar (aerobically) at 68° F. (3 days) averaged 2,040 per c.c. Number of micro-organisms developing on Yeastral agar (aerobically) at 98° F. (48 hours) averaged 1,000 per c.c. Bacillus Coli absent from 50 to 0·001 per c.c. of sample. Coliform organisms—B.Welchi not present. Streptococci not present. Water precipitated and plated for typhoid group—negative. Remarks—The bacterial count is too high to allow of this water being passed as fit for drinking purposes.	See Special Report, page 19
,, 5	ss. "Llanstephan Castle." From No. 4 Starboard D.B. (not filtered). (Laurenco Marques water.)	Condition of sample—Cloudy, opalescent. Definite deposit. Number of micro-organisms developing on Yeastral agar (aerobically) at 68° F. (3 days) averaged 593 per c.c. Number of micro-organisms developing on Yeastral agar (aerobically) at 98° F. (48 hours) averaged 579 per c.c. Bacillus Coli absent from 50 to 0·001 per c.c. of sample. Coliform organisms—B.Welchi not present. Streptococci not present. Water precipitated and plated on McConkey—negative for typhoid group. Remarks—Poor quality water. The bacterial count is high but the absence of pathogenic organisms such as B.Coli, Streptococci, &c., would allow of it being passed for drinking purposes.	Ditto.
,, 5	ss. "Llanstephan Castle." From tap on boat deck after passing through filter. (Genoa water.)	Condition of sample—Bright and clear. Number of micro-organisms developing on Yeastral agar (aerobically) at 68° F. (3 days) averaged 5,400 per c.c. Number of micro-organisms developing on Yeastral agar (aerobically) at 98° F. (48 hours) averaged 1,540 per c.c. Bacillus Coli absent from 50 to 0·001 per c.c. of sample. Coliform organisms—B.Welchi not present. Streptococci not present. Water precipitated and plated on McConkey—negative for typhoid group. Remarks—The bacterial count is too high for this water to be passed as fit for drinking water.	Ditto
,, 7	ss. "Llanstephan Castle." Sample of water and sediment from filter.	Condition of sample—Dirty brown water with about 1 inch of sand deposit at bottom. Number of micro-organisms developing on Yeastral agar (aerobically) at 68° F. (3 days) averaged 172,000 per c.c. Number of micro-organisms developing on Yeastral agar (aerobically) at 98° F. (48 hours) averaged 82,000 per c.c. Bacillus Coli absent from 50 to 0·001 per c.c. of sample. Coliform organisms—B.Faecalis alkaligenes isolated from 10 c.c. of water. B.Pyocaneous isolated from 5 c.c. of water. B.Welchi present in 10 c.c. of water. McConkey plates—negative for typhoid and dysentery group. Remarks—The bacteriological findings indicate an unsatisfactory condition.	Ditto.

Date. 1938.	Sample.	Result of Analysis.	Action taken.
April 25	Water from Barling Hall Creek, River Roach. Sample taken at Ebb tide.	Condition of sample—Cloudy, opalescent. Heavy deposit. No. of micro-organisms developing on Yeastral agar (aerobically) at 68° F. (3 days) averaged 150,233 per c.c. No. of micro-organisms developing on Yeastral agar (aerobically) at 98° F. (48 hours) averaged 3,403 per c.c. Bacillus Coli (typical) present in 50 to 5 c.c. Absent from 1 to 0·001 c.c. Streptococci not present. B. Welchi present in 50 c.c. *Remarks*—The presence of typical B. Coli in 5 c.c. and B. Welchi in 50 c.c. of water shows evidence of sewage contamination.	Tenant of Barling Hall Creek informed that this creek cannot be approved by the Port Health Authority as a suitable position for the re-laying of shellfish collected from within the jurisdiction of the Authority.
,, 25	Water from Barling Hall Creek, River Roach. Sample taken at Flood tide.	Condition of sample—Cloudy, opalescent. Heavy deposit. No. of micro-organisms developing on Yeastral agar (aerobically) at 68° F. (3 days) averaged 344 per c.c. No. of micro-organisms developing on Yeastral agar (aerobically) at 98° F. (48 hours) averaged 709 per c.c. Bacillus Coli (typical) absent from 50 to 0·001 c.c. Streptococci and B. Welchi not present. Remarks—This sample does not show evidence of sewage contamination.	
May 30	4 samples of water from ss. "Orama."	Condition of samples : all slightly cloudy opalescent water. General appearance : 3 slight deposit, 1 definite deposit. Number of micro-organisms developing on Yeastral (aerobically) at 68° F. (3 days) averaged 213, 275, 517 and 185 per c.c. respectively. Number of micro-organisms developing on Yeastral agar (aerobically) at 98° F. (48 hours) averaged 296, 315, 725 and 370 per c.c. respectively. Bacillus Coli (typical) absent from 50 to 0·001 per c.c. of each sample. Coliform organisms—B. Pyocyaneus present ++ in all samples. Other organisms—Streptococci and B. Welchi not present. Remarks—All unsatisfactory drinking water.	All fresh water tanks, were emptied, cleansed and refilled.
	(*b*) Analyst—		
Jan. 4	Tomato paste	Contained 32 parts of copper per million.	Sampled for Ministry of Health.
,, 4	Tomato purée	Contained 4 parts of copper per million.	Sampled for Ministry of Health.
,, 4	Tomato purée	Contained 2 parts of copper per million.	Sampled for Ministry of Health.
,, 4	Canned tomatoes (6 tins)	The tins were incubated at blood heat for 14 days and inspected at 1, 7 and 10 days. In outward appearance there was little difference at any of these periods with that of the tins when first incubated. Considerable swelling took place when tins reached blood heat, but decreased on cooling, showing that the swelling was due chiefly to expansion of the contents. From the 6 tins 4·9 c.c.s of gases were collected, of which 0·2 c.c. was carbon dioxide. Unable to obtain evidence of presence of hydrogen. There was a complete absence of vacuum in each tin. From these experiments I am of the opinion that the gas present in the cans was air.	Consignment destroyed.
,, 7	Tomato purée	Contained 28 parts of copper per million.	Sampled for Ministry of Health.

Date. 1938.	Sample.	Result of Analysis.	Action taken.
Jan. 7	Tomato extract	Contained 4 parts of copper per million.	Sampled for Ministry of Health.
,, 7	Tomato purée	Free from preservative and colouring matter.	Sampled for Ministry of Health.
,, 7	Mustard flour	Free from metallic contamination.	None.
,, 11	Lettuce hearts	Contained 9 parts of copper per million.	None.
,, 17	Mustard	Contained 3 parts of lead per million.	None.
,, 21	Natural orange juice ...	Contained 340 parts of sulphur dioxide per million.	None.
,, 21	Brisling in oil ... ... (see * below).	Contained 2·1 grains of tin per pound.	Consignment detained for further sampling (see * below).
,, 25	Gaffelbiter (Herrings in sauce).	Free from the presence of prohibited preservatives and metallic contaminations.	None.
,, 25	Gelatine	Contained 520 parts of sulphur dioxide per million.	None.
,, 25	Canned fish (4)	These samples on examination gave the following results :—	None.
		Sample — Tin, Grains per pound Brisling ... ... 0·2 Sild ... ... 1·46 Sild ... ... 0·1 Brisling ... ... 0·2	
,, 25	Brisling in oil (see * above)	Contained 1·83 grains of tin per pound.	Letter to Importer. Consignment released (see * above).
,, 27	Red salmon steak ...	Free from the presence of prohibited preservatives and colouring matter.	None.
,, 27	Soup powders (4) ...	These samples on examination gave the following results :—	None.
		Sample — Lead, parts per million Pea ... ... 2 Oxtail ... ... None. Tomato ... ... None. Scotch Broth ... ... 2 Free from the presence of prohibited preservatives.	
,, 27	Haricot beans	Free from the presence of prohibited colouring matter and preservatives.	None.
,, 27	Sardines stuffed with ham	Contained 34 parts of lead per million.	Consignment abandoned.
Feb. 1	Brisling in oil	Free from the presence of prohibited preservatives and colouring matter, and contained 0·25 grain tin per pound.	None.
,, 1	Brisling in tomato ...	Free from the presence of prohibited preservatives and colouring matter, and contained 0·63 grain tin per pound.	None.
,, 1	Crab paste	Free from prohibited preservatives, colouring matter and metallic contamination.	None.
,, 1	Dressed lobster	Free from prohibited preservatives, colouring matter and metallic contamination.	None.
,, 1	Salmon spread	Free from prohibited preservatives, colouring matter and metallic contamination.	None.
,, 1	Tuna fish	Free from prohibited preservatives, colouring matter and metallic contamination.	None.
,, 1	Canned apples	Contained 0·15 grain tin per pound. Free from the presence of preservatives and colouring matter.	None.
,, 1	Tea sweepings (3) ...	All three samples were free from the presence of extraneous matter.	None.
,, 3	Mandarin oranges ...	Contained 0·58 grain tin per pound. Free from presence of preservatives and colouring matter.	None.
,, 3	Sild (4)	These samples contained 1·46, 1·75, 1·54 and 0·75 grains of tin per pound respectively.	None.
,, 3	Sardines	Contained 3 parts of lead per million.	None.
,, 3	Canned fish (6)	These samples on examination gave the following results :—	None.
		Sample — Tin, grains per pound Brisling ... ... 0·35 Spir (?Mackerel) ... ... 0·15 Sild ... ... 0·55 Brisling ... ... 0·30 Sild ... ... 0·25 Sild ... ... 1·56	

Date. 1938.	Sample.	Result of Analysis.	Action taken.
Feb. 10	Peeled tomatoes ...	Free from prohibited preservatives and colouring matter.	None.
„ 10	Sardines in tomato ...	Free from the presence of lead and copper.	None.
„ 11	Tomato purée	Contained 8 parts of copper per million.	None.
„ 12	Raspberry extract ...	Free from prohibited preservatives and colouring matter.	None.
„ 15	Sardines (2)	These samples contained 1 and 3 parts of lead per million respectively.	None.
„ 15	Apricot pulp	Contained 1,164 parts of sulphur dioxide per million.	None.
„ 15	Canned fish (4)	These samples on examination gave the following results :—	None.
		Sample — Tin, grains per pound Sild ... ... 0·12 Sild ... ... 0·10 Brisbies ... ... 0·23 Sild ... ... 0·35	
„ 15	Sardines	Contained 1 part of lead per million.	None.
„ 18	Canned fish (4)	All samples were free from prohibited preservatives, colouring matter and tin. The stuffed salmon contained 3 parts of lead per million.	None.
„ 23	Tinned cherries	Free from the presence of sulphur dioxide.	None.
„ 23	Sardines	Contained 5 parts of lead per million.	None.
„ 23	Brisling	Contained 0·15 grains of tin per pound.	None.
„ 24	Tomato paste	Contained 64 parts of copper per million.	None.
„ 25	Matte tea	Found to be free from the presence of extraneous matter.	None.
„ 25	Tomato paste	Contained 2 parts of copper per million.	None.
„ 25	Canned fish (3)	These samples on examination gave the following results :—	None.
		Sample — Tin, Grains per pound Smoked Cod Roe ... ... None. Sild in Tomato ... ... 0·25 Sild in Oil ... ... None. The cod roe contained 4 parts of lead per million. The sild in tomato contained a trace only of copper.	
„ 25	Sugar sweepings ...	Contained 168 parts of copper per million.	Consignment destroyed.
„ 28	Gherkins	Contained 138 parts of copper per million of the dry weight of the sample.	Reported to M.O.H. City of London.
Mar. 7	Tomato paste	Contained 110 parts of copper per million of the dry weight of the sample.	Consignment re-exported.
„ 10	Tomato purée	Contained 14 parts of copper per million of the dry weight of the sample.	None.
„ 10	Runner beans	Contained 450 parts of copper per million of the dry weight of the sample.	Consignment re-exported.
„ 10	Unsalted butter ...	Free from the presence of prohibited colouring matter and preservatives, including boron.	None.
„ 10	Vinegar	Contained 7·98 per cent. of acetic acid.	None.
„ 10	Curry powder	Contained 3 parts of lead per million.	None.
„ 16	Fish, tinned	These samples on Examination gave the following results :—	None.
		Sample — Tin, Grains per pound Kipper Snacks ... ... None. Shrimps ... ... None. Herring Roes ... ... None. Crab ... ... None. Brisling ... ... 1·00 The crab also contained 3 parts of lead per million.	
„ 24	Blackcurrant pulp ...	Free from the presence of prohibited colouring matter and preservatives.	None.
„ 24	Canned fish (2)	Both free from prohibited preservatives.	None.
„ 24	Tomato purée	Contained 120 parts of copper per million of the dried sample.	Letter to Importer.
„ 24	Oranges (2)	Both samples contained foreign colouring matter. This colouring matter is not, however, a prohibited dye.	Letter to Importer.
„ 28	Tomato purée	Contained 85·5 parts of copper per million of the dried sample.	Letter to Importer.
„ 29	Tomato purée	Contained 6 parts of copper per million of the dried sample.	Letter to Importer.

Date. 1938.	Sample.	Result of Analysis.	Action taken.
Mar. 29	Brisling	Contained 1·83 grains of tin per pound.	Letter to Importer.
,, 29	Silver sild	Free from metallic contamination.	Letter to Importer.
,, 31	Tomato purée	Contained 135 parts of copper per million of the dried sample.	Consignment re-exported.
April 1	Brisling	Contained 0·24 grain of tin per pound.	None.
,, 1	Rubbed parsley	Free from the presence of arsenic and other foreign ingredients.	None.
,, 6	Apples	The bluish deposit contained no arsenic or boric acid, and had neither acid nor alkaline reaction.	None.
,, 8	Apples and pears ...	The whitish spots thereon contained neither arsenic nor boron compounds, and all had a neutral reaction to litmus.	None.
,, 8	Tomato purée	Contained 78·8 parts of copper per million of the dried sample.	Letter to Importers.
,, 11	*Sardines (see below) ...	Contained 7 parts of lead per million.	Detained for further sampling.
,, 13	Tomato purée	Contained 78·8 parts of copper per million of the dried sample.	Letter to Importer.
,, 13	Tomato purée	Contained 31·4 parts of copper per million of the dried sample.	None.
,, 13	Sardines	Contained 5 parts of lead per million.	None.
,, 20	Tomato purée	Contained 90 parts of copper per million of the dried sample.	Letter to Importer.
,, 20	*Sardines (6) (see above)	These samples on examination gave the following results :—	Consignment released.
		Sample No. — Lead, parts per million 1 ... ... 2 2 ... ... 5 3 ... ... 3 4 ... ... 3 5 ... ... 2 6 2	
,, 25	Fruit paste (2	Both samples were free from the presence of prohibited colouring matter and preservatives.	None.
,, 28	Sugar	Free from the presence of tin.	None.
May 6	Angelica	Free from the presence of prohibited preservative.	None.
,, 12	Mustard	Contained 2 parts of lead per million.	None.
,, 14	Sild	Contained 1·54 grains of tin per pound.	None.
,, 14	Canned fish	These samples on examination gave the following results :—	None.
		Sample — Tin, grains per pound Sild ... ... 0·25 Peeled shrimps ... ... None Herring roes ... ... None	
,, 14	Canned fish	These samples on examination gave the following results :—	None.
		Sample — Tin, grains per pound Brisling ... ... None Sild ... ... 0·56 Sild ... ... 0·5	
,, 28	Sardines	Contained 6 parts of lead per million	Letter to Importer.
,, 23	Oranges and wrappers ...	From the wrappers approximately 0·025 gramme of diphenyl was extracted and the skins of the oranges were found to contain traces of this substance.	Reported to the Ministry of Health.
June 1	Orange pulp	Contained 960 parts of sulphur dioxide per million.	None.
,, 1	Orange juice	Contained 400 parts of sulphur dioxide per million.	None.
,, 1	Apple juice	Free from the presence of prohibited preservatives.	None.
,, 3	Sild	Contained 0·15 grain of tin per pound.	None.
,, 3	Brisling	Contained 0·25 grain of tin per pound.	None.
,, 4	Apricots (dried)	Contained 1,005 parts of sulphur dioxide per million.	None.
,, 4	Sultanas	Free from preservatives.	None.
,, 7	Cods' roe caviare ...	Free from the presence of prohibited preservatives.	None.
,, 7	Canned fish (3)	These samples on examination gave the following results :—	None.
		Sample — Tin, Grains per pound Sild in Oil ... ... 1·42 Brisling in Oil ... ... 0·2 Herring roes ... ... None	

Date. 1938.	Sample.	Result of Analysis.	Action taken.
June 11	Drained cherries ...	This sample on examination was found to contain copper and copper compounds equivalent to 4 parts of copper per million of the sample as received. This quantity is equal to 4·8 parts of copper per million of the dried sample. Free from the presence of other prohibited colouring matter and preservatives.	None.
„ 17	Brisling	Contained 0·35 grain of tin per pound.	None.
„ 17	Herrings	Contained 1·37 grains of tin per pound. Free from the presence of prohibited preservatives.	None.
„ 18	Canned fish (7)	These samples on examination gave the following results :—	None.

Sample	Tin, grains per pound
Dressed crab	None
Brisling in tomato	0·08
Sild in oil	0·15
Peeled shrimps	None
Herring roes	None
Sild in tomato	0·12
Sild in oil	0·30

In addition, the samples were found to be free from the presence of prohibited preservatives and colouring matter, including copper.

„ 24	Fillets of herring ...	Free from the presence of prohibited preservatives	None.
„ 24	Pectin	Free from the presence of prohibited preservatives	None.
July 13	Sardines	Contained 2 parts of lead per million	None.
„ 15	Sardines (2)	Contained 1 and 2 parts of lead per million, respectively.	None.
„ 15	Sugar candy	Free from prohibited colouring matter and preservatives.	None.
„ 15	Tomato paste	Contained 72 parts of copper per million on the dry weight.	None.
„ 18	Canned fish (2)	On examination these samples gave the following results :—	None.

Sample	Tin, Grains per pound.
Sild in tomato	0·52
Brisling	0·50
Dressed crab	None
Sild in oil	0·14
Sild in oil	0·15
Sild in oil	0·12
Crab	None
Crab	None

„ 21	Lobster tomali	Free from the presence of metallic contamination, prohibited preservatives and colouring matter.	None.
„ 22	Cocoa residue powder ...	Contained 8 parts of lead per million	Consignment re-exported.
„ 27	Sardines (2)	These samples contained 4 and 3 parts of lead per million respectively.	None.
„ 27	Canned fish (9)	On examination these samples gave the following results :—	None.

Sample	Tin, Grains per pound
Sild in tomato	None
Sild in oil	None
Dressed crab	None
Dressed crab	None
Sild in oil	0·04
Gaffelbeiter	0·04
Sild in oil	0·17
Brisling in oil	0·06
Sild in oil	0·08

„ 27	Apricot pulp	Contained 1,120 parts of sulphur dioxide per million.	None.
„ 27	Tomato pulp (2) ...	These samples on examination were found to contain 139 and 41 parts of copper per million of the dry sample respectively.	Consignment containing 139 parts re-exported.
„ 30	Sardines in tomato ...	Contained 2 parts of lead per million, but was free from the presence of copper.	None.
Aug. 4	Canned crab	Free from the presence of metallic contamination, preservatives and colouring matter.	None.

Date. 1938.	Sample.	Result of Analysis.	Action taken.
Aug. 4	Drained cherries ...	Contained 4·6 parts of copper per million of dry sample. Free from presence of preservatives and prohibited colouring matter.	None.
„ 11	Canned salmon	Free from metallic contamination, prohibited colouring matter and preservatives.	None.
„ 13	Cheese	Contained 3·54 grains of tin per pound	Consignment destroyed.
„ 13	Canned fish (6)	The samples on examination gave the following results :—	None.
		Sample — Tin, grains per pound Sild ... ... 0·1 Sild ... ... None Brisling ... ... 0·4 Kipper snacks ... ... None Sild ... ... 0·1 Sild ... ... None	
„ 17	Rice (2)	These samples on examination were found to contain sodium chloride (salt) to the extent of 0·05 per cent and 0·81 per cent respectively.	None.
„ 17	Apricot pulp	Contained 1,960 parts of sulphur dioxide per million.	None.
„ 17	Tomato purée	Contained 27 parts of copper per million of dry sample.	None.
„ 17	Tomato preserve ...	Contained 28 parts of copper per million of dry sample.	None.
„ 18	Sild	Contained 3 grains of tin per pound	Consignment re-exported.
„ 18	Beans	Contained 6 parts of copper per million of dry sample.	None.
„ 29	Canned spinach ... (see * below) ...	Contained 16 parts of copper per million of dry sample and 285 parts of zinc per million of sample.	Still under investigation.
„ 31	Sardines	Contained 3 parts of lead per million.	None.
„ 31	Li chees (Litchi) ...	Contained 0·1 grain of tin per pound.	None.
„ 31	Canned fish (4)	These samples on examination gave the following results :—	None.
		Sample — Tin, Grains per pound Sild in oil ... ... 0·2 Cods' roe caviare ... ... 0·15 Sild in tomato ... ... 0·3 Brisling in oil ... ... 0·2	
„ 31	Canned vegetables (4) 2 peas, 2 celery. ...	These samples were found to be free from the presence of metallic contamination, with the exception of one sample of celery, which contained 80 parts of copper per million of dried sample.	Importers' attention called to the presence of copper in celery.
Sept. 2	Sugar sweepings (2) ...	These samples contained 758 and 500 parts of copper per million respectively.	Consignment destroyed.
„ 2	Lettuce hearts	Contained 16 parts of copper per million.	None.
„ 7	Sardines	Contained 7 parts of lead per million.	Result passed to Medical Officer of Health, City of London.
„ 8	Grapes (10) (fruit only)...	Nine samples were found to be free from the presence of arsenic and one sample to contain less than 0·0035 grain per pound.	Consignment released and result passed to Ministry of Health.
„ 9	Grapes (2 bunches) ...	This sample on examination gave the following results :—	Reported to Ministry of Health.
		Part of Sample — Arsenic, parts per million 1st bunch, grapes only ... ... None. „ stalks only ... ... 10 2nd bunch, lower portion grapes and stalks ... ... 0·3 „ upper portion, grapes only None. In addition the grapes only from the upper portion of the 2nd bunch were found to contain 6 parts of copper per million.	
„ 9	Sardines (see † below) ...	Contained 15 parts of lead per million.	Consignment re-exported.

Date.	Sample.	Result of Analysis.	Action taken.
1938.			
Sept. 9	Cocoa powder	Contained 12 parts of lead per million.	Result passed to Medical Officer of Health, Watford, and to Ministry of Health.
„ 12	Sardines	Contained 4 parts of lead per million	None.
„ 13	Sugar sweepings ...	Contained 8·19 per cent of copper.	Consignment destroyed.
„ 13	Tinned spinach (2) (see * above).	These samples on examination were found to contain 23 and 67 parts of copper per million of the dried sample respectively, and 15 and 8 parts of zinc per million of the sample.	Consignment released.
„ 14	Sardines (see † above) ...	Contained 14 parts of lead per million.	Consignment re-exported.
„ 14	Chocolate	Contained 3 parts of lead per million.	None.
„ 14	Tinned peas	Free from metallic contamination, prohibited preservatives and colouring matter.	None.
„ 17	Raisins (4)	These samples on examination were found to contain 480, 600, 535 and 445 parts of sulphur dioxide per million respectively.	None.
„ 19	Grapes (11) (fruit only)...	All these samples were found to be free from the presence of arsenic.	Consignment released and result passed to Ministry of Health.
„ 21	Canned fish (3)	All samples were found to be free from the presence of prohibited preservative and metallic contamination.	None.
„ 23	Cocoa powder	Contained 1 part of lead per million.	None.
„ 24	Canned spinach	This sample on examination gave the following results :— Tin, 0·74 grains per pound ; Zinc, 5 parts per million ; Copper, 36 parts per million ; of the dried sample.	None.
„ 30	Beans	Contained 383 parts of copper per million of the dried sample.	Consignment re-exported.
Oct. 4	Beans	Contained 678 parts of copper per million of the dried sample.	
„ 4	Canned mushrooms ...	This sample on examination was found to be free from the presence of prohibited preservatives and colouring matter, and to contain 0·79 grain of tin per pound. In addition the sample was free from copper and found to contain 1 part of lead per million.	None.
„ 5	Cocoa powder	Contained 1 part of lead per million.	None.
„ 7	Chutney	Free from the presence of prohibited preservatives, colouring matter and metallic contamination.	None.
„ 7	Canned fish (4)	These samples on examination gave the following results :— Sample — Tin, Grains per pound: Sild in oil ... ... 0·12; Brisling in oil ... ... 0·08; Peeled shrimps ... ... None; Sild in oil ... ... 1·21	None.
„ 13	Canned herrings (2) ...	Both samples were found to be free from the presence of prohibited preservatives and metallic contamination.	None.
„ 14	Coffee beans (2)	One sample was found to be contaminated with gummy matter, probably one of the ester gums. The other sample was found to be free from contamination.	Released for reconditioning under the supervision of Medical Officer of Health, Stepney.
„ 18	Sardines	Free from the presence of lead.	None.
„ 22	Maize sweepings ...	Free from the presence of copper.	None.
„ 22	Prepared mustard ...	Free from the presence of metallic contamination and prohibited preservatives.	None.
„ 24	Blackcurrant pulp ...	Contained 1,465 parts of sulphur dioxide per million.	None.
„ 24	Sardines	Contained 5 parts of lead per million.	None.

Date. 1938.	Sample.	Result of Analysis.	Action taken.
Nov. 2	Smoked salmon substitute.	Free from the presence of prohibited preservatives, colouring matter and metallic contamination.	None.
„ 2	Gruyere cheese	Free from the presence of prohibited preservatives.	None.
„ 2	Sild in oil	Contained 1·21 grains of tin per pound.	None.
„ 4	Herring roes	Free from the presence of prohibited preservatives and colouring matter.	None.
„ 4	Canned fish (4)	These samples on examination gave the following results :—	None.
		Sample — Tin, Grains per pound Brisling in oil ... ... 0·1 Sild in tomato ... ... None „ „ oil ... ... 1·67 „ „ tomato ... ... None The samples of sild in tomato were free from the presence of copper.	
„ 8	Dried apricots	Contained 1,300 parts of sulphur dioxide per million	None.
„ 10	Prepared mustard ...	Free from prohibited preservatives and metallic contamination.	None.
„ 10	Pâté de foie gras ...	Free from prohibited preservatives and metallic contamination.	None.
„ 10	Smoked salmon	Free from prohibited preservatives and metallic contamination.	None.
„ 11	Butter	Free from prohibited colouring matter and preservatives, including boron.	None.
„ 17	Apricot pulp	Contained 3,067 parts of sulphur dioxide per million.	Consignment destroyed.
„ 22	Canned fish (10)	These samples on examination gave the following results :—	None.
		Sample — Tin, Grains per pound Sild in oil ... ... None Dressed crab ... ... None Sild in oil ... ... 1·58 „ „ tomato ... ... None Gaffelbeiter in oyster sauce... ... None „ „ wine sauce... ... None „ „ tomato sauce... ... None Sea salmon ... ... None Mussels in vinegar ... ... 0·28 „ „ vegetable sauce ... ... 0·35 The samples were found to be free from the presence of prohibited preservatives.	
„ 25	Sardines	Contained 1 part of lead per million.	None.
„ 25	Sugar sweepings ...	Sample contained copper and copper compounds equivalent to 15·07 per cent. of copper.	Destroyed.
„ 26	Canned beans	Free from the presence of copper.	None.
„ 29	Fruit pulp (2)	These samples on examination gave the following results :— Orange—205 parts of sulphur dioxide per million. Grapefruit—105 parts of sulphur dioxide per million.	None.
„ 29	Oranges ("Colour added")	Free from the presence of prohibited colouring matter.	None.
Dec. 2	"Ravioli" (egg, macaroni and meat).	Free from the presence of prohibited preservatives.	None.
„ 3	Banana santista ...	Free from the presence of prohibited preservatives.	None.
„ 3	Nougat	Free from the presence of prohibited preservatives.	None.
„ 3	Dried pears	Contained 685 parts of sulphur dioxide per million.	None.
„ 5	Sardines	Contained 2 parts of lead per million.	None.
„ 9	Canned peaches, canned cherries, canned asparagus, canned spaghetti.	Free from the presence of prohibited preservatives and colouring matter.	None.
„ 9	Tomato pulp	Contained 28 parts of copper per million of the dried sample.	None.
„ 9	Tomato paste	Contained 21 parts of copper per million.	None.
„ 9	Tomato juice	Free from the presence of copper.	None.
„ 9	Aspic jelly	Contained 5 parts of lead per million.	None.
„ 16	Paper wrapping for apples	Free from the presence of prohibited colouring matter, arsenic, copper and lead.	None.
„ 16	Haricot verts	Free from the presence of copper.	None.

Date. 1938.	Sample.	Result of Analysis.	Action taken.
Dec. 17	Canned fish (6)	These samples on examination gave the following results :—	None.

Sample	Tin, grains per pound
Sild in oil	0·25
Sild in oil	0·1
Sild in tomato	0·15
Sild in oil	0·1
Peeled shrimps	None.
Dressed crab	None.

Date. 1938.	Sample.	Result of Analysis.	Action taken.
„ 22	Haricot verts (3) ...	These samples on examination gave the following results :—	Consignment re-exported.

Sample	Copper, Parts per million of the dried sample
(1)	404
(2)	454
(3)	454

Date. 1938.	Sample.	Result of Analysis.	Action taken.
„ 30	Fresh tomatoes	Free from the presence of arsenic	None.

GRAPES FROM CRETE.

On information from the Ministry of Health that cases of arsenical poisoning were alleged to have occurred recently among the grape growers in Crete a large consignment, the first of its kind to arrive in the Port of London, was temporarily detained pending the sampling of the grapes for the presence of arsenic.

Arsenic was recovered from one of the ten bunches examined, but in very small quantity. The grapes were released.

A further consignment which arrived ten days later was permitted to be unloaded and to be sent to the London Central Markets at Covent Garden and Spitalfields on the understanding that they would be retained there pending sampling. The samples taken revealed the presence of traces of arsenic in the bunches of grapes, but only on the stalk, and not on the fruit itself. The consignment was released.

In the meantime discussions took place between your Medical Officer and the Greek Legation, and information was eventually received from Crete via the Greek Legation which satisfied your Medical Officer, that although minute traces of arsenic might be present on the stalk, the fruit itself was to all intents and purposes free from arsenic and in this respect safe for human consumption.

CARGO OF APPLES PER SS. "TACOMA STAR."

During the course of routine examination of a cargo of apples which arrived in the Royal Albert Dock on the 27th July, from Australia, your Food Inspector, Mr. E. H. Johnson, found a number of apples to be affected with what appeared to be "brown heart." This condition was found to affect only one particular variety of apple, of which there were approximately 80,000 boxes on board, and seemed to be confined to the apples carried in the lower holds of the vessel, those in the 'tween decks being unaffected.

Owing to the fact that it was impossible to detect by external examination the condition of the apples, your Medical Officer ordered that the whole of the suspected variety be placed under detention on the dock.

Subsequently, after discussion between your Medical Officer and representatives of the National Federation of Fruit and Potato Trades' Association, the consignment was released to the various merchants concerned under guarantee that the whole of the apples would be taken to their premises and there dealt with under the supervision of the local Medical Officer of Health. The names and addresses of the consignees, together with quantities and shipping marks of their apples, were obtained from the dock, and the local Medical Officers of Health informed of the circumstances.

THE GROWTH AND DEVELOPMENT OF THE IMPORTED MEAT TRADE.

I am indebted to Mr. E. H. Johnson, one of the Authority's Food Inspectors on the Royal Docks, for the following most interesting and informative account of the history of the imported meat trade.

At the beginning of the nineteenth century Britain was in the transitional period of her Industrial Revolution, changing from agriculture to industry. Manufacturing towns were growing rapidly, with a corresponding increase of the population, bringing with it the problem of the Nation's food supply.

Meat was becoming scarce with dwindling herds of cattle, while at the other side of the earth the reverse was taking place ; Australia, New Zealand, the Argentine, where colonists were numbered only by thousands, their cattle had increased to millions. How to bring that abundant supply of meat to Europe ? The colonists were boiling down carcases for fat, and in many instances burying the hides as waste. Prices were so low that some method of conserving the meat became vital, and many ideas were put forward, and experiments made in England, America, Australia and elsewhere.

In the meantime live cattle were being shipped from the Continent and North America ; during 1894 Australia made the experiment of shipping 20 head of cattle on the s.s. " Maori King " from Sydney. After 67 days on board, the cattle were landed at Deptford, only one having died on the voyage. Though this pioneering venture showed that live stock could be taken from Australia to England, the financial result was a heavy loss. However, another shipment was tried, this time 18 cattle and 48 sheep were carried on the s.s. " Port Pirie," and only one ox and six sheep died during the voyage. Shipments continued until February, 1896 when, of some 381 cattle shipped at Gladstone, only 32 animals arrived at Deptford, and the Royal Society for the Prevention of Cruelty to Animals took the matter up. The vessel, s.s. " Angers," was prohibited from carrying live stock again for 12 months, at the same time the underwriters were beginning to fight shy of covering such cargoes, and so that trade died.

During the year 1874 live cattle and sheep were exported to England from the Argentine, which continued as a prosperous business until the year 1900, when, owing to a severe outbreak of Foot and Mouth disease in the Argentine, the English ports were closed to this traffic. Three years later the ports were re-opened to receive Argentine cattle, but upon further discovery of Foot and Mouth disease in some cattle sent from the Argentine to South Africa, English ports were again closed, and have remained so ever since.

Live animals from the Continent were stopped in 1892 owing to various infective diseases which were then rampant in Germany, Holland, &c., but cattle continued to arrive from the U.S.A., Canada, and Ireland. These beasts had to be slaughtered at the port of landing, either Glasgow or Birkenhead, but gradually the numbers of animals from these countries diminished until to-day they have practically ceased.

In 1717 salting works were built in Buenos Aires and the beef was exported. The process of drying meat, termed " Jerked Beef," " Biltong " or " Charque " grew, but soon became limited, as practically the only outlet were the markets in Cuba, Northern Brazil and the West Indies. No South American meat of any kind was imported into England during the sixties, and Australia was the pioneer of the canned, as she was later of the frozen meat trade.

The first men to preserve meat by canning in Australia were the Dangar Brothers. Discontented with the low values of cattle, they established a canning works, and in 1847 they produced canned meats, which were sent to London and were readily taken up by the Admiralty. They also found a good market in the Midlands. Although the canning trade was certainly a useful outlet for surplus sheep and cattle it was not sufficient to enable the graziers to derive much benefit therefrom, and boiling down and production of tallow was still the main outlet. In 1863 a German chemist, Liebig, began to manufacture meat extract in the River Plate, building up a useful export trade to England. Three years later a Mr. Tindal, after studying Liebig's method, began operations in Australia ; at the same period one Robert Tooth began making extract at Jengaree, New South Wales.

The position in New Zealand was much the same as in Australia ; there being a large surplus of sheep which the small population was quite unable to deal with profitably, and so matters stood until the event of refrigeration.

There were many suggestions, and much experiment was made in bringing meats across the world about this time ; one was the boiling of the best cuts of mutton, placing them in barrels and pouring hot fat round the meats. Such cargoes did arrive in England and in good condition, but somehow the public did not take to the product. Another idea that soon collapsed, was to dip the meat in bisulphide of lime ! When one reads that 200 patents had been registered for preserved meat processes, it can be imagined how scarce meat was becoming in England.

In 1875 two large tin-lined cases of meats were shipped from Melbourne, the meat wrapped in prepared calico and the whole packed in charcoal, but as may be expected the meats were somewhat decomposed on arrival in England.

Turning now to refrigeration, we find that as long ago as 1626 snow was used to preserve fowls, and it was well known that meats always kept longer in the colder climates than in the warmer ones.

At the beginning of the nineteenth century a new trade sprang up between America and this country in bringing ice from Wenham Lake in specially constructed vessels ; later this trade was transferred to Norway for the shorter sea-passage. There is no information as to the various uses to which this ice was put except for cooling wines in deep cellars that were always built in the large houses of the period. However, the success of this preservative, limited though it was, led to a bold experiment in 1873. James Harrison, born in Glasgow, at the age of 21 emigrated to Sydney, there taking up journalism. During his leisure time he devoted himself to the production of ice, and after many ups and downs took up the freezing of meat. Before attempting export he publicly exhibited his cold producing machine ; carcases of sheep, sides of beef, poultry, fish, &c., were frozen six months and then consumed at a public banquet.

The stage was set for his great adventure ; the s.s. " Norfolk " was fitted up, 20 tons of mutton and sheep were loaded and frozen on board, tanks of ice and salt being the freezing mixture used to effect the refrigeration of the cargo, but misfortune overtook this experiment, the tanks leaked, and when the vessel arrived in London the meat was unsaleable.

To an Australian pioneer, also an emigrant from England, by name Mort, working at the same time as Harrison on the problem of practical meat freezing, must be given the honour of actually building the first freezing works in the world, in Sydney in 1861. Like Harrison he too gave, in 1875, a banquet of his frozen meats. The feast was so well praised that during the next year the sailing ship " Northane " was chartered to carry frozen meat to England ; a meat chamber was constructed, the insulation consisting of a 15 inch space between two bulkheads filled in with tallow with cold brine pipes fixed round the inside of the chamber. The meat was shipped, but just before the vessel sailed the pipes failed, spoiling the cargo, which had then to be discharged. Three years later, both Mort and Harrison died before they could see real success in meat freezing.

The North Americans had by now developed well appointed stockyards, and the well-known firm of Swift & Company had, in 1860, their own system of transporting meat over long distances in insulated railway trucks, the refrigerant being a mixture of ice and salt. Eleven years later exportation of frozen beef from New York to the United Kingdom was inaugurated, and the White Star liner s.s. " Celtic " carried frozen beef across the North Atlantic, refrigeration being secured by passing cold air over ice blocks. But it was T. C. Eastman who, in October, 1875, shipped the first parcel of American chilled beef to this country. A baron of that beef was sent to Queen Victoria at Windsor Castle, the Queen pronouncing the meat to be " Very Good " and Eastman's, Ltd., have the Royal Seal in connection with that transaction. The beef was carried in canvas bags and hung in the chambers, the chilling temperature being obtained by ice carried in tanks.

The first consignment of chilled meat from the Argentine was brought over by one Charles Tellier, a French scientist and engineer, on the s.s. " Frigorifique," the cargo being landed in Rouen in 1877. A previous attempt was made on the s.s. " City of Rio de Janeiro," but owing to the machines failing on the homeward voyage the meat was eaten on board. These cargoes were small, and did not arouse much enthusiasm in France, but the next year the s.s. " Paraquay " arrived at Havre with a cargo of 5,500 carcases of mutton. This cargo was not chilled as in the previous shipments, but frozen hard by a new type of refrigerating machine invented by Carrie, a Frenchman.

The idea of keeping meat at low temperature was now passing beyond the use of ice only ; all experiments so far had been to make ice first, then pass air over the ice or store ice in tanks surrounded by the meat.

At home, Henry Bell, an imported meat agent, seeing the costly nature of iced transport, in which a quarter of the space was not available for meat cargo, consulted Lord Kelvin, who introduced Bell to J. Coleman, and between them they perfected a cold air machine, constructing a trial chamber on the s.s. " Cercassia " of the Anchor Line.

Having heard of the success of the s.s. " Paraquay " the Queensland squatters cabled to London, instructing their agents to obtain a steamer for the carrying of frozen meats. The s.s. " Strathleven " was chosen, Bell-Coleman machines were designed and fitted on board, and arrangements were made for loading at Sydney. Thus in February, 1880, there arrived in London 40 tons of beef and mutton frozen hard ; the first consignment of Australian fresh meat to reach England. This was destined to revolutionise the world's meat trade, and very soon many vessels were employed in the dead meat trade.

Naturally the New Zealand sheep owners, realising their great need of an outlet for the large surplus of sheep, studied the reports of the new frozen export trade between Australia and England with the greatest interest. A Mr. Davidson, on their behalf, investigated the whole position, resulting in arranging with James Galbraith, a director of the Albion Shipping Company, to supply a suitable vessel for a trial shipment of frozen mutton from New Zealand. The sailing vessel " Dunedin " was picked, on account of her fast voyages made between the two countries. Mr. Coleman himself supervised the fitting of the refrigerating machines, and in December, 1881, at Port Chalmers, sheep were brought down alongside the " Dunedin," slaughtered, and then frozen on board. Unfortunately, owing to a break down after some 600 sheep had thus been treated, they had to be brought ashore, New Zealanders being then the first to consume their own frozen meat. However, after repairs had been effected a new start was made, and at the end of a 98 day run the cargo was discharged in London in May, 1882, in a sound condition, the consignment consisting of 4,450 sheep and 449 lambs.

The result of the marketing of this pioneer shipment was so encouraging (the net average price received by the shippers was £1 1s. 9d.) that another fast sailing vessel was engaged, the s.v. " Marlborough," and these two vessels continued to carry meat for several voyages, until tragedy overcame

them ; both vessels were lost within six weeks of one another in the icebergs off the Horn. There is, however, no doubt that this marked the turning point for the New Zealand farmers, who were at that time in a very bad way.

Many shipping companies by now were having steamers fitted, and new ones constructed, for the carrying of frozen meats from the Argentine, Australia and New Zealand, and the stockraisers in these countries were alive to the immense possibilities of the Meat Export Trade, and the necessity of improving the flocks and herds which had been bred chiefly for wool and hides.

Pedigree sheep were imported into New Zealand and beef into Australia and the Argentine, the variety of breeds used depending on the nature of the country and the pasturage. The Argentine growers greatly improved their cattle by purchasing champion bulls from England, by taking a census of the cattle then in the country, and by introducing registers and herd books. This had the good effect of practically eliminating the old native breed which had been introduced from Spain over 300 years ago, since these beasts, though suitable for the salting and sun-dried works, were quite unsuitable for the English market.

As the pure bred and cross-bred herds increased new methods of feeding were introduced, these purer animals requiring more feeding than the hardy thick skinned native animals. Alfalfa grass was sown, climate conditions being excellent, which rapidly took hold, with the result that to-day Argentine herds enjoy the finest feeding pastures in the world, thus producing some of the best meat that can be seen anywhere.

The growth of the Argentine Meat Export trade coincided with the decline of the U.S.A. Export trade, as the meat in that country was required for internal use.

While the frozen meat trade was in full swing, the shipping of chilled meat practically ceased, coming to a standstill during the Great War. Despite the fact that chilled beef as a marketable article is superior to frozen beef, one of the reasons why it was not adopted was that engineers thought that the life of chilled meat was limited to about 18 days, yet in August, 1894, the s.s. " Port Pirie " was loaded with 1,000 quarters beef to carry to England in a chilled state, but on the homeward run it was found that to save the meat it had to be frozen down. Three more trials were made in different vessels, carrying the meat at 28½° F., and of these one consignment was successful. The next attempt was a shipment of a few quarters in 1896 in the s.s. " Urmiston Grange." This meat had been dipped in oil prior to shipment to prevent the formation of moulds, and on arrival in England the meat was compared with the American chilled, but adverse opinions were passed, and so this trial was also a failure.

Nine years later New Zealand made a move, and 1,200 quarters of beef were shipped on board the s.s. " Tokomaru " at Dunedin by the New Zealand Refrigerating Company. Through various causes the voyage was a long one, and on discharging the meat in London it was found to be heavily infected by Black Mould, and the Port Sanitary Authority seized the whole consignment. Like many other experiments it failed owing to the lack of knowledge of how to prevent the development of mould, and was a total loss to the shippers.

Argentine entered into the chilled beef trade in 1901 ; after experimenting for 18 months, The River Plate Fresh Meat Co. fitted a chamber in the s.s. " Zuleika " to hold 500 quarters beef. After the vessel had made three successful voyages, arrangements were made with the Royal Mail Lines to continue carrying on the trade. By 1908 the chilled beef industry had become a successful trade as far as the South American shippers were concerned, and several of the large packing firms built or acquired freezing works in the Argentine.

Although the chilled meat trade was now an established fact on the engineering side, very little advance had been made on the biological side, and in consequence extensive and serious losses from mould occurred.

Much research was made on this problem, and later J. A. Luiley brought out a sterilising plant, the system being to blow a sterilising agent into the chamber while empty, and again after the meat had been hung. During the voyage, the return air from the chambers was passed over sticks of chloride of calcium, and as the air was again drawn back to the chambers it passed through rotating discs kept moist with sulphuric acid. However, it was not long before it was realised that cleanliness was the chief factor, and straight forward chilling and freezing systems were instituted both for plants and vessels.

Both Australia and New Zealand desired to ship chilled meat, but how was it to be done in view of the long period at sea. The answer came from the results of experiments carried out in the laboratories of the Low Temperature Research Station at Cambridge, where it was found that chilled beef could be maintained in first-rate condition with the aid of carbon dioxide. So in July, 1933, we in London examined the first consignment of gas treated chilled meat, brought over from New Zealand by the s.s. " Port Fairy." This meat found ready buyers, in fact, the system was so strikingly successful that regular shipments of increasing quantities are now arriving from both Australia and New Zealand.

The days of experiments are not yet over ; 2½ years ago a South American firm placed 12 hinds of beef in the chilled chambers of the s.s. " Andalucia Star," each quarter had two steel spikes fitted one in the leg and the other in the wing end. Attached to the spikes were electric wires connected to the engine room, and during the voyage a light current of electricity was passed through the meat every few hours, thus slightly raising the internal temperature and preventing the formation of ice

crystals, but on discharging in London the meat did not compare well with the usual chilled. Another experiment now in progress, is to hasten the chilling of the deep parts of the meats while the quarters are in the chilling rooms, by inserting into the heavy beef rounds a hollow stainless steel needle containing a small tube through which cold brine flows, passing back between the tube and the needle casings ; by this means the whole quarter cools at a uniform rate.

Carrying meat in a frozen state and defrosting 48 hours before delivery, has been tried with some measure of success.

The storage of frozen meats became a necessity as cargoes increased, and in 1881 the first cold stores were constructed, a very crude affair by modern standards, but nevertheless successful. A vault beneath a warehouse in the Victoria Dock was fitted up, and a small cold air machine installed, but a few years later these stores were reconstructed, and very much enlarged. During the same period two floating hulks did duty as cold stores, being moved about the Docks as required. Cold storage is now an intimate branch of the meat trade, and has reached a high state of efficiency.

During the year 1938, London received from all sources 691,000 tons of frozen and chilled meats ; representing 66 per cent. of the total imports of Meats for the United Kingdom,

In the preparation of this note recourse has been had to information in the following published works, the value of which the author desires to acknowledge :—

Gritchell, J. T., and Raymond, J.—" A History of the Frozen Meat Trades."

Smith, Sir Frank E., K.B.E.—The Hardy Memorial Lecture, 1934.

Dunlop Young, Lt.-Col. T., O.B.E., M.R.C.V.S., D.V.S.N.—" Fifty Years' Progress in Meat Inspection."

ALIENS ORDER, 1920.

Medical Inspection of Aliens.

During the year 24,957 Aliens (excluding Alien Seamen) and 5,420 Transmigrants landed in the Port of London.

Medical Certificates under the Aliens Order were issued in respect of seven Aliens as follows :—

Lunatic, Idiot, or Mentally Deficient	3
Undesirable for Medical reasons	3
Physically Incapacitated	1
Total	7

TRAINING SHIPS.

The six Training Ships now within the district of the Port of London Health Authority are as follows :—

"Cornwall"	Lying at Denton.
"Exmouth"	,, Grays.
"Warspite"	,, Grays.
"Worcester"	,, Greenhithe.
"Stork"	,, Hammersmith.
"Triton"	,, Gravesend.

The following cases of Infectious Disease occurred on these vessels during the year :—

"Triton" (Gravesend Sea School)	9 Scarlet Fever. 5 Diphtheria.
"Warspite"	2 Scarlet Fever. 1 German Measles.
"Stork"	1 Pulmonary Tuberculosis.

BYE-LAWS—OFFENSIVE CARGOES.

Four cases of infringement of the above-mentioned Bye-laws were reported during the year. Written intimation was sent to the owners of the barges concerned.

The draft new Bye-laws in regard to the carriage of offensive cargoes are still the subject of discussion with the Minister of Health.

PARROTS (Prohibition of Import) REGULATIONS, 1930.

916 parrots, &c., came under the notice of your Officers during the year. 119 Notices were issued in respect of 174 parrots, &c.

Number exported in respect of Notices served	165
Number destroyed (Notice served to export)	9
Number destroyed (Notice not served)	2
Number admitted under Ministry of Health permits	56
Bodies of birds sent for investigation to the Ministry of Health ...	8
Number transhipped on through Bills	676
	916

In addition, two parrots were reported as having escaped from a vessel during the voyage.

DANGEROUS DRUGS.

During the year three Certificates authorising the purchase of scheduled Dangerous Drugs were issued by your Medical Officer as follows :—

Date. 1938.	*Person authorised.*	*Drugs specified.*
Feb. 2	Master of ss. " Bajamar "	20 tablets Cocaine Hydrochloride gr. ½.
May 31	Master of ss. " Tampico "	25 tablets Morphine Hydrochloride gr. ⅛.
Aug. 19	Master of ss. " Algol "	20 dms. Tanndraaper (Toothdrops).
		Chloral Hydrate ... ... 9·75.
		Camphor ... ... 9·75.
		Cocaine Hydrochlor ... 0·50.

These Certificates were issued under the Dangerous Drugs (No. 3) Regulations, 1923, amending the Dangerous Drugs Regulations, 1921, Regulation 15 of which is as follows :—

" If a foreign ship in any port in Great Britain requires to obtain a supply of any of the drugs in order to complete the necessary equipment of the ship, the Master of the Ship is authorised to purchase and be in possession of such quantity of any of the drugs as may be certified by the Medical Officer of Health of the Port where the ship is (or in his absence by the Assistant Medical Officer of Health of the Port) to be necessary for the purpose, the quantity not to exceed what is required for the use of the ship until it next reaches its home port. The certificate given by the Medical Officer or Assistant Medical Officer of Health of the Port shall be marked by the supplier with the date of the supply, and shall be retained by him and kept available for inspection."

PUBLIC HEALTH (AIRCRAFT) REGULATIONS, 1938.

The above-mentioned Regulations which came into force on the 1st July, 1938, are designed to prevent the introduction of infectious diseases into this country through the medium of air-borne traffic, and resemble in their general scope the Port Sanitary Regulations, 1933, which were made to secure a similar object in regard to water-borne traffic. The Regulations have been made in conformity with the International Convention for Aerial Navigation, 1933.

The responsible Authority for the execution of the Regulations is :—

(1) In regard to an aerodrome maintained by a Local Authority, but situated in the district of another Authority, the maintaining authority, with the proviso that the two Authorities concerned may agree on such terms and conditions as they think fit, and with the approval of the Minister, that one of them shall undertake the execution of, and appoint the officers for executing the whole or specified provisions of the Regulations at such aerodrome.

This may be of interest in relation to the proposed aerodrome at Fairlop.

(2) The Port Health Authority, if the aerodrome is situated in a Port Health district.

(3) The Local Authority, if the aerodrome is situated elsewhere than in a Port Health district.

The Authority responsible for the administration of the Regulations must appoint a staff and provide or arrange for the provision of the premises, apparatus and equipment necessary for the execution of the Regulations.

It will be necessary to make arrangements for the medical inspection of persons arriving or departing on foreign-going aircraft, and for the other services such as hospital accommodation, ambulance transport, laboratory examinations, disinfection, disinsectisation, and possibly deratisation.

There is not at the present time any aerodrome within the Port Health district, and it does not appear likely that one will be established in the near future, but these Regulations will no doubt affect the arrangements to be made at the aerodrome which, I understand, the Corporation propose to establish at Fairlop.

ASSOCIATION OF PORT HEALTH AUTHORITIES OF THE BRITISH ISLES.

The Autumn meeting of the Association of Port Health Authorities of the British Isles took place at the London School of Hygiene and Tropical Medicine, Gower Street, London, W.C. 1, on the 17th November, and was attended by your Chairman, Captain Robert Hewett, your late Chairman, Mr. Alfred Robertson, your Permanent Representative, Mr. Frederick Whittingham, J.P., as well as by your Medical Officer of Health.

Your Medical Officer gave the following address to the Members on the work of the International Health Office of Paris :—

QUARANTINE BY SEA, LAND AND AIR. AN ACCOUNT OF THE WORK OF THE INTERNATIONAL HEALTH OFFICE, PARIS

BY

DR. M. T. MORGAN, *Medical Officer of Health, Port of London, President of the International Health Office, Paris.*

MR. PRESIDENT, LADIES AND GENTLEMEN,

I would like at once to take this opportunity of expressing my great pleasure in renewing acquaintance and contact with my friends and colleagues of this Association and my appreciation of the great honour the Association has done me in inviting me to give a brief survey of the work of the International Health Office of Paris.

Time does not permit me to give more than a brief historical account of the origin of the Paris Office ; suffice it to say that it was established by an International Agreement signed at Rome on 9th December, 1907, by 12 countries—Great Britain, Belgium, Brazil, Spain, the United States of America, France, Italy, the Netherlands, Russia, Switzerland, Portugal and Egypt.

The moving spirit of its creation was that distinguished French Ambassador, Monsieur Camille Barrère, who has displayed for many years past great interest in the prevention of the spread of epidemic disease and has taken an active part in the work and growth of the Paris Office since its foundation.

The duties and functions of the Paris Office are to be found in Articles 4 and 5 of its Statutes of Constitution, which read as follows :—

> " ARTICLE 4.—The principal object of the Office is to collect and bring to the knowledge of the participating States the facts and documents of a general character which relate to public health, and especially as regards infectious diseases, notably, cholera, plague, and yellow fever, as well as the measures taken to combat these diseases."
>
> " ARTICLE 5.—The Governments shall inform the Office of the steps taken by them to ensure the application of International Sanitary Conventions. The Office shall suggest the modifications which it might be advantageous to introduce into the provisions of these Conventions."

You will see, therefore, that it has a wide field to study ; in practice it restricts itself principally to the study of communicable diseases and of measures for their prevention and control.

While it is always prepared to study any matters of public health interest, it leaves, by tacit consent, much of, if not all, the field of social medicine and hygiene to its younger brother, the Health Organisation of the League of Nations.

The executive duties of the Paris office are carried out :—

(*a*) By a Permanent Committee composed of Delegates sent by each country that has signed the Rome Agreement ; and

(*b*) By a Secretariat comprising a Medical Director, a lay Secretary and two Medical Officers with the necessary subordinate Staff.

The premises of the Paris Office are situated on the left bank of the Seine at 195, Boulevard St. Germain.

You will recollect that I stated that the Rome Agreement establishing the Paris Office was signed, at the time of its conclusion in 1907, by 12 countries. That number has steadily grown, and the Agreement has now been signed by no less than 54 countries, including, of course, all the great maritime powers.

The Permanent Committee has, therefore, 54 members, each representing one of the signatory countries, many of whom are the Chief Medical Officers of the State Health Service of their country.

The Permanent Committee meets twice a year, generally in May and October, for a period of a week to 10 days. It has a large number of communications, reports, etc., to deal with at each session—in recent years about 80 to 100—on progress in the study of epidemic disease ; on administrative measures recently adopted in some country or other in connection with quarantine or other Port Health practice ; on a number of complaints concerning such matters as the arbitrary fumigation of ships carrying valid deratisation or exemption certificates, or on the interpretation of some Article or some practice arising out of the application of the International Sanitary Conventions.

Much of the work of the Permanent Committee is carried out by means of a number of Standing Commissions which meet during each session, and make a report to the main Committee.

Each Commission is composed of members who are particularly interested in the subject with which the Commission deals, though the rule is that any member of the Permanent Committee may attend a meeting of the Commissions and take part in the debates.

These Commissions, and a brief account of the work they do, are as follows :—

1. *The Quarantine Commission.*—This Commission deals with all matters arising out of the interpretation and application of the International Sanitary Conventions.

You will recognise some of its work when I tell you that it recently drew up the International Agreement for the abolition of Bills of Health and Consular visas thereon ; it was also responsible for the International arrangement for the sending of wireless quarantine messages by ships approaching a port, and the International arrangement whereby Port Health Authorities transmit to the Health Authorities of other countries, by the most rapid means possible, the names and addresses of passengers, travelling overland, who have disembarked from a ship on which one or other of the five convention diseases, plague, cholera, typhus fever, small-pox or yellow fever is present or suspected to be present.

The Commission usually has a number of complaints to consider, generally on the application of Article 28 of the Convention which, as you know, deals with the periodic inspection of vessels for the reduction of their rat population, and the issue of certificates of fumigation or exemption from fumigation.

It issues a report of its discussions at the end of each meeting and no doubt many of you will have read these reports, extracts from which are published, from time to time, in the Weekly Record of the Ministry of Health.

2. *The Yellow Fever Commission.*—This Commission was set up some years ago to review the important developments which were taking place in the detection, control and above all the prevention of the spread of yellow fever.

As you all know, the brilliant discoveries of Stokes which culminated in the experimental transmission of yellow fever to the India monkey, the *Macacas rhesus*, opened up a vast field of investigation into the properties of the yellow fever virus, of measures for its detection and for the prevention of its spread.

The disease is, at the moment, going through a curious phase in its history. Classical yellow fever has given place of importance to the so-called Jungle Yellow Fever which is not conveyed by the stegomia mosquito.

The so-called " mouse protection test " for detecting immunity in humans, and the viscerotome for taking specimens of infected liver of fatal cases, have shown a wide and unexpected distribution of the yellow fever virus throughout Brazil and in Central Africa, even as far east as the Nile.

In the meantime, thanks to the brilliant work of Sawyer and his colleagues in the yellow fever laboratories of the Rockefeller Foundation at New York, a fixed attenuated virus has been obtained which, when inoculated in minute quantities, seems to confer a strong and lasting immunity to the disease in humans without any accompanying risk.

Advantage of this has been taken to immunise during this year over a million inhabitants of the rural areas of Brazil, and a similar policy in being contemplated for Central Africa.

These and kindred subject matter are the subject of discussion and report by the Yellow Fever Commission.

3. *The Cholera Commission.*—Cholera is no longer of much interest to this country nor probably to Western Europe, but its study is of fundamental importance to the Middle and Far East.

Thanks to the researches of Taylor and his collaborators in India on the properties of pathogenic cholera vibrios and of non-pathogenic water vibrios, we are on the threshold of an entirely new conception of the epidemiology of cholera, which still claims its tens of thousands of victims annually in India, and is an ever present scourge in the Far East.

At the instigation of the Cholera Commission a new specific toxin has been perfected by Taylor in India and by Gardner and Bruce White in London, for the diagnosis of true cases of Cholera.

The highly selective serum prepared from this toxin will be of great value in distinguishing true from pseudo cholera and eventually, it is hoped, in defining the role, if any, played by the so-called healthy cholera carrier.

The Cholera Commission studies these researches and recommends such administrative action as can be translated from them.

4. *The Pilgrimage Commission.*—This Commission deals with all matters concerning the safety, welfare and health of Moslem Pilgrims journeying to and from Mecca and with the practical measures designed to ensure the healthiness of Saudi Arabia and of other pilgrimage countries susceptible to the invasion of cholera, plague, smallpox and other epidemic diseases that might arise from this annual mass movement of some 100,000 people.

The Permanent Committee of the Paris Office at its last session decided, at the request of the Saudi Arabian Government, to undertake a review of the existing pilgrimage clauses of the 1926 Convention with a view to the amelioration of quarantine measures at present imposed upon pilgrims, seeing that cholera, nor indeed any serious epidemic disease, has not appeared among the pilgrims for a great many years and is not likely to reappear so long as the countries of origin continue to immunise pilgrims, before departure, against cholera and smallpox.

5. *The Brussels Agreement Commission*, so-called because it occupies itself with the measures taken under the International Agreement signed in Brussels in 1924 for the control of venereal disease among seamen.

The Commission is responsible for compiling the list of clinic centres established in ports throughout the world at which seamen can obtain free consultation and treatment.

The List 7A, with which you are all acquainted, compiled by the Ministry of Health, is a faithful reproduction in English of the Paris Office list.

The Commission recently undertook a thorough review of the working of the Brussels Agreement, and I am glad to say found it highly satisfactory.

6. Last, but not least, among the standing Commissions, is one comparatively recently created, known as the *Quarantine Commission for Aerial Navigation*.

This Commission was first set up in 1930, and was entrusted with the preparation of a code of quarantine procedure for aerial navigation, in view of the rapidly increasing international aerial traffic, and of the epidemiological problems to which it was giving rise.

The Commission, of which I had the honour to be Chairman for several years, and was, therefore, to some extent responsible for its work, after much discussion and study, produced what you all now know as the International Sanitary Convention of Aerial Navigation, 1933.

It may be said, and I believe not a few of you consider, that the Convention is not altogether suitable in its methods, nor in their application to certain countries, including Great Britain, and I have to accept the truth of such contentions.

But I would ask you to appreciate the many difficulties and conflicting interests that arise in preparing any international code of procedure reasonably applicable to all countries and embracing all circumstances however rare or unusual they may be.

It must be remembered that the measures laid down are maximum measures that may be taken, and are as much in the interests of the protection of our aircraft travelling abroad from excessive interference, as in the protection of this country from the invasion of epidemic disease.

In drawing up the Convention the Commission had to employ a considerable amount of guesswork as to developments in aerial navigation likely to take place in the near future, and, as often happens, their guesswork has not always hit the mark satisfactorily.

The fact is that aerial navigation has developed so rapidly and extensively, even now covering the earth with a network of main and subsidiary routes that rules laid down in 1933, even with the best endeavours to anticipate what would be likely to happen in five years time, are already out of date.

Those of you who have used air lines to and from the Continent from this country during the past few years, will remember how on one occasion you left or arrived at Croydon, on the next occasion you found yourself at Gatwick, on a third occasion you returned to Croydon, and only recently, you again changed and visited Heston.

Is it to be wondered, therefore, that the health administrator has become somewhat confused by these butterfly changes, and that his code of procedure has been subjected to severe strains.

The Commission has done its best to grapple with the many problems as they have arisen, often without much success.

I will not trouble you with the international complications that have resulted from the fear of certain countries, susceptible to yellow fever, of its importation by aircraft, and I will restrict my observations to two problems of fundamental importance on which the Commission have recently been working.

The first, again not of much interest to this country, is nevertheless of vital importance to others and to our imperial routes—I refer to the measures for the destruction of mosquitoes and other insect vectors of diseases in aircraft.

You will at once appreciate the potential dangers of these unauthorised passengers. Fortunately, thanks largely to the co-operation of the Imperial Airways Company, a valuable pyrethrum insecticide with a watery basis (a very important point in view of inflammability) has recently been perfected, as has also apparatus for its dissemination through the cabins and other spaces of the aircraft in a droplet cloud which, by its rapid diffusion and penetration into all parts of the fusilage, destroys mosquitoes in a very short space of time.

Furthermore, this watery suspension has no unpleasant effect on the crew and passengers, and can, therefore, be applied during the voyage, thus saving time—that vital element in aircraft transportation.

The second point to which I will refer touches closely every public health administrator in this country who has, under his jurisdiction, one or more Customs Aerodromes for foreign traffic.

The Commission at the outset of its deliberations set its face resolutely, and in my opinion quite rightly so, against the practice of requiring Bills of Health for aircraft, but unfortunately they were unable to devise a really satisfactory and practical alternative.

What they did was to make use of the journey log-book, which every aircraft must carry, and to require that any facts relevant to public health which had arisen on the aircraft during the course of its voyage, any sanitary measures undergone by aircraft before departure or at places of call and information concerning the appearance in the country from which the aircraft has departed, of any of the five Convention diseases, should be entered in the journey log-book and thus be available for the information of the health officers of the aerodromes of arrival.

Unfortunately much of this information and particularly information concerning the health of the regions whence the passengers have come is not, in practice, entered into the log-book for the simple reason that it is not practicable to do so and some other means will have to be devised to meet the case. I believe the United States Government has hit upon a happy and at the same time simple solution.

At present, all aircraft coming up the East coast of South America, collecting passengers who may have been in contact with yellow fever, are required to furnish such passengers with a simple form of declaration in which the passenger records the place he has stayed in during the six previous days and nights before embarkation.

If, on arrival in the United States he is found to have stayed in a place suspected of yellow fever he is put under surveillance for the balance of the six days following his departure from that place.

I think a similar declaration will, sooner or later, have to be required of all passengers and crew travelling on international aircraft routes ; not for six days, however, but for fifteen days.

These declarations are collected by the steward or the assistant pilot shortly before arrival and are handed to the Boarding Medical Officer at the aerodrome.

The Boarding Medical Officer looks through the declarations and picks out any passengers he may have reason to suspect, giving them special attention.

It is not claimed that this system is fool-proof for there is nothing to prevent a passenger, coming from say a typhus infected area, booking his passage to a certain point and then taking a ticket from that point onwards. In this way or by making a false declaration he can easily get round any control that may be possible, unless it is eventually decided internationally that some suitable entry should be made on his passport. Most countries, however, are, at present, averse to the entry of any information on a passport, other than of a diplomatic nature.

Before terminating this brief and somewhat sketchy review of the present activities of the Paris Office I must refer to two of its main activities.

First the system of rapid notification by the countries signatory to the International Sanitary Conventions of information concerning the outbreak or continued existence of the five Convention diseases, plague, cholera, typhus, yellow fever and smallpox, and the distribution of this information among all other signatories.

This system has grown up since 1926 and has become increasingly comprehensive, rapid and efficient every year.

The Paris Office notifies outbreaks of serious epidemics by telegraph, otherwise the information is sent by weekly bulletin and from it is compiled, in the Ministry of Health for the use of this country and the British Empire, what you all know as the Weekly Record of Infectious Disease.

The second general activity is that imposed upon it by Article 10 of its Statutes, to wit, the publication of a monthly bulletin which shall comprise especially :—

1. Laws and general or local regulations promulgated in the various countries respecting transmissible diseases ;
2. Information respecting the spread of infectious diseases ;
3. Information respecting the works executed or the measures taken for improving the healthiness of localities ;
4. Statistics dealing with public health ;
5. Bibliographical notes.

The Paris Office has faithfully carried out this duty and publishes each month an excellent and most informative bulletin of epidemiological and relevant information.

One of the principal features of this bulletin, and I venture to say a unique one, for I have not seen it so fully given in any other publication, is the section giving a summary of the various Conventions, laws and health regulations recently put into force in various countries.

The bulletin has not received the publicity it deserves largely because it is at present published only in French, but I hope that arrangements will be made in the near future for an English edition which I am sure will command a wide circulation.

I should now like to devote such time as I have left to a brief survey of the work which the Paris Office has been called upon to carry out in the immediate future.

But before doing so I must refer to an important Conference which has just taken place in Paris under the auspices of the French Government, at the express desire of the Egyptian Government, to give effect, if possible, to the long felt wish of that Government to abolish the International Quarantine Board of Egypt.

That Board, which has been in existence for over one hundred years, carries out the measures laid down in Parts II and III of the 1926 Convention, that is, all the quarantine measures applicable to traffic with Egyptian ports, on the Suez Canal and to the Pilgrimage.

Forty-eight countries signatory to the Convention were represented at the Conference and after much discussion and negotiation it was unanimously decided to grant Egypt her desire that she herself, under certain safeguards, should take over the work of the Egyptian Quarantine Board.

To that end a Convention was drawn up abolishing a certain number of Articles in Parts II, III and IV of the 1926 Convention and modifying others.

This modifying Convention was signed in Paris on October 31st last and will come into force after four Governments with members on the Quarantine Board have appended their ratifications.

I have referred to this Conference first, for the reason that the Paris Office took a prominent part in the preliminary discussions leading up to the Conference and was largely responsible for preparing the draft modifications of the 1926 Convention necessary to give effect to the abolition of the Quarantine Board and the eventual transfer of its quarantine service to the Egyptian Health Authority ; secondly, because by unanimous resolution of the Conference a highly important duty was imposed upon the Paris Office.

The Conference requested the Paris Office to undertake a preliminary study of the International Sanitary Convention as a whole, and to make recommendations with a view to bringing its terms and code of procedure into line with modern quarantine practice and with the new conditions which have developed since 1926, the date when the present International Sanitary Convention was brought into force.

Their recommendations would form a basis for discussion at an International Sanitary Conference to be convened in due course for the purpose of drawing up a new International Sanitary Convention.

This, of course, is a big undertaking, not to be embarked upon lightheartedly, but with a due sense of responsibility in the knowledge that whatever recommendations may be adopted may profoundly modify quarantine procedure in every country in the world, to say nothing of national quarantine regulations.

I believe there will be few here who will disagree with my view that great progress has been made during the past decade in the prevention of epidemic disease and the control of its spread from country to country. The time has therefore come, or will come very shortly, when Port Health Authorities may afford to be much more lenient as regards some of the measures they now impose on international traffic though they must, no doubt, continue to maintain their watchfulness, and to adopt strict precautions in other directions.

What, for example, are the risks to which this country is still exposed from the introduction of serious epidemic diseases ?

By reason of biological conditions or of geographical situation or thanks to our highly developed health organisation, or to a combination of these circumstances, this country has, I believe, no longer anything to fear from the introduction of human plague, cholera, typhus or yellow fever.

In fact, there are only two diseases which continue to give us serious cause for preoccupation, first the introduction of rat plague and secondly smallpox.

Even rat plague is nothing like the menace it used to be for these shores. As you know, the principle of periodic inspection of ships and their deratisation if found infested has, thanks to its strict application in practically every country with a sense of responsibility and to the spirit of co-operation which has everywhere been displayed, reduced the rat population on ships to a most remarkable extent.

Recent investigations in ports of the United States of America have shown that 90 per cent. of the foreign shipping entering these ports are free, or practically free, from rats, and that of the 10 per cent. which are " ratty " only 2 per cent. are seriously infested ; furthermore those found heavily infested are almost invariably the same ships.

You will remember that a similar investigation of the shipping in a number of ports in the British Isles revealed precisely parallel conditions.

The time is coming, therefore, when Port Health Authorities will be able to draw up a " black list " of ships in the hope, perhaps, of eventually and progressively reducing this list by imposing on the ships figuring therein measures which will render their lives intolerable unless they mend their ways.

Unfortunately the rat population of certain ports has not fallen concurrently with that of ships, and vigilance against the carriage of rat plague must therefore continue to be exercised.

One of the primary duties of the Paris Office is by repeated persuasion to try to prevail upon such Port Health Authorities to take still more active measures to rid their ports of plague.

Smallpox to my mind remains the really serious menace, and in some ways an increasing menace.

The development of sea transport and particularly of the speed, even of " trampers," has brought about this change that, whereas only a few years ago the Port of Marseilles, for instance, had the doubtful privilege of being the first port on the route from the East to receive cases of smallpox, ports in this country nowadays often enjoy that privilege.

Should we, therefore, advocate more stringent measures for the detection of this, to us, most dangerous disease and, if so, what should these measures be ? And in this connection let is not forget the super-added risk of the introduction of smallpox by aircraft.

In this connection I venture, Mr. President, to suggest that no body in this country is more appropriate nor more fitted than this Association to carry out a study of these problems with a view eventually to tendering advice and counsel to the Ministry of Health, and through the Ministry of Health to the International Health Office, Paris, now charged with the revision of the International Sanitary Convention.

In conclusion, may I express my faith in the value of the International Health Office to this country, which, as you know, is always the biggest target to hit at, and which suffers more than any other country from indiscriminate and excessive measures imposed upon its transport and its commerce.

I am not exaggerating when I state that each and every member of the Paris Office honestly endeavours to improve international health relationships and that few, if any, are impelled by purely selfish motives, nor by political considerations. Indeed the work of the Paris Office is, particularly these days, a welcome demonstration that countries are prepared, when moved by the highest motives, to put themselves to inconvenience and often to expense if, in doing so, they can further the progress of trade and commerce, and the health and welfare of all concerned.

CANAL BOATS ACTS.

Your Medical Officer made on 10th January, 1939, the following report on the steps taken to carry into effect the provisions of Part X of the Public Health Act, 1936, relating to Canal Boats, within the district of the Port of London Health Authority during the year ended 31st December, 1938.

This Part of the Act applies within the whole district under the jurisdiction of the Port of London Health Authority, including the River Thames and Docks, as a "canal" for the purposes of the Act "includes any river, inland navigation or lake, and any other waters situate wholly or in part within a county or county borough, whether those waters are or are not within the ebb and flow of the tide."

The navigation, in addition to the River Thames and Docks, includes the following navigable tributary rivers and creeks of the River Thames :—

On the right bank—

From Teddington downwards :—

- Wandsworth Creek (River Wandle).
- Hay's Dock.
- St. Saviour's Dock.
- Part of the Grand Union Canal within the Surrey Commercial Dock.
- Deadman's Dock.
- Deptford Creek (River Ravensbourne).
- Dartford Creek (Rivers Cray and Darenth).
- The entrance to Gravesend Canal.
- Cliffe Creek.
- Yantlet and Coalmouth Creeks.
- Part of the River Medway and of the Swale.

On the left bank—

From Teddington downwards :—

- The entrance of the River Brent.
- Hammersmith Creek.
- Chelsea Creek.
- Grosvenor Dock.
- Limekiln Creek.
- Bow Creek (River Lea).
- Rainham Creek (River Ingrebourne).
- Mucking Creek.
- Thames Haven and Hole Haven.
- Havengore Creek.
- River Roach as far as Rochford.

The whole of this area is divided into three districts, known as the Upper, Middle and Lower; each district is in charge of an Inspector, as follows :—

Upper District	Teddington to Greenwich	Inspector McDermott.
Middle District	Greenwich to Erith	Inspector Dring.
Lower District	Erith to the seaward limits of the Port (including part of the River Medway).	Inspector Beattie.

Docks.

The Docks are divided into four districts, known as the Central, Eastern, Western and Gravesend Districts :—

Central District	West India Dock	Inspector Wright.
	South West India Dock	Inspector Wright.
	Poplar Dock	Inspector Wright.
	Millwall Dock	Inspector Mackie.
	East India Dock	Inspector Mackie.
	Surrey Commercial Dock	Inspector Mackie.
Eastern District	Royal Albert Dock	Inspector Gray.
	Royal Victoria Dock	Inspector Hundy.
	King George V. Dock	Inspector Hundy.
Western District	London Dock	Inspector Madeley.
	St. Katharine Dock	Inspector Madeley.
	Regent's Canal Dock	Inspector Madeley.
Gravesend District	Tilbury Dock	Inspector Edwards.
	Left bank of the River, from Purfleet down	Inspector Edwards.
	Right bank of the River, from Northfleet down.	Inspector Edwards.

Inspections.

The total number of inspections for the year was 257, representing a nett number of 199 boats. The remainder—58—represents repeated visits by Inspectors of this Authority.

The number of boats not conforming to the Act was 36 (inspected on 38 occasions), or 14·78 per cent. of the total inspections, the percentage for the previous five years being 17·05.

New Boats Registered.

No new boats were registered during the year.

Infringements.

The following infringements of the provisions of the Act were reported during the year :—

Registration.

Nil.

Notification of Change of Master.

Nil.

Absence of Certificate of Registration.

1938.			
April 13	"Phaeton"	Registered Rickmansworth	No. 73.
„ 13	"Purton"	„ „	No. 104.
„ 13	"Purley"	„ „	No. 102.
May 13	"Poplar"	„ „	No. 101.
„ 13	"Starling"	„ „	No. 124.
„ 13	"Brian"	„ „	No. 131.
„ 13	"Rose"	„ „	No. 127.
Aug. 29	"Nell"	„ Brentford	No. 192.
Sept. 13	"Bury"	„ Rickmansworth	No. 76.
Oct. 12	"Bordersley"	„ Brentford	No. 616.
„ 14	"Ruislip"	„ Rickmansworth	No. 107.
„ 14	"Dido"	„ Port of London	No. 466.
„ 14	"Bury"	„ Rickmansworth	No. 76.
Nov. 2	"Burnham"	„ Brentford	No. 594.
„ 2	"Belmont"	„ „	No. 595.
„ 10	"Ida"	„ Uxbridge	No. 575.
Dec. 1	"Chesham"	„ Rickmansworth	No. 153.

Certificate not Identifying Owner with Boat.

Nil.

Marking.

1938.		
Nov. 15	"Begonia"	Registered Uxbridge No. 586.

Overcrowding.

Nil.

Partition Separating Sexes.

Nil.

Males over Age.

Nil.

Females over Age.

Nil.

Cleanliness.

1938.			
July 20	"Langho"	Registered Rickmansworth	No. 82.
„ 20	"Towcester"	„ „	No. 144.
Aug. 3	"Shirley"	„ „	No. 121.
Sept. 13	"Norton"	„ „	No. 83.
„ 13	"Bury"	„ „	No. 76.
„ 13	"Otley"	„ „	No. 96.
„ 13	"Bexhill"	„ „	No. 596.
Oct. 14	"Ruislip"	„ „	No. 107.
„ 14	"Halsall"	„ „	No. 79.

Painting.

1938.			
Feb. 15	"Buxton"	Registered	Coventry No. 540.
Sept. 13	"Bexhill"	„	Brentford No. 596.
Oct. 20	"Otley"	„	Rickmansworth No. 96.

Ventilation.

Nil.

Dilapidations (including defective bulkheads).

1938.			
Jan. 1	"Ribble"	Registered	Brentford No. 454.
„ 12	"Leam"	„	Coventry No. 301.
Feb. 15	"Barnes"	„	Brentford No. 620.
Mar. 3	"Southon"	„	Rickmansworth No. 116.
„ 15	"Zodiac"	„	„ No. 140.
„ 23	"Cleopatra"	„	Brentford No. 553.
May 13	"Hydra"	„	„ No. 496.
„ 13	"Orion"	„	Daventry No. 463.
Aug. 29	"Nell"	„	Brentford No. 192.
Oct. 14	"Ruislip"	„	Rickmansworth No. 107.
„ 20	"Bury"	„	„ No. 76.

Removal of Bilge Water.

Nil.

Without Pump.

Nil.

Refusal to Admit Inspector.

1938.			
Oct. 12	"Bordersley"	Registered	Brentford No. 616.
„ 12	"Camborne"	„	„ No. 625.

Absence of proper Water Vessel.

1938.			
Jan. 11	"Tay"	Registered	Coventry No. 309.
„ 12	"Leam"	„	„ No. 301.
April 7	"Carson"	„	Uxbridge No. 486.

Double Bulkheads.

Nil.

Notification of Infectious Disease.

Nil.

Register.

On the 31st December, 1938, there were 214 boats on the Register :—

Propelled by Tugs and Oars	192
„ „ Steam	15
„ „ Motor	7

TABLE OF CANAL BOATS CARRYING CHILDREN ON BOARD.

Year.	No. of Boats.	No. of Boats with Children.	No. of Children.	Average No. of Children per Boat.	Percentage of Boats with Children.
1929	82	20	96	4·80	24·39
1930	91	13	35	2·70	14·29
1931	108	20	40	2·00	18·52
1932	94	12	28	2·33	12·77
1933	87	14	28	2·00	16·09
1934	79	16	39	2·45	20·25
1935	93	29	53	1·81	31·18
1936	136	49	80	1·63	36·03
1937	252	105	162	1·54	40·24
1938	199	74	128	1·73	37·19

SUMMARY OF CANAL BOATS FOR THE YEAR ENDED 31st DECEMBER, 1938.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	TOTAL	Total for Years 1933.	1934.	1935.	1936.	1937.
New boats registered	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2	2	2	3
Registration owing to structural alteration ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Registration for other purposes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
No. of Inspections	16	15	33	23	25	—	24	10	34	27	45	5	257	205	131	129	167	257
Conforming to Acts and Regulations	13	12	29	19	20	—	22	8	30	20	42	4	219	189	117	106	132	254
Infringements in respect of :—																		
Registration	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	2	19
Notification of change of Master	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Absence of Certificate	—	—	—	3	4	—	—	1	1	4	3	1	14	6	6	6	25	36
Certificate not identifying owner with boat ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Marking, &c.	—	—	1	—	—	—	—	—	—	—	—	—	1	2	2	3	9	9
Overcrowding	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—
Partition separating sexes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Males over age	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Females over age	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cleanliness	—	—	—	—	—	—	2	1	4	2	—	—	9	—	—	1	2	5
Painting	—	1	—	—	—	—	—	—	1	1	—	—	3	2	—	1	2	1
Ventilation	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	1	—
Dilapidations (including defective bulkheads)	2	1	3	—	2	—	—	1	—	2	—	1	12	7	7	10	5	10
Removal of bilge water	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Without pump...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Refusal to admit Inspector	—	—	—	—	—	—	—	—	—	2	—	—	2	—	—	—	—	—
No proper water vessel	2	—	—	1	—	—	—	—	—	—	—	—	3	1	1	3	1	5
Double bulkheads	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Notification of infectious disease	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Detained for cleansing	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Proceedings taken	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Written cautions given	2	2	1	3	4	—	2	1	2	2	1	—	20	6	8	11	29	52
*Cautions attended to	—	1	5	—	3	—	—	1	4	2	2	1	19	9	12	15	24	40

Total number of canal boats registered by Port Health Authority since 1887 562
Registrations Cancelled 348
Actual number of canal boats on Register, 31st December, 1938 214

* Includes cautions given during previous years and attended to during 1938.

(*Signed*) M. T. MORGAN,
Medical Officer of Health, Port of London.

AIR-RAID PRECAUTIONS.

The first and most important problem confronting your Medical Officer shortly after he took up his duties with the Authority was the organisation of the Port Health Service in Air-raid Defence, and the protection of its premises and property, particularly Denton Hospital, in the event of a national emergency.

Consequently your Medical Officer lost no time in preparing a provisional scheme on the lines embodied in the following report, which he submitted to the Committee at their October meeting :—

26th September, 1938.

AIR-RAID AND OTHER PRECAUTIONS IN THE TIMES OF NATIONAL EMERGENCY.

" The present international situation seems to call for an early and indeed urgent consideration of the various conditions that might affect the normal work of the Port Health Authority in times of national emergency.

" It seems clear that much of the work of the Port Health Authority would have to be continued, even in the most difficult circumstances, in order to protect the health of the Port and the Country generally, and to safeguard the food supplies that enter the Port. It may also be desirable, if not necessary, to collaborate closely with the work, under emergency conditions, of the Port of London Authority, in order to assist that Authority in maintaining the efficiency and safety of the Port and in carrying out exceptional measures to that end.

" The first problem that arises in connection with the maintenance of the work of the Port Health Authority is the protection of the staff of the Authority in the course of their duties, so that they may carry them out with the maximum possible efficiency. This can best be done by training each and every member of the staff in the methods of self-protection against gas, so as to minimise the possibility of casualties. After consultation with your Chairman, your Medical Officer has made arrangements for the instruction of the whole staff in air-raid precaution measures for self protection. It is anticipated that by the time this Report comes before your Worshipful Committee for consideration, each member of the staff will have completed a full course of ten hours' instruction under the direction of Mr. A. W. Moore, one of your clerical officers in the central office, who is officially recognised under the Home Office Scheme as an Instructor in Air-raid Precautions.

" The second problem concerns the part that the Port Health Authority might play in the general scheme for carrying out the work of the Port in national emergency and in times of air-raids. A general review of Anti-gas Precautions for Merchant Shipping is given in the Air-raid Precautions Handbook No. 7, issued by the Home Office. Your Medical Officer has had occasion to confer with Rear-Admiral R. W. Oldham, O.B.E., the Port of London Authority Air-raid Precautions Officer. Admiral Oldham pointed out that under the Air-raid Precautions Scheme of the Port of London, ships which have been subjected to attack by lethal gas are required to fly the signal " Gas " on entering the Port, and to remain in an approved examination anchorage at a safe distance from the shore and other shipping until the Port Anti-gas Officer has visited the ship and made suitable arrangements. The duty of the Port Anti-gas Officer in this respect will be to ascertain whether the ship itself and the whole or part of the cargo has been contaminated, and it is suggested that since health and even safety to life is involved your Worshipful Committee's medical and other staff at the " Hygeia " could render great assistance to the Port Anti-gas Officer by acting as Assistant Port Anti-gas Officers, and by boarding ships flying the " Gas " flag, and after inspection issuing instructions for such further action as may be necessary should the ship or its cargo be found contaminated.

" With regard to Denton Hospital, it has been suggested that the Hospital could render invaluable services to shipping subjected to air-raids, by acting as a decontamination centre where persons and clothing from contaminated ships could be sent, and as a casualty clearing station for the gassed and wounded.

" The next stage in the system of defence concerns the handling of the ship and its cargo on arrival at the mooring set aside for dealing with contaminated ships. In normal circumstances the ship would enter dock for unloading, and your Food Inspectors, Sanitary Inspectors and Assistant Rat Officers would deal with the food cargo, if any, and with the state of health of the ship. Under the Air-raid Precautions Scheme of the Port it is suggested that your Inspectors might make an examination of the contents of each hold while the ship was lying at the decontamination berth and decide to what extent the cargo would require special decontamination treatment. It might be that every hold was so contaminated that cargo would have to be unloaded into lighters, part of it condemned forthwith for destruction, and the remainder dealt with specially in the manner considered most appropriate. On the other hand, only one or two holds might be considered affected, and it would be a question of dealing with this cargo in detail at the time of its unloading either in the river or at the quayside.

" It is obvious that in cases of contamination food cargoes will require very special attention. It may be possible in the case of certain food cargoes to decontaminate and then to release for consumption, but others will need individual attention, piece by piece, in the hope of saving a certain proportion as fit, after treatment, for human consumption.

" Admiral Oldham pointed out that one of the principal duties of the Port of London Authority will be the certification of cargo for export as free from contamination. He suggested that since the Officers of your Authority have great experience in dealing with foodstuffs for export or for re-export, their services might be employed in times of emergency in inspecting and passing not only foodstuffs, but all cargo coming into the Port of London for export, as free from contamination, and consequently safe to handle. This might necessitate somewhat complicated machinery for ascertaining whether the cargo had been contaminated at the point of manufacture or in transit to the docks. It is understood that arrangements for the setting-up of a co-ordinated procedure have already been investigated.

" It will be clear to your Worshipful Committee that there will be no margin having regard to the extra burden and expense laid on your Officers in the discharge of their normal duties, complicated by a state of emergency, for carrying out additional duties without appropriate assistance. It is understood that the Air-raid Precautions Authority of the Port of London fully realise this, and will be quite prepared, in any scheme that is adopted, to render such additional assistance as is necessary in the way of personnel and transport.

" The accompanying memorandum* which has been drawn up in consultation with Admiral Oldham, considers in greater detail a draft scheme of collaboration with the Air-raid Precautions Department of the Port of London Authority, and is submitted to your Worshipful Committee for consideration and approval, as indeed, is the scheme as a whole.

" (*Signed*) M. T. MORGAN."

On Wednesday morning, the 28th September, 1938, the international situation seemed so critical that your Medical Officer, after consultation with your Chairman, with Mr. Town Clerk and with Mr. Surveyor, decided to carry out immediate protective measures with a view to preparing Denton Hospital for the reception of wounded, contaminated and other cases from the River.

It was decided to render the Cubicle Block and connecting corridor, the Enteric Block, the Smallpox Block and the Cleansing Station, as far as possible gas-proof by preparing frames covered with wire netting and blanketing, to fit into the windows.

It was considered necessary to erect three air-locks ; one at the entry to the Cubicle Block, another at the entry to the Cleansing Chamber " dirty " side, and another at the exit from the Cleansing Chamber " clean " side.

The air-lock at the Cubicle Block would be easily made by filling in the open space between the pillars supporting the eaves at the Eastern end of the Block. The other two air-locks were to be built of solid wooden framework covered with " tongued and grooved " boarding.

* See Appendix XXX.

It was also considered necessary to dig a trench to receive the exhaust from the Washington Lyons Disinfector which, if used for decontaminating purposes, would discharge highly noxious gas. The trench to receive the exhaust pipe was to be dug 3 feet deep and 15 feet long, two perforated pipes to be laid along the bottom, and the trench to be filled in with clinker to within a foot of the top ; the whole to be covered over with earth.

Mr. Surveyor ordered 10,000 sand bags, to be filled with earth, to give some protection to the windows against high explosive blast.

The immediate difficulty in carrying out this work was the obtaining of the necessary labour, since all skilled labour, and indeed most of the casual labour available locally, had already been recruited.

Fortunately, your Medical Officer had on the staff of the Authority a fully qualified ship's carpenter, Mr. A. Cook, who is normally engaged in the Tilbury Docks. Mr. Cook was at once transferred to Denton Hospital, and given authority to purchase the necessary materials, and to obtain, in the Gravesend area, such labour as he could for his immediate requirements.

In the meantime your Medical Officer made an appeal for assistance to the whole of the staff on the Gravesend Station ; an appeal which was met with an immediate and most gratifying response.

The " Howard Deighton " was temporarily laid up, and the Boarding Medical Officer on duty was able to use the Customs' Launch, thanks to the courtesy of the Customs' Officials, who, indeed, have never failed in offering their ready collaboration.

The launch crews off duty enlisted to a man, and it was therefore possible, with the help of four casual labourers used for digging the trench and for carting timber, to start the work that very evening. Such members of the staff as could be spared and were immediately available, turned to cutting and preparing the frames for the windows, and by midnight that evening the work was well in hand.

The work continued on Thursday from 5 a.m., right through to midnight, on Friday, similarly, and on Saturday until 10 p.m. Some of the members of the staff refused to waste valuable time in returning home, and overnight accommodation was provided for them in the Enteric Block.

Your Matron and her staff entered wholeheartedly into the spirit of the emergency and prepared meals on Thursday, Friday and Saturday morning for the men who started work at daylight, and who slept at the Hospital overnight.

The " Howard Deighton " left Gravesend at 3.0 a.m. on Friday morning, collected 5,000 sand bags at 6.0 a.m. at Castle Yard Wharf, and unloaded them at Denton later in the day. The remaining 5,000 bags were collected and delivered the next day by the " Alfred Robertson."

By 5.0 p.m. on Saturday the work had progressed so rapidly that the Hospital would have been ready to function on a war time basis under the scheme envisaged if hostilities had broken out. Most of the frames had been cut and fitted to the windows and covered, the air-locks were nearly completed, and the exhaust pipes from the disinfector re-laid.

Your Medical Officer, who supervised the work on the spot, finds it difficult adequately to express his appreciation, indeed his admiration, for the manner in which the staff responded to the call, for the way they worked under great pressure, and for the good quality of the work they did, despite the fact that many of them were not skilled in that type of construction.

Denton Hospital having been prepared, to the extent that was possible in the short time available, to meet a national emergency, and the international situation having somewhat eased, it was possible to proceed with the training of the whole of the personnel in measures of self-protection against gas.

A series of lectures and practical demonstrations were organised under the direction of Mr. A. W. Moore, a member of the Port Health Staff, who is officially recognised under the Home Office Scheme as an Instructor in Air-raid Precautions.

By noon on Saturday, 1st October, all members of the staff had been through a course. Their attendance, which was most regular and conscientious, often involved considerable inconvenience to themselves and interference with their leisure hours. Your Medical Officer, in reporting the success of the course to the Committee, drew attention to the fine spirit which had been displayed by the staff, and to the devotion and indefatigable energy of Mr. Moore, to whose efforts the success of the course was so largely due.

Considerable progress has been made since the September crisis in developing the scheme of co-operation between the Port Health Authority and the Port of London Authority, and numerous and fruitful consultations have taken place between the two bodies and their Officers.

The completion of the scheme in all its details has not yet been possible, since much delay has unavoidably occurred from consultations with the Government Departments concerned.

A full account of the scheme must, therefore, necessarily be deferred until the Report for 1939.

APPENDIX I.

MEDICAL INSPECTION. From 1st January to 31st December, 1938.

(a) Gravesend.

	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total.
No. Medically Inspected ...	185	172	194	177	202	196	178	197	194	194	159	188	2,236
No. of Passengers	1,349	1,403	2,523	1,778	3,596	3,640	3,615	3,082	2,817	2,283	1,535	1,606	29,227
No. of Crews	6,342	6,478	6,756	7,494	7,573	6,541	5,240	6,334	6,275	6,387	6,267	6,765	78,452
No. of Foreign Arrivals ...	1,031	984	1,101	1,029	1,156	1,101	1,161	1,140	1,087	1,158	1,064	1,022	13,034

(b) Sheerness.

	Jan.	Feb.	March	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Total.
No. Medically Inspected ...	19	16	18	19	31	31	31	26	21	22	15	13	262
No. of Passengers	—	—	—	—	—	—	—	—	—	—	—	—	—
No. of Crews	461	405	407	531	719	741	733	648	509	544	397	345	6,440
No. of Foreign Arrivals ...	61	64	64	58	70	74	73	74	66	68	59	54	785

APPENDIX II.

Infectious Disease.

DISEASE.	1929.	1930.	1931.	1932.	1933.	1934.	1935.	1936.	1937.	Mean Annual No. for 10 years ending 31st Dec., 1938.	1938.
(a) Cases Reported :											
Cholera (including suspected cases)	2	1	1	3	—	—	—	—	—	*0·8*	**1**
Yellow Fever (ditto) ...	—	—	—	—	—	—	—	—	—	—	—
Plague (ditto) ...	1	—	—	—	—	—	—	—	—	*0·1*	—
Smallpox	22	11	14	14	4	11	4	9	—	*9·3*	**4**
Scarlet Fever	11	29	7	12	21	7	9	10	6	*12·8*	**16**
Diphtheria	17	9	16	10	7	13	5	16	3	*10·5*	**9**
Enteric Fever	46	25	23	23	29	23	16	29	28	*27·8*	**36**
Measles	48	50	11	25	26	38	41	16	57	*36·1*	**49**
German Measles	9	6	3	22	4	5	8	4	6	*9·2*	**25**
Erysipelas	4	2	2	2	1	2	2	2	2	*2·3*	**4**
Typhus Fever	—	—	—	—	—	—	1	—	1	*0·2*	—
Continued Fever	—	1	—	—	—	—	—	—	—	*0·1*	—
Relapsing Fever	—	—	—	—	—	—	—	—	—	—	—
Tuberculosis :—											
Pulmonary	126	116	147	135	148	114	133	120	94	*120·8*	**75**
Other kinds	7	4	4	4	1	9	1	—	2	*3·5*	**3**
Other diseases (including Chicken-pox)	653	904	1,118	791	460	516	647	543	508	*668·0*	**540**
Total	946	1,158	1,346	1,041	701	738	867	749	707	*901·5*	**762**
(b) Treated in Port Sanitary Hospital :											
Cholera (including suspected cases)	—	—	—	—	—	—	—	—	—	—	—
Yellow Fever (ditto) ...	—	—	—	—	—	—	—	—	—	—	—
Plague (ditto) ...	—	—	—	—	—	—	—	—	—	—	—
Smallpox	4	—	—	—	—	—	—	—	—	*0·6*	**2**
Typhus Fever	—	—	—	—	—	—	2*	—	—	*0·2*	—
Scarlet Fever	7	12*	—	4	15	5	2	1	2	*6·2*	**14**
Diphtheria	5	3	1	4	4	2	1	14*	1	*4·0*	**5**
Enteric Fever	23	9	4	9	6	11	6	9	7	*9·6*	**12**
Measles	18‡	**12	—	1	2	13	10	5	37	*12·6*	**28‡**
Erysipelas	—	1	—	—	—	—	—	—	1	*0·2*	**1**
Parotitis	—	—	21	2	4	4	5*	1	2	*4·3*	**4**
Continued Fever	—	—	—	—	—	—	—	—	—	—	—
Other diseases (including Chicken-pox)	30	19*	23*	33	22	21	26	36	65	*40·9*	**133****
Total	87	56	49	53	53	56	52	66	115	*78·6*	**199**

* Includes one contact. ** Includes three contacts. ‡ Includes six contacts.

APPENDIX III.—Cholera.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) Landed from Vessels—Nil.					
(*b*) Died, Landed elsewhere or well on Arrival—					
June 16	ss. "Mandasor"	Calcutta	1	Crew ...	Landed at Calcutta.
		Total	1	(1 Crew)	

APPENDIX IV.—Smallpox.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) Landed from Vessels—					
Mar. 4	ss. "Cathay"	Brisbane ...	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
,, 21	Port Health Authority Staff (1 Boarding Medical Officer)			...	Admitted to Port Isolation Hospital, Denton.
		Total	2	(1 Passenger) (1 Staff)	
(*b*) Died, Landed elsewhere or well on Arrival—					
Aug. 20	ss. "Planter"	Calcutta	1	Crew ...	Landed to Hospital at Aden.
Sept. 6	ss. "Defender"	Calcutta	1	Crew ...	Landed to Hospital at Aden.
		Total	2	(2 Crew)	

APPENDIX V.—Scarlet Fever.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) Landed from Vessels—					
Mar. 19	Gravesend Sea School		1	Boy ...	Admitted to Port Isolation Hospital, Denton.
April 12	Gravesend Sea School (T.S. "Triton.")		2	Boys ...	Removed to Port of London Isolation Hospital, Denton.
,, 25	Training Ship "Warspite"	Lying at Grays ...	1	Boy ...	Removed to Port of London Isolation Hospital, Denton.
May 1	ss. "Baltrover"	Gdynia	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
,, 3	Sea School	Gravesend ...	1	Boy ...	Admitted to Port Isolation Hospital, Denton.
,, 6	Sea School	Gravesend ...	1	Boy ...	Admitted to Port Isolation Hospital, Denton.
,, 12	Sea School	Gravesend ...	1	Boy ...	Admitted to Port Isolation Hospital, Denton.
,, 13	Sea School	Gravesend ...	1	Boy ...	Admitted to Port Isolation Hospital Denton.
June 20	Gravesend Sea School		1	Boy ...	Admitted to Port Isolation Hospital Denton.
		Carried forward ...	10		

SCARLET FEVER—*continued.*

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
		Brought forward	10		
July 12	Gravesend Sea School		1	Boy ...	Admitted to Port Isolation Hospital, Denton.
Sept. 26	Training Ship " Warspite "	Grays	1	Boy ...	Admitted to Port Isolation Hospital, Denton.
Oct. 3	ss. " Baltrover "	Gdynia	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
„ 3	ss. " Baltrover "	(In River) ...	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
		Total	14	(3 Passengers) (11 Boys)	

(*b*) DIED, LANDED ELSEWHERE OR WELL ON ARRIVAL—

June 16	ss. " Otranto "	Brisbane	1	Crew ...	Well on arrival.
July 31	ss. " Gambian "	Burutu	1	Crew ...	Landed at Port Harcourt.
		Total	2	(2 Crew)	

APPENDIX VI.—DIPHTHERIA.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) LANDED FROM VESSELS—					
July 7	Gravesend Sea School		1	Boy ...	Admitted to Port Isolation Hospital, Denton.
„ 9	Gravesend Sea School		1	Boy ...	Admitted to Port Isolation Hospital, Denton.
„ 9	Gravesend Sea School		1	Boy ...	Admitted to Port Isolation Hospital, Denton.
„ 10	Gravesend Sea School		2	Boys ... (Carriers)	Admitted to Port Isolation Hospital, Denton.
Nov. 9	ss. " Agios Georgios IV " ...	Vancouver ...	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
Dec. 31	ss. " Tilsington Court " ...	Vancouver ...	1	Crew ...	Admitted to London County Council's South Eastern Hospital.
		Total	7	(2 Crew) (5 Boys)	

(*b*) DIED, LANDED ELSEWHERE OR WELL ON ARRIVAL—

Feb. 8	ss. " Llandaff Castle " ...	E. Africa... ...	1	Crew ...	Landed at Southampton.
Oct. 19	ss. " Burma "	Rangoon ...	1	Crew ...	Landed at Port Sudan.
		Total	2	(2 Crew)	

APPENDIX VII.—Enteric Fever.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) Landed from Vessels—					
May 19	ss. "Orama"	Brisbane ...	4	Crew ...	Admitted to Port Isolation Hospital, Denton.
June 16	ss. "Strathnaver" ...	Tilbury Dock ...	1	Crew ...	Transferred from Seamen's Hospital, Tilbury, to Port Isolation Hospital, Denton.
„ 29	ss. "Otranto"	Australia ...	1	Pass. ...	Transferred from Tilbury Hospital to Port Isolation Hospital, Denton.
Aug. 27	ss. "Orford"	Mediterranean Cruise. ...	2	Crew ...	1 admitted to Port Isolation Hospital, Denton. 1 admitted to Port Isolation Hospital, Denton, from Gravesend General Hospital.
Nov. 2	ss. "Narkunda"	Bombay	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
„ 17	ss. "Mahsud"	Calcutta	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
		Total	10	(2 Passengers)	
			—	(8 Crew)	
(*b*) Died, Landed elsewhere or well on Arrival—					
Jan. 4	ss. "Manaar"	Antwerp ...	1	Crew ...	Landed to Hospital at Dundee.
„ 7	ss. "Strathmore"	Brisbane ...	1	Crew ...	Landed to Hospital at Adelaide.
„ 29	ss. "Worcestershire" ...	Rangoon ...	2	Pass. ...	Well on arrival.
Feb. 3	ss. "Deucalion"	Shanghai... ...	1	Crew ...	Landed at Singapore.
„ 22	ss. "Mahanada"	Calcutta	1	Crew ...	Landed at Oran.
Mar. 16	ss. "Avila Star"	Buenos Aires ...	1	Crew ...	Landed to Hospital in Montevideo.
„ 20	ss. "Siris"	Brazil	1	Crew ...	Landed to Hospital in Madeira.
„ 20	ss. "Ajax"	Dairen	1	Pass. ...	Landed to Hospital in Calcutta.
April 1	ss. "Stratheden"	Brisbane ...	1	Crew ...	Landed at Malta.
„ 7	ss. "Orion"	Australia ...	1	Pass. ...	Landed at Sydney.
			2	Crew ...	1 landed at Sydney. 1 landed at Melbourne.
May 20	ss. "Cheshire"	Rangoon ...	1	Pass. ...	Landed at Port Sudan.
„ 27	ss. "Strathaird"	Brisbane ...	1	Pass. ...	Landed at Marseilles.
June 16	ss. "Port Caroline" ...	Colon	1	Pass. ...	Convalescent on arrival.
Aug. 18	ss. "City of Guildford" ...	Calcutta	1	Crew ...	Landed to Hospital at Aden.
„ 19	ss. "Strathnaver" ...	Australia ...	1	Pass. ...	Died. Buried at sea.
„ 31	ss. "Rangitiki"	Auckland ...	1	Crew ...	Convalescent on arrival.
Oct. 10	ss. "Britannic"	New York ...	1	Crew ...	Landed at New York.
„ 20	ss. "Otranto"	Brisbane ...	1	Crew ...	Landed at Colombo.
Nov. 11	ss. "Comorin"	Australia... ...	1	Pass. ...	Landed at Colombo.
„ 17	ss. "Mahsud"	Calcutta	2	Crew ...	1 Landed at Aden. 1 landed at Brixham.
Dec. 9	ss. "Stratheden"	Brisbane ...	1	Crew ...	Landed at Bombay.
„ 16	ss. "Ceramic"	Sydney	1	Crew ...	Died. Buried at sea.
		Total	26	(9 Passengers)	
			—	(17 Crew)	

APPENDIX VIII.—Measles.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) Landed from Vessels—					
Jan. 10	ss. "Baltrover"	Gdynia	5	Pass. ...	All admitted to Port Isolation Hospital. Denton.
Feb. 20	ss. "Baltrover"	Gdynia	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
Mar. 18	ss. "The Marquis" ...	Northfleet ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
April 1	ss. "Alexander Kennedy"	Lying in the River	1	Crew ...	Admitted to L.C.C. Western Fever Hospital.
„ 9	Houseboat "May" ...	Lying at Bankside	1	Resident	Remained on Board.
„ 12	ss. "Beachy"	Belfast	1	Crew ...	Admitted to L.C.C. Eastern Fever Hospital.
„ 18	ss. "Baltrover"	—	8	Pass. ... (includes 4 Contacts)	Admitted to Port Isolation Hospital, Denton.
May 9	ss. "Warszawa"	Gdynia	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
„ 10	ss. "Warszawa"	Gdynia	2	Pass. ...	Admitted to Port Isolation Hospital, Denton.
„ 14	ss. "Briarwood"	Montreal ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
„ 29	ss. "Alaunia"	Montreal ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
June 6	ss. "Warszawa"	Gdynia	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
„ 20	ss "Warszawa"	Gdynia	2	Pass. ...	Admitted to Port Isolation Hospital, Denton.
Aug. 19	ss. "Strathnaver"... ...	Australia... ...	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
Oct. 11	ss. "Warszawa"	Gdynia	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
			—	(18 Passengers)	
		Total	24	(5 Crew)	
			—	(1 Resident)	
(*b*) Died, Landed elsewhere or well on Arrival—					
Feb. 10	ss. "Orford"	Brisbane ...	2	Pass. ...	Well on arrival.
„ 15	ss. "Gleniffer"	Wei Hai Wei ...	1	Pass. ...	Well on arrival.
„ 26	ss. "Corfu"	Yokohama ...	2	Pass. ...	Well on arrival.
Mar. 20	ss. "The Baron"	Newcastle ...	1	Crew ...	Well on arrival.
April 16	ss. "Esmond"	St. Johns ...	1	Crew ...	Well on arrival.
June 7	ss. "Lancastria"	New York ...	1	Pass. ...	Landed at Helsingfors.
„ 14	ss. "Rangitane"	New Zealand ...	1	Pass. ...	Recovered.
„ 17	ss. "Modavia"	Outward Bound	1	Crew ...	Recovered. Remaining on board.
July 1	ss. "Montcalm"	Atlantic Cruise ...	1	Crew ...	Well on arrival.
Aug. 11	ss. "Highland Chieftain"	Buenos Aires ...	1	Pass. ...	Landed at Santos.
„ 20	ss. "Stratheden"	Mediterranean Cruise.	1	Pass. ...	Well on arrival.
„ 26	ss. "Ranpura"	Kobe	1	Pass. ...	Well on arrival.
Sept. 3	ss. "Themistocles" ...	Brisbane ...	3	Pass. ...	2 landed at Durban. 1 landed at Southampton.
„ 22	ss. "Highland Patriot" ...	Rio de Janeiro ...	1	Pass. ...	Well on arrival.
Dec. 5	ss. "David Livingstone"...	Port Harcourt ...	1	Crew ...	Landed at Lagos.
„ 9	ss. "Remuera"	Opua	4	Crew ...	Well on arrival.
„ 9	ss. "Stratheden"	Brisbane ...	1	Pass. ...	Well on arrival.
„ 23	ss. "Strathallan"	Brisbane ...	1	Pass. ...	Well on arrival.
			—		
		Total	25	(16 Passengers)	
			—	(9 Crew)	

APPENDIX IX.—German Measles.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) Landed from Vessels—					
April 21	ss. "Viceroy of India" ...	(In Dock) ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
May 2	ss. "Strathnaver"... ...	Bombay	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
June 20	ss. "Mooltan"	Tilbury Dock ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
Sept. 28	ss. "Rangitata"	Napier	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
Oct. 4	Training Ship "Warspite"	Grays	1	Boy ...	Admitted to Port Isolation Hospital, Denton.
„ 12	ss. "Avila Star"	Buenos Aires ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
„ 28	ss. "Rangitane"	Auckland ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
			—	(2 Passengers)	
		Total	7	(4 Crew)	
			=	(1 Boy)	
(*b*) Died, Landed elsewhere or well on Arrival—					
April 18	ss. "Viceroy of India" ...	Bombay	1	Crew ...	Convalescent on Arrival.
May 13	ss. "Narkunda"	Brisbane ...	1	Crew ...	Well on arrival.
Oct. 9	ss. "Waimana"	Bowen	1	Crew ...	Well on arrival.
Nov. 17	ss. "Ormonde"	Brisbane ...	9	Crew ...	All recovered.
			1	Pass. ...	Proceeded home by private car.
„ 28	ss. "Port Jackson" ...	Auckland ...	4	Crew ...	Well on arrival.
Dec. 27	ss. "Middlesex"	Lyttleton ...	1	Crew ...	Well on arrival.
			—		
		Total	18	(1 Passenger)	
			=	(17 Crew)	

APPENDIX X.—Erysipelas.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) Landed from Vessels—					
Feb. 5	ss. "Tyndall"	Cardiff	1	Crew ...	Admitted to London County Council, Brook Hospital.
June 14	ss. "Oltenia"	Black Sea ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
July 7	ss. "Suecia"	Gothenburg ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
Nov. 4	ss. "London"	Lying off Limehouse	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
			—		
		Total	4	(4 Crew)	
			=		

(*b*) Died, Landed elsewhere or well on Arrival—Nil.

APPENDIX XI.—Pulmonary Tuberculosis.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) Landed from Vessels—					
Jan. 14	ss. "Rajputana"	Yokohama ...	1	Pass. ...	Proceeded home.
Feb. 24	ss. "Otranto"	Brisbane ...	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
„ 25	ss. "Justitia"	Fiji	1	Pass. ...	Proceeded home.
„ 28	ss. "Fordsdale"	Lyttleton ...	1	Pass. ...	Landed in care of Board of Trade.
Mar. 3	ss. "Clan Stuart" ...	Far East ...	1	Crew ...	Admitted to Seamen's Hospital, Royal Albert Dock.
„ 3	ss. "Clan Chattan" ...	Far East ...	1	Crew ...	Admitted to Seamen's Hospital, Royal Albert Dock.
„ 9	ss. "Inkosi"	Demerara ...	1	Pass. ...	Admitted to Seamen's Hospital, Greenwich.
„ 9	ss. "Andania"	Halifax	1	Pass. ...	Admitted to Seamen's Hospital, Greenwich.
„ 25	ss. "Rajputana"	Bombay	1	Crew ...	Proceeded in care of Shipping Company.
April 11	ss. "Domala"	Bombay	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
„ 14	ss. "Duquesa"	Buenos Aires ...	1	Crew ...	Proceeded home.
„ 25	ss. "Clan Ross"	Calcutta	1	Crew ...	Admitted to Seamen's Hospital, Tilbury.
May 2	ss. "Strathnaver"... ...	Bombay	1	Pass. ...	Proceeded home.
„ 6	ss. "Naldera"	Yokohama ...	1	Pass. ...	Admitted to Seamen's Hospital, Greenwich.
„ 15	ss. "Hakusan Maru" ...	Yokohama ...	1	Pass. ...	Proceeded home.
„ 19	ss. "Highland Monarch"	Buenos Aires ...	1	Pass. ...	Proceeded home.
June 17	ss. "Corfu"	Yokohama ...	2	Pass. ...	Admitted to Royal Naval Hospital, Gillingham.
„ 19	ss. "Mashobra"	Coastwise ...	1	Crew ...	Returning to Calcutta.
„ 28	ss. "Kasima Maru" ...	Yokohama ...	1	Pass. ...	Proceeded home.
„ 30	ss. "Highland Brigade" ...	Buenos Aires ...	1	Crew ...	Admitted to Brompton Hospital.
July 3	ss. "City of Baroda" ...	Calcutta	1	Crew ...	Admitted to Hospital for Tropical Diseases, W.C. 1.
„ 4	ss. "Gretaston"	...	1	Crew ...	Admitted to Hospital for Tropical Diseases, W.C. 1.
„ 7	ss. "Alaunia"	Montreal ...	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
„ 7	ss. "Port Auckland" ...	Auckland ...	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
„ 29	ss. "Oronsay"	Brisbane ...	1	Pass. ...	Proceeded in care of Military Authorities.
Aug. 5	ss. "Maloja"	Brisbane ...	1	Pass. ...	Proceeded in care of Naval Medical Authorities.
„ 12	ss. "Ranchi"	Yokohama ...	3	Pass. ...	2 proceeded in care of Naval Medical Authorities.
			1	Crew. ...	1 proceeded in care of Military Authorities.
					1 proceeded home.
„ 15	ss. "Britannic"	Halifax	1	Crew ...	Admitted to Seamen's Hospital, Royal Albert Dock.

Carried forward 32

PULMONARY TUBERCULOSIS—*continued.*

Date. 1938.	Name of Vessel	Where from.	No. of Cases.	Passenger or Crew Rating	How dealt with
		Brought forward	32		
Aug. 18	Training Ship "Stork" ...	Hammersmith ...	1	Boy ...	Admitted to L.C.C. Western Hospital.
,, 22	ss. "Domala"	Calcutta	2	Pass. ...	Proceeded in care of Service Medical Authorities.
,, 26	ss. "Ranpura"	Kobe	5	Pass. ...	Proceeded in care of Service Medical Authorities.
Sept. 9	ss. "Rawalpindi"	Yokohama ...	3	Pass. ...	Proceeded in care of Service Medical Authorities.
,, 22	ss. "Orama"	Brisbane ...	1	Crew ...	Admitted to Seamen's Hospital, Tilbury.
,, 25	ss. "Nalgora"	Karachi	1	Crew ...	Admitted to Seamen's Hospital, Royal Albert Dock.
,, 25	ss. "Nalgora"	Aden	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
Oct. 5	ss. "Viceroy of India" ...	Bombay	1	Pass. ...	Landed in care of Military Authorities.
,, 13	ss. "Madura"	Beira	1	Pass. ...	Admitted to Seamen's Hospital, Greenwich.
,, 14	ss. "Strathaird"	Brisbane ...	1	Pass. ...	Proceeded home.
Nov. 2	ss. "Glenfinlas"	Belawar	1	Pass.	Proceeded home.
,, 18	ss. "Rhesus"	Tjelatjap ...	1	Crew ...	Proceeded home.
,, 25	ss. "Maloja"	Brisbane ...	1	Pass. ...	Proceeded to Royal Naval Hospital, Chatham.
,, 29	ss. "Odda"	Danzig	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
Dec. 1	ss. "Oronsay"	Brisbane ...	1	Pass. ...	In transit for Norway.
,, 2	ss. "Strathaird"	Bombay	3	Pass. ...	Landed in care of Military Authorities.
,, 2	ss. "Ranchi"	Yokohama ...	2	Pass. ...	Landed in care of Naval Authorities.
,, 4	ss. "Umtali"	Mauritius ...	1	Pass. ...	Landed in care of Military Authorities.
,, 24	ss. "City of Cairo" ...	Calcutta	1	Pass. ...	Proceeded home.
,, 30	ss. "Viceroy of India" ...	Bombay	1	Pass. ...	Proceeded home.
,, 30	ss. "Otranto"	Brisbane ...	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
			—		(41 Passengers)
		Total	63		(21 Crew)
			==		(1 Boy)

(*b*) DIED, LANDED ELSEWHERE OR WELL ON ARRIVAL—

June 2	ss. "Orford"	Brisbane ...	1	Pass. ...	Landed at Southampton.
July 7	ss. "Mahronda"	Calcutta	1	Crew ...	Well on arrival.
Aug. 12	ss. "Ranchi"	Yokohama ...	1	Pass. ...	Died. Buried at sea.
,, 15	ss. "Worcestershire" ...	Rangoon ...	1	Pass. ...	Landed at Marseilles.
Sept. 7	ss. "Erik Frisell"	Port Tampa ...	1	Crew ...	To be repatriated to Sweden.
,, 18	ss. "Edward Blyden" ...	Africa	1	Pass. ...	Died. Buried at sea.
Oct. 30	ss. "Phrontis"	Java	1	Pass. ...	Died. Buried at sea.
Nov. 9	ss. "Polydorus"	Macassar ...	1	Pass. ...	Landed at Jeddah.
Dec. 2	ss. "Ranchi"	Yokohama ...	1	Pass. ...	Landed at Singapore.
,, 5	ss. "Tricolor"	Cairns	1	Pass. ...	In transit for Norway.
,, 6	ss. "Mantola"	Beira	1	Pass. ...	En route for Austrian Tyrol.
,, 23	ss. "Strathallan"	Brisbane ...	1	Pass. ...	Landed at Bombay.
			—		
		Total	12		(10 Passengers)
			==		(2 Crew)

APPENDIX XII.—Tuberculosis (other kinds).

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating	How dealt with.
(*a*) Landed from Vessels—					
Feb. 4	ss. "Strathaird"	Brisbane ...	1	Pass. ...	Landed in care of Military Authorities.
		Total	1	(1 Passenger)	
(*b*) Died, Landed elsewhere or well on Arrival—					
May 25	ss. "Sea Rambler" ...	Soroka	1	Crew ...	Landed at Honnigsvarg.
Aug. 12	ss. "Strathallan"	Copenhagen ...	1	Pass. ...	Died. Buried at sea.
		Total	2	(1 Passenger)	
				(1 Crew)	

APPENDIX XIII.—Pneumonia.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) Landed from Vessels—Nil.					
May 2	The Cottage	Limehouse Basin	1	Resident	Admitted to St. Andrew's Hospital, Bow.
„ 9	ss. "Warszawa"	Gdynia	1	Pass. ...	Allowed to proceed to a General Hospital in London.
„ 16	ss. "City of London" ...	Beira	1	Crew ...	Admitted to Seamen's Hospital, Royal Albert Dock.
„ 25	ss. "Onto"	Pernovik ...	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
June 15	ss. "Andalucia Star" ...	Montevideo ...	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
July 2	ss. "Burma"	Rangoon ...	1	Crew ...	Admitted to Seamen's Hospital, Tilbury.
Aug. 5	ss. "Dilwara"	Norwegian Cruise	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
„ 12	ss. "Ranchi"	Yokohama ...	1	Pass. ...	Admitted to Seamen's Hospital, Royal Albert Dock.
Sept. 3	ss. "Bruse Jarl"	Salonika	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
Oct. 18	ss. "Strathnaver" ...	Bombay	1	Crew ...	Admitted to Seamen's Hospital, Tilbury.
„ 24	ss. "Ngatira"	Jersey	1	Crew ...	Admitted to Seamen's Hospital, Tilbury.
Dec. 9	ss. "Stratheden"	Brisbane ...	1	Crew ...	Admitted to Seamen's Hospital, Tilbury.
				(3 Passengers)	
		Total	12	(8 Crew)	
				(1 Resident)	
(*b*) Died, Landed elsewhere or well on Arrival—					
Jan. 4	ss. "Malakand"	Calcutta	1	Crew ...	Landed at Aden.
„ 7	ss. "Strathmore"	Brisbane ...	1	Crew ...	Died. Buried at sea.
„ 26	ss. "Mashobra"	Calcutta	1	Crew ...	Died. Buried at sea.
„ 29	ss. "Worcestershire" ...	Rangoon ...	1	Pass. ...	Convalescent on arrival.
April 4	ss. "Achilles"	Far East ...	1	Crew ...	Landed at Hong Kong.
„ 8	ss. "Phemius"	Macassar ...	1	Crew ...	Died. Buried at Sea.
		Carried forward	6		

PNEUMONIA—*continued.*

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
		Brought forward	6		
May 13	ss. "Narkunda"	Brisbane ...	1	Pass. ...	Died. Buried at sea.
,, 20	ss. "Cheshire"	Rangoon ...	1	Pass. ...	Landed at Port Said.
Aug. 23	ss. "Llanstephan Castle"	Mombasa ...	1	Pass. ...	Died. Buried at sea.
Sept. 8	ss. "Achilles"	Dairen	1	Crew ...	Landed at Dairen.
Oct. 30	ss. "Phrontis"	Java	1	Pass. ...	Died. Buried at sea.
Nov. 9	ss. "Polydorus"	Macassar ...	1	Pass. ...	Landed at Jeddah.
,, 16	ss. "Clan Mackinlay" ...	Calicut	1	Crew ...	Died. Buried at Port Said.
,, 30	ss. "Humber Arm" ...	Halifax	1	Crew ...	Died. Landed at Corner Brook for burial.
		Total	14	(6 Passengers)	
			—	(8 Crew)	

APPENDIX XIV.—INFLUENZA.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) LANDED FROM VESSELS—Nil.					
(*b*) DIED, LANDED ELSEWHERE OR WELL ON ARRIVAL—					
Feb. 8	ss. "Menin Ridge" ...	Gibraltar... ...	1	Crew ...	Convalescent on arrival.
Mar. 5	ss. "Clan Mackinlay" ...	Vizagapatam ...	1	Crew ...	Well on arrival.
June 19	ss. "Mashobra"	Coastwise ...	2	Crew ...	Recovered.
Aug. 12	ss. "City of Lyons" ...	Dairen	1	Pass. ...	Well on arrival.
Oct. 20	ss. "Otranto"	Brisbane ...	15	Pass. ...	All Recovered.
			15	Crew	
Dec. 16	ss. "Ceramic"	Sydney	6	Crew ...	All Recovered.
		Total	41	(16 Passengers)	
			—	(25 Crew)	

APPENDIX XV.—DYSENTERY.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) LANDED FROM VESSELS—					
Mar. 2	ss. "Matra"		1	Crew ...	Admitted to Seamen's Hospital, Royal Albert Dock.
May 6	ss. "Worcestershire" ...	Colombo ...	1	Pass. ...	Proceeded home to report to Doctor.
,, 17	ss. "Umvoti"	Beira	1	Crew ...	Admitted to St. Andrew's Hospital, Bow, E. 3.
Aug. 12	ss. "Ranchi"	Yokohama ...	1	Pass. ...	Proceeded to King's College Hospital, London, S.E.
Nov. 7	ss. "Torfinn Jarl" ...	Genoa	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
		Total	5	(2 Passengers)	
			—	(3 Crew)	
(*b*) DIED, LANDED ELSEWHERE OR WELL ON ARRIVAL—					
May 28	ss. "City of Shanghai" ...	Vizagapatam ...	1	Crew ...	Landed at Madras.
July 22	ss. "City of Newcastle" ...	Calcutta	1	Crew ...	Died. Buried at sea.
Aug. 19	ss. "Strathnaver"... ...	Australia... ...	1	Pass. ...	Well on arrival.
Sept. 3	ss. "Blythmoor"	Karachi	1	Crew ...	Landed at Algiers.
,, 19	ss. "Glenapp"	Chefoo	1	Crew ...	Landed at Hong Kong.
Oct. 22	ss. "Staffordshire" ...	Rangoon ...	1	Pass. ...	Convalescent on arrival.
Nov. 1	ss. "Tudor Star"	Taku Bar ...	1	Crew ...	Landed at Port Said.
,, 9	ss. "City of Bagdad" ...	Saigon	1	Crew ...	Landed at Manila.
		Total	8	(1 Passenger)	
			—	(7 Crew)	

APPENDIX XVI.—Malaria.

Date.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
1938.					
(a) Landed from Vessels—					
Mar. 21	ss. "City of Exeter" ...	Cape Town ...	1	Pass. ...	Admitted to Seamen's Hospital, Tilbury.
April 1	ss. "Stratheden"	Brisbane	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
May 19	ss. "David Livingstone" ...	West Africa ...	1	Crew ...	Admitted to Port Isolation Hospital Denton.
„ 25	ss. "Guineon"	Oporto	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
June 24	ss. "William Wilberforce."	Duala	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
„ 25	ss. "Heinricharp" ...	Sapele	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
July 19	ss. "Takoradian"	Sapele	3	Crew ...	Admitted to Port Isolation Hospital, Denton.
„ 20	ss. "Egba"	West Africa ...	3	Crew ...	Admitted to Port Isolation Hospital, Denton.
„ 20	ss. "Dunkwa"	West Africa ...	2	Crew ...	Admitted to Port Isolation Hospital, Denton.
Aug. 15	ss. "Worcestershire" ...	Rangoon ...	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
„ 20	ss. "Orm Jarl"	Sfax	1	Crew ...	Admitted to Minster Hospital, Isle of Sheppey.
„ 31	ss. "Robert L. Holt" ...	West Africa ...	1	Crew ...	Remained on board.
Sept. 1	ss. "Possidon"	Azia Marina ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
„ 3	ss. "Bruse Jarl"	Salonika	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
„ 5	ss. "Lanager"	Tampa	1	Crew ...	Admitted to Seamen's Hospital, Greenwich.
„ 22	ss. "Orama"	Brisbane ...	1	Pass. ...	Proceeded home in care of own doctor.
„ 25	ss. "Akenside"	Archangel ...	1	Crew ...	Admitted to Port Isolation Hospital Denton.
Oct. 12	ss. "Manela"	Calcutta	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
Dec. 14	ss. "Clan Cameron" ...	Chittagong ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
		Total	24	(3 Passengers) (21 Crew)	
(b) Died, Landed elsewhere or well on Arrival—					
Jan. 18	ss. "Deido"	West Africa ...	1	Pass. ...	Well on arrival.
Feb. 5	ss. "Durham Castle" ...	Beira	1	Pass. ...	Well on arrival.
„ 24	ss. "Mary Kingsley" ...	Africa	5	Crew ...	Well on arrival.
„ 26	ss. "Ebani"	Africa	8	Crew ...	Well on arrival.
April 6	ss. "Boonant"	Takoradi ...	2	Crew ...	Well on arrival.
„ 18	ss. "Umtali"	Beira	1	Pass. ...	Well on arrival.
June 25	ss. "William Wilberforce."	Duala	2	Crew ...	Well on arrival.
July 14	ss. "Kotagede"	Batavia	4	Crew ...	Well on arrival.
„ 14	ss. "Heraklea"	Istanbul	1	Crew ...	Remained on board for Hamburg.
		Carried forward	25		

MALARIA—*continued*.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
		Brought forward	25		
July 27	ss. "Stentor"	Macassar ...	10	Crew ...	All well on arrival.
Aug. 5	ss. "Maloja"	Brisbane ...	1	Crew ...	Died. Buried at sea.
,, 8	ss. "City of Marseilles" ...	Beira	1	Crew ...	Died. Buried at sea.
,, 23	ss. "Llansterian Castle" ...	Mombasa ...	5	Crew ...	3 landed at Cape Town. 2 recovered.
Sept. 10	ss. "Leonian"	West Africa ...	3	Crew ...	Well on arrival.
Oct. 24	ss. "Manipur"	Colombo	1	Crew ...	Landed at Aden.
Nov. 19	ss. "Jonathon Holt" ...	Warri	3	Crew ...	All well on arrival.
		Total	49	(3 Passengers)	
				(46 Crew)	

APPENDIX XVII.—CHICKENPOX.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) LANDED FROM VESSELS—					
Jan. 28	ss. "Ranpura"	Yokohama ...	2	Pass. ...	All admitted to Port Isolation Hospital, Denton.
			2	Crew ...	
,, 31	ss. "Mashobra"	Calcutta	2	Crew ...	Admitted to Port Isolation Hospital, Denton.
Feb. 4	ss. "Strathaird"	Brisbane ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
,, 10	ss. "Ranpura"	(In Dock) ...	3	Crew ...	Admitted to Port Isolation Hospital, Denton.
,, 22	ss. "Mashobra"	Middlesbrough ...	6	Crew ...	Admitted to Port Isolation Hospital, Denton.
Mar. 21	ss. "Astronomer" ...	Calcutta	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
April 12	ss. "Jamaica Progress" ...	Jamaica	2	Crew ...	Removed to Port of London Isolation Hospital, Denton.
May 6	ss. "Umvoti"	Beira	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
,, 9	ss. "Warszawa"	Gdynia	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
Aug. 5	ss. "Maloja"	Brisbane ...	1	Pass. ...	Proceeded home.
,, 20	ss. "City of Exeter" ...	Outward bound	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
Sept. 13	ss. "Warszawa"	Gdynia	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
,, 14	ss. "Pinto"	(In Dock) ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
,, 25	ss. "Nalgora"	Karachi	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
Dec. 15	ss. "Mathura"	Calcutta ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
		Total	27	(5 Passengers)	
				(22 Crew)	
(*b*) DIED, LANDED ELSEWHERE OR WELL ON ARRIVAL—					
Feb. 8	ss. "Jamaica Producer" ...	Kingston... ...	1	Crew ...	Landed at Kingston.
,, 10	ss. "Orford"	Brisbane ...	1	Crew ...	Well on arrival.
,, 16	ss. "Jamaica Planter" ...	Kingston... ...	1	Pass. ...	Recovered.
April 8	ss. "Phemius"	Macassar ...	1	Pass. ...	Landed at Amsterdam.
,, 12	ss. "Jamaica Progress" ...	Jamaica	1	Crew ...	Landed to Hospital at Kingston, Jamaica.
		Carried forward	5		

CHICKENPOX—*continued.*

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
		Brought forward	5		
April 19	ss. "Mahratta"	Calcutta	1	Pass. ...	Well on arrival.
„ 22	ss. "Kaisar-i-Hind" ...	Yokohama ...	1	Crew ...	Landed to Hospital at Singapore.
May 6	ss. "Umvoti"	Beira	8	Crew ...	2 landed at Capetown. 6 isolated on board.
„ 16	ss. "Stratheden"	Bombay	1	Pass. ...	Convalescent on arrival.
„ 18	ss. "Avila Star"	Buenos Aires ...	2	Pass. ...	Landed at Boulogne.
June 20	ss. "Britannic"	New York ...	1	Pass. ...	Landed at Havre.
July 4	ss. "Shropshire"	Rangoon ...	1	Pass. ...	Landed at Gibraltar.
„ 29	ss. "Dunbar Castle" ...	Beira	1	Pass. ...	Landed at Southampton.
Sept. 3	ss. "Themistocles" ...	Brisbane ...	1	Pass. ...	Landed at Southampton.
Dec. 2	ss. "Ranchi"	Yokohama ...	1	Pass. ...	Well on arrival.
		Total	23	(11 Passengers)	
				(12 Crew)	

APPENDIX XVIII.—MUMPS.

Date. 1938.	Name of Vessel.	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) LANDED FROM VESSELS—					
April 7	ss. "Orion"	Australia... ...	1	Pass. ...	Proceeded home by Private Conveyance.
May 9	ss. "Ascania"	Montreal ...	1	Pass. ...	Landed in care of Naval Authorities.
„ 17	ss. "Mangalore"	Lying in Tilbury Dock.	2	Crew ...	Admitted to Port Isolation Hospital, Denton.
„ 22	ss. "Britannic"	New York ...	1	Pass. ...	Proceeded home in Private Ambulance.
June 12	ss. "Modasa"	Middlesbrough ...	1	Crew ...	Admitted to Port Isolation Hospital, Denton.
„ 20	ss. "Warszawa"	Gdynia	1	Pass. ...	Admitted to Port Isolation Hospital, Denton.
		Total	7	(4 Passengers)	
				(3 Crew)	
(*b*) DIED, LANDED ELSEWHERE OR WELL ON ARRIVAL—					
Feb. 24	ss. "Otranto"	Brisbane ...	1	Crew ...	Well on arrival.
Mar. 20	ss. "Ajax"	Dairen	1	Pass. ...	Well on arrival.
April 15	ss. "Maloja"	Brisbane ...	2	Crew ...	1 landed at Aden. 1 well on arrival.
June 2	ss. "Orford"	Brisbane ...	1	Pass. ...	Landed at Southampton.
„ 6	ss. "Warszawa"	Gdynia	1	Pass. ...	Proceeded in ship.
„ 20	ss. "Derbyshire"	Rangoon ...	1	Crew ...	Landed at Colombo.
July 29	ss. "Rajputana"	Yokohama ...	1	Pass. ...	Well on arrival.
„ 29	ss. "Dunbar Castle" ...	Beira	1	Pass. ...	Landed at Southampton.
Sept. 2	ss. "Narkunda"	Brisbane ...	1	Pass. ...	Well on arrival.
„ 29	ss. "Dunvegan Castle" ...	Mombasa ...	1	Pass. ...	Landed at Port Said.
Nov. 17	ss. "Highland Brigade" ...	Buenos Aires ...	1	Pass. ...	Well on arrival.
Dec. 9	ss. "Stratheden"	Brisbane ...	1	Crew ...	Well on arrival.
		Total	13	(8 Passengers)	
				(5 Crew)	

APPENDIX XIX.—POLIO-MYELITIS.

Date 1938.	Name of Vessel	Where from.	No. of Cases.	Passenger or Crew Rating.	How dealt with.
(*a*) LANDED FROM VESSELS—					
Oct. 28	ss. "Cathay"	Brisbane ...	1	Pass. ...	Admitted to Seamen's Hospital, Greenwich.
			1	Pass.	

(*b*) DIED, LANDED ELSEWHERE OR WELL ON ARRIVAL—Nil.

APPENDIX XX.—Miscellaneous Diseases (Classified).

	Landed from Vessels.	Died, Landed elsewhere or Well on arrival.
OTHER COMMUNICABLE DISEASES.		
Dengue Fever	1 P. 1 C.	—
Whooping Cough	—	4 P.
CATARRHAL DISEASES.		
Febrile Cold	1 P.	—
Catarrh	1 C.	—
Catarrhal Cold	—	1 P.
Sore Throat	1 Boy	—
Tonsillitis	17 P. 44 C. 3 Boys	2 C.
Ulcerated Tonsil	—	1 C.
SEPTIC CONDITIONS.		
Cellulitis	1 P. 1 C.	1 P. 1 C.
Cerebral Abscess	—	1 P.
Inguinal Adenitis	1 C.	—
Rectal Abscess	1 P.	—
Septicæmia	1 C.	—
NERVOUS AND MENTAL DISORDERS.		
Cerebral Tumour	—	1 P. (Died)
Dementia Praecox	1 C.	—
Insanity	4 P.	—
DISEASES OF THE SKIN.		
Bullows Impetigo	2 C.	—
Dermatitis	1 C.	—
Eczema	2 C.	—
Erythema	2 Boys	—
Exfoliative Dermatitis	1 C.	—
Healed Granulomata	1 P.	—
Herpes of Face	1 C.	1 C.
Rash	1 P.	—
Scabies	2 C. 1 Staff	—
Urticaria	1 C.	1 P.
DISEASES OF THE CIRCULATORY SYSTEM.		
Heart Failure	2 P. (Died)	15 P. 16 C. (Died)
Angina Pectoris	—	1 P. (Died)
Apoplexy	—	1 P. (Died)
Arterio Sclerosis	1 C.	—
Cardiac Debility	1 C.	—
Cerebral Hæmorrhage	—	2 P. (Died) 1 C. (Died)
Coronary Thrombosis	—	1 P. (Died) 2 C. (Died)
Hæmorrhoids	1 C.	—
Myocarditis	—	1 P. (Died)
Myocardial Degeneration	—	2 P. (Died)
Pernicious Anæmia	1 P.	—
DISEASES OF THE RESPIRATORY SYSTEM.		
Asthma	1 C.	—
Bronchial Catarrh	1 C.	—
Bronchitis	4 C.	1 P.
Haemoptysis	1 C.	—
Silicosis	1 C.	—

	Landed from Vessels.	Died, Landed elsewhere or Well on arrival.
DISEASES OF THE DIGESTIVE SYSTEM.		
Abdomen, Sub-acute	1 C.	—
Abdominal Pain	1 C.	—
Appendicitis	3 P. 5 C.	—
Biliary Colic	—	1 C.
Carcinoma of Rectum	—	1 P. (Died)
Carcinoma of Stomach	—	1 P. (Died)
Catarrhal Jaundice	—	1 C.
Cholecystitis	1 C.	—
Colitis	1 C.	—
Constipation	1 C.	—
Diarrhœa	1 C.	1 P. 2 C.
Enteritis	1 C.	11 C.
Gastritis	2 C.	2 C.
Gastro Enteritis	2 P. 19 C.	1 P. 2 C.
Helmenthic Infection	1 C.	—
Hepatitis	1 P. 1 C.	—
Perforated Gastric Ulcer	—	2 C. (Died)
Peritonitis	—	1 C. (Died)
Salmonella Food Poisoning	—	4 P.
Tænia	2 C.	—
Ventral Hernia	2 C.	—
DISEASES OF THE GENITO-URINARY SYSTEM		
Cystitis	—	1 C.
Nephritis, Chronic	—	1 P. (Died)
Orchitis	1 C.	—
Pyo-Nephrosis	—	1 C. (Died)
Renol Colic	1 C.	—
Uræmia	—	1 P. (Died)
Urinary Obstruction	—	1 C.
INJURIES.		
Injury	2 P. 15 C.	
DISEASES OF THE EYE AND EAR.		
Otitis Media	1 Boy	—
Trachoma	4 C.	1 P. 1 C.
DISEASES OF THE MUSCULATURE, BONES AND JOINTS.		
Arthritis	1 C.	—
Fibrostitis	—	1 C.
Myalgia	—	1 C.
Periostitis	1 P.	—
Rheumatism, Acute	1 C.	—
Tumour on right arm	1 C.	—
OTHER DISEASES (not classified).		
Abortion	1 P.	—
Alcoholism	1 C.	—
Beri Beri	1 C.	—
Cachexia	—	1 P. (Died) 1 C. (Died)
Carcinoma	2 C.	—
Cerebral Tumour	1 P.	—
Debility	—	1 P.
Heat Hyperpyrexia	—	1 C. (Died)
Heat Stroke	—	1 C. (Died)
Leech Bites	1 C.	—
Marasmus	—	2 P. (Died)
Pyrexia	5 P. 13 C.	2 P. 9 C.

APPENDIX XXI.—Venereal Diseases.

	Number of Cases reported. Crew.	Passengers.
Syphilis	50	14
Gonorrhœa	216	17
Soft Sore	26	2
Climatic Bubo	6	—
	298	33
	Total, 331	

APPENDIX XXII.—Hospital.

Number of Cases Admitted, Cost of Maintenance, &c.

Patients remaining in Hospital on 31st December, 1937 10

	Admitted.	Discharged.	Died.	Remaining under treatment.
Smallpox	2	1	1	—
Chickenpox	29	32	—	1
Diphtheria	5	5	—	—
Enteric Fever	12	12	1	1
Scarlet Fever	14	16	—	—
Measles	28	26	3	—
Mumps	4	4	—	—
German Measles	9	9	—	—
Malaria	16	17	—	—
Other Diseases	80	79	1	—
Total	199	201	6	2
Remaining in Hospital on 31st December, 1938	...	...	...	2
Total number of days' treatment during the year	...	...	...	2,175
Average number of days' treatment for each case	...	...	...	10·4
Average daily number of patients in Hospital	..	...	..	5·9
Average daily cost of maintenance per patient	...	...	...	1s. 3¾d.
Average total cost of maintenance per patient	...	...	...	13s. 10d.

APPENDIX XXIII.—Return of Rats Caught and Destroyed during 1938.

The entire cost of destroying these rats has been borne by the Shipowners and Port of London Authority.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Millwall Dock—													
Warehouses	48	35	55	76	71	54	57	53	66	105	72	92	774
Vessels while in dock	267	140	25	38	80	91	182	33	192	59	170	97	1,374
Surrey Commercial Dock—													
Warehouses	33	43	38	77	63	37	63	79	80	83	84	75	755
Vessels while in dock	52	37	—	—	12	—	10	3	32	10	4	—	160
Regent's Canal Dock—													
Warehouses	30	21	15	33	25	8	9	4	11	16	10	12	194
Vessels while in dock	3	24	—	—	—	—	—	—	—	—	—	—	27
St. Katharine's Dock—													
Warehouses	71	70	62	76	67	56	62	54	79	68	56	66	787
Vessels while in dock	—	—	—	—	—	—	—	—	—	—	—	—	—
London Dock—													
Warehouses	81	71	61	102	83	50	66	40	40	53	48	38	733
Vessels while in dock	13	3	23	—	16	—	27	—	2	1	—	—	85
Royal Albert Dock—													
Warehouses	7	10	12	13	7	6	7	5	13	7	—	8	95
Vessels while in dock	1	—	79	—	5	163	43	—	—	—	—	—	291
Royal Victoria Dock—													
Warehouses	33	17	9	16	12	13	20	7	13	21	11	16	188
Vessels while in dock	21	20	12	59	32	3	30	17	8	53	27	7	289
King George V. Dock—													
Warehouses	14	12	15	11	20	8	13	15	8	19	32	14	181
Vessels while in dock	3	—	10	4	—	3	—	—	—	—	—	2	32
West India Dock—													
Warehouses	21	18	22	21	17	5	27	24	41	35	29	86	346
Vessels while in dock	55	60	111	124	19	36	81	94	63	99	53	75	870
East India Dock—													
Warehouses	—	2	5	1	1	3	5	18	7	5	39	57	143
Vessels while in dock	—	—	—	—	—	—	—	—	—	—	9	16	25
Tilbury Dock—													
Warehouses	48	29	27	70	44	54	48	32	31	55	29	41	508
Vessels while in dock	2	—	5	20	—	—	—	1	7	—	—	37	72
River—													
Vessels while in River	—	29	—	33	—	75	—	171	—	—	—	—	308
Totals	803	641	586	774	574	665	750	650	693	689	673	739	8,237

Total from 1st January to 31st December, 1938:—

In Dock Warehouses	4,714
On Vessels while in Dock and River	3,523
Total	8,237

APPENDIX XXIV.

BACTERIOLOGICAL EXAMINATION OF RATS DURING 1938.

Source.	Total Examined.	Black Rats.		Brown Rats.		Species Unknown.		Mice.		Rats Infected with Plague.
		Found Dead.	Trapped Poisoned, &c.	Found Dead.	Trapped, Poisoned, &c.	Found Dead.	Trapped, Poisoned &c.	Found Dead.	Trapped Poisoned, &c.	
Vessels	961	23	927	—	11	—	—	—	—	Nil.
London Dock	297	1	212	1	83	—	—	—	—	Nil.
St. Katharine Dock ...	248	1	128	—	119	—	—	—	—	Nil.
Regent's Canal Dock ...	12	—	10	—	2	—	—	—	—	Nil.
Surrey Commercial Dock	276	—	37	—	239	—	—	—	—	Nil.
Poplar Dock	—	—	—	—	—	—	—	—	—	Nil.
West India Dock ...	78	—	60	—	18	—	—	—	—	Nil.
South West India Dock...	36	—	8	7	21	—	—	—	—	Nil.
East India Dock... ...	15	—	15	—	—	—	—	—	—	Nil.
Royal Victoria Dock ...	49	—	3	—	46	—	—	—	—	Nil.
Royal Albert Dock ...	38	—	37	—	1	—	—	—	—	Nil.
King George V. Dock ...	208	—	205	—	3	—	—	—	—	Nil.
Tilbury Dock	58	—	25	—	33	—	—	—	—	Nil.
Millwall Dock	98	—	27	—	71	—	—	—	—	Nil.
Totals	2,374	25	1,694	8	647	—	—	—	—	Nil.

APPENDIX XXV.

INTERNATIONAL SANITARY CONVENTION.

Deratisation Certificates.

The number issued during the period covered by this Report was 126 :—

Date. 1938.	Name of Vessel.	Reason for Deratisation.	Action taken.	No. of Rats reported found dead after Fumigation or Trapping.
Jan. 1	mv. " Rangitiki "	Owner's request for Certificate.	Fumigated with Hydrogen Cyanide.	Nil.
,, 1	ss. " Alaunia "	,,	,,	Nil.
,, 5	ss. "Anna Bulgaris "	,,	,,	Nil.
,, 5	ss. " Janeta "	Rat infested	Fumigated with Sulphur Dioxide.	Vessel sailed before count could be made.
,, 8	mv. " Highland Monarch "	Owner's request for Certificate.	Fumigated with Hydrogen Cyanide.	Nil.
,, 8	ss. " Ascania "	,,	,,	Nil.
,, 8	ss. " Orontes "	,,	,,	Nil.
,, 10	ss. " Tunni "	Rat infested	,,	18
,, 14	ss. " Baronesa "	Owner's request for Certificate.	Fumigated with Sulphur Dioxide.	Nil.
,, 15	ss. " Beaverdale "	,,	Fumigated with Hydrogen Cyanide.	Nil.
,, 17	ss. " Eboe "	,,	,,	18 by trapping, 7 by fumigation.
,, 28	ss. " Duquesa "	,,	Fumigated with Sulphur Dioxide.	Nil.
,, 29	ss. " Andania "	,,	Fumigated with Hydrogen Cyanide.	Nil.
,, 29	mv. " Rangitata "	,,	,,	Nil.
,, 29	ss. " Michalios "	Rat infested	,,	43 by trapping, 56 by fumigation.
Feb. 1	ss. " Bjorneborg "	,,	,,	37.
,, 5	ss. " Orama "	Owner's request for Certificate.	,,	Nil.
,, 8	ss. " Petrel "	Rat infested	Fumigated with Sulphur Dioxide.	14 by trapping, 16 by fumigation.

DERATISATION CERTIFICATES—*continued.*

Date.	Name of Vessel.	Reason for Deratisation.	Action taken.	No. of Rats reported found dead after Fumigation or Trapping.
1938.				
Feb. 9	ss. " Banaderos "	Owner's request for Certificate.	Fumigated with Sulphur Dioxide.	29.
„ 12	mv. " Dunster Grange "	„	„	Nil.
„ 12	ss. " Ruahine "	„	Fumigated with Hydrogen Cyanide.	Nil.
„ 12	ss. " Beaverhill "	„	„	27 mice.
„ 12	ss. " Merchant Royal "	Rat infested	„	19 by trapping, 83 by fumigation.
„ 19	mv. " Highland Brigade "	Owner's request for Certificate.	„	Nil.
„ 19	ss. " Orford "	„	„	Nil.
„ 19	ss. " Jamaica Planter "	„	„	5.
„ 26	mv. " Bajamar "	„	Fumigated with Sulphur Dioxide.	9 by traping, 17 by fumigation.
„ 26	mv. " Rangitane "	„	Fumigated with Hydrogen Cyanide.	Nil.
„ 26	ss. " Tongariro "	Rat infested	„	75.
Mar. 5	mv. " Highland Patriot "	Owner's request for Certificate.	„	Nil.
„ 5	ss. "Otranto "	„	„	Nil.
„ 10	ss. " Llanstephan Castle "	„	„	38 by trapping, 25 by fumigation.
„ 12	ss. " Beaverburn "	„	„	17 mice.
„ 12	mv. " Mary Slessor "	„	„	20.
„ 19	ss. " Ormonde "	„	„	Nil.
„ 23	ss. " Rotorua "	„	„	4.
„ 25	mv. " El Argentino "	„	Fumigated with Sulphur Dioxide.	Nil.
„ 26	ss. " Aghia Thallassini "	Rat infested	„	Sailed before count made.
„ 26	ss. " New Zealand Star "	Owner's request for Certificate.	Fumigated with Hydrogen Cyanide.	10
„ 29	ss. " Siris "	Rat infested	„	32
April 7	ss. " Dunluce Castle "	„	„	33 by trapping, 63 by fumigation.
„ 9	ss. " Remuera "	Owner's request for Certificate.	„	Nil.
„ 9	ss. " Oronsay "	„	„	Nil.
„ 11	ss. " Stanleigh "	Rat infested	„	29
„ 16	ss. " Beaverbrae "	Owner's request for Certificate.	„	15 mice by trapping 60 mice by fumigation.
„ 20	ss. " Surrey "	„	„	Nil.
„ 30	m.v. " Domala "	„	„	Nil. (15 mice).
May 7	ss. " Rangitiki "	„	„	Nil.
„ 14	ss. " Orontes "	„	„	Nil.
„ 17	ss. " Canonesa "	„	Fumigated with Sulphur Dioxide.	Nil.
„ 21	m.v. " Port Alma "	„	„	Nil.
„ 23	ss. " Rangitata "	„	Fumigated with Hydrogen Cyanide.	Nil.
„ 24	ss. " Norman Star "	„	„	Nil.
„ 31	ss. " Avila Star "	„	„	Nil.
June 3	mv. " Upwey Grange "	„	Fumigated with Sulphur Dioxide.	1.
„ 4	ss. " Orama "	„	Fumigated with Hydrogen Cyanide.	Nil.
„ 15	ss. " Baltistan "	„	„	Nil.
„ 20	ss. " Mahana "	Rat infested	Fumigated with Sulphur Dioxide.	45.
„ 21	ss. " Nicolaou Zografia "	„	„	11 by trapping, 64 by fumigation.
23	ss. " Hardwicke Grange "	Owner's request for Certificate.		Nil.

DERATISATION CERTIFICATES—*continued.*

Date. 1938.	Name of Vessel.	Reason for Deratisation.	Action taken.	No. of Rats reported found dead after Fumigation or Trapping.
June 24	ss. " Mamari "	Rat infested	Fumigated with Sulphur Dioxide.	18 by trapping, 85 by fumigation.
„ 25	ss. " Ruahine "	Owner's request for Certificate.	Fumigated with Hydrogen Cyanide.	Nil.
„ 25	ss. " Andalucia Star "	„	„	Nil.
„ 25	ss. " Orion "	„	„	Nil.
July 1	ss. " Sarthe "	„	„	40.
„ 4	ss. " Rodney Star "	„	„	3.
„ 4	mv. " Rangitane "	„	„	Nil.
„ 6	ss. " Duquesa "	„	Fumigated with Sulphur Dioxide.	Nil.
„ 9	ss. " Port Hunter "	„	„	Nil.
„ 9	ss. " Otranto "	„	Fumigated with Hydrogen Cyanide.	Nil.
10	ss. " Andalusian "	Rat infested	Fumigated with Sulphur Dioxide.	17 by trapping, 34 by fumigation.
„ 16	ss. " Ormonde "	Owner's request for Certificate.	Fumigated with Hydrogen Cyanide.	Nil.
„ 18	ss. " Almeda Star "	„	„	Nil.
„ 23	ss. " Mulbera "	„	„	Nil.
„ 27	ss. " Gourko "	Rat infested	Fumigated with Sulphur Dioxide.	11.
„ 28	ss. " Trafalgar "	Owner's request for Certificate.	„	Nil.
„ 29	mv. " Beacon Grange "	„	„	Nil.
„ 31	ss. " Matiana "	„	Fumigated with Hydrogen Cyanide.	28 mice.
Aug. 2	mv. " Port Jackson "	„	Fumigated with Sulphur Dioxide.	Nil.
„ 2	ss. " Royal Star "	„	Fumigated with Hydrogen Cyanide.	Nil.
„ 4	ss. " Rotorua "	„	„	Nil.
„ 12	mv. " Dunster Grange "	„	Fumigated with Sulphur Dioxide.	Nil.
„ 12	ss. " Evagoras "	Rat infested	Fumigated with Hydrogen Cyanide.	10 by trapping, 102 by fumigation.
„ 16	mv. " Port Wyndham "	Owner's request for Certificate.	Fumigated with Sulphur Dioxide.	Nil.
„ 17	ss. " Remuera "	„	Fumigated with Hydrogen Cyanide.	Nil.
„ 20	ss. " Oronsay "	„	„	Nil.
„ 21	ss. " Mantola "	„	„	Nil.
„ 23	ss. " Jamaica Pioneer "	„	„	20 by trapping, 11 by fumigation.
„ 30	mv. " El Argentino "	„	Fumigated with Sulphur Dioxide.	Nil.
„ 31	ss. " Inkosi "	„	Fumigated with Hydrogen Cyanide.	Nil.
Sept. 1	mv. " Brenas "	„	Fumigated with Sulphur Dioxide.	1 by trapping, 13 by fumigation.
„ 2	ss. " Orcades "	„	Fumigated with Hydrogen Cyanide.	Nil.
„ 5	ss. " Strathallan "	„	„	3.
„ 7	mv. " Rangitiki "	„	„	Nil.
„ 8	mv. " Bajamar "	„	Fumigated with Sulphur Dioxide.	6.
„ 14	ss. " Fabian "	„	„	31.
„ 17	ss. " Orontes "	„	Fumigated with Hydrogen Cyanide.	Nil.
„ 17	ss. " Arawa "	„	„	Nil.
„ 19	sv. " Winterhude "	Rat infested	Fumigated with Sulphur Dioxide.	41 by trapping, 27 by fumigation.

DERATISATION CERTIFICATES—*continued.*

Date. 1938.	Name of Vessel.	Reason for Deratisation.	Action taken.	No. of Rats reported found dead after Fumigation or Trapping.
Sept. 24	ss. "Tabaristan"	Rat infested	Fumigated with Hydrogen Cyanide.	7 by trapping, 63 by fumigation.
,, 24	ss. "Malda"	Owner's request for Certificate.	,,	Nil.
,, 24	ss. "Moreton Bay"	,,	,,	Nil.
,, 28	mv. "Essex"	,,	,,	Nil.
,, 28	ss. "Inanda"	,,	,,	Nil.
Oct. 1	ss. "Orion"	,,	,,	Nil.
,, 6	mv. "Rangitata"	,,	,,	Nil.
,, 6	ss. "Jamaica Progress"	,,	,,	19
,, 14	ss. "Orama"	,,	,,	Nil.
,, 15	mv. "Pinto"	,,	,,	6 by trapping, 26 by fumigation.
,, 15	ss. "Araby"	Rat infested	,,	35
,, 26	ss. "Jamaica Producer"	,,	,,	5 by trapping, 28 by fumigation.
,, 29	ss. "Orford"	Owner's request for Certificate.	,,	Nil.
,, 30	ss. "Sultan Star"	,,	,,	3.
Nov. 4	mv. "Rangitane"	,,	,,	Nil.
,, 4	ss. "Otranto"	,,	,,	Nil.
,, 11	ss. "Keti Chandris"	Rat infested	Fumigated with Sulphur Dioxide.	47 by trapping, 27 by fumigation.
,, 17	mv. "Upwey Grange"	Owner's request for Certificate.	,,	Nil.
,, 19	ss. "Beaverhill"	,,	Fumigated with Hydrogen Cyanide.	43 mice.
,, 19	ss. "Casanara"	,,	,,	7 by trapping, 5 by fumigation.
,, 25	ss. "Ormonde"	,,	,,	Nil.
,, 26	mv. "Rimutaka"	,,	,,	Nil.
,, 26	mv. "Port Dunedin"	,,	Fumigated with Sulphur Dioxide.	Nil.
Dec. 10	ss. "Oronsay"	,,	Fumigated with Hydrogen Cyanide.	Nil.
,, 17	ss. "Beaverbrae"	,,	,,	87 mice.
,, 28	ss. "Baronesa"	,,	Fumigated with Sulphur Dioxide.	2.
,, 31	mv. "Rangitiki"	,,	Fumigated with Hydrogen Cyanide.	Nil.

DERATISATION EXEMPTION CERTIFICATES.—The number issued during the year was 1,010.

APPENDIX XXVI.—General Summary, and Analysis, of the Sanitary Inspections Vessels, &c., in the Port of London for the year ended 31st December, 1938.

Foreign.						Coastwise.						Inland Navigation.												Shore Premises.			Sick Seamen referred to Hospital	Water Barges.				
Steam.			Sail.			Steam.			Sail.			Steam.			Sail.			Lighters (uninhabited)			Canal Boats										
Inspected.	Defective.	To be Cleaned.	Inspected.	Defective.	To be Cleaned.	Inspected.	Defective.	To be Cleaned.	Inspected.	Defective.	To be Cleaned.	Inspected.	Defective.	To be Cleaned.	Inspected.	Defective.	To be Cleaned.	Inspected.	Defective.	To be Cleaned.	Inspected.	Defective.	To be Cleaned.	Inspected.	Defective.	To be Cleaned.		No. in District in good condition 31st December, 1937.	New Barges.	Condemned.	Use discontinued.	Previously withdrawn and since resumed work.	No. in District 31st December, 1938.
681	1,102	8	—	—	2,647	520	284	421	1	27	103	—	8	120	24	5	539	—	21	257	29	9	5,288	6	582	437	12	—	—	—	12

Inspections.		Docks and River.	No.
Total Inspections from 1st January to 31st December, 1938:—		St. Katharine	102
Foreign	9,837	London	1,056
Coastwise	3 068	Regent's Canal	641
Inland Navigation .	1,019	Millwall	585
Premises on shore ...	5,288	West India	705
Total ...	19,212	Poplar	16
		East India	179
Cleansing of Crew's Quarters, &c.:—		Victoria	716
Total No. of Vessels from 1st January to 31st December, 1938	1,456	Royal Albert	1,266
		King George V	575
Number of Vessels inspected:—		Surrey Commercial ...	1,759
In the Launches—		Tilbury	1,026
"Howard Deighton"	1,575	Gravesend District ...	—
"Frederick Whittingham"	1,842	River—*Upper District...	1,842
"Alfred Robertson"	1,881	„ *Middle „ ...	1,881
Total ...	5,298	„ *Lower „) „ Medway)	1,575
In the Docks, &c. ...	8,626	Total Vessels ...	13,924
Total ...	13,924	Shore Premises	5,288
		Total	19,212

Nationalities.	No.
American	219
BRITISH	8,573
Brazilian	—
Bulgarian	1
Belgian	254
Dutch	1,334
Danish	387
Danzig Free State	9
Egyptian	8
Estonian	112
French	49
Finnish	572
German	494
Greek	152
Hungarian	3
Italian	74
Icelandic	5
Japanese	82
Latvian	90
Lithuanian	4
Norwegian and Swedish ...	1,306
Panama	4
Polish	21
Portuguese	26
Russian	87
Roumanian	5
Spanish	20
Uruguayan	1
Yugo-Slavakian	32
	13,924
Shore Premises	5,288
Total	19,212

*Upper District extends from Greenwich to Teddington.
*Middle „ „ „ „ Erith.
*Lower „ „ „ Erith to outer limits of the Port of London.

	1929.	1930.	1931.	1932.	1933.	1934.	1935.	1936.	1937.	1938.	Yearly Average for the 10 years ending 31st Dec., 1938.
Total number of Inspections of vessels from—											
"Foreign" ...	12,186	12,489	11,071	11,090	12,025	10,052	11,685	11,133	10,580	9,837	11,214·8
"Coastwise," "Inland Navigation," and other Inspections	8,880	8,613	9,429	9,883	9,525	10,804	10,826	10,468	10,902	9,375	9,870·5
Total ...	21,066	21,102	20,500	20,973	21,550	20,856	22,511	21,601	21,482	19,212	21,085·3

APPENDIX XXVII.

NUMBER OF NUISANCES AND SANITARY DEFECTS ON **VESSELS** REPORTED AND DEALT WITH during the year ended 31st December, 1938.

DESCRIPTION OF NUISANCES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
SMOKE NUISANCES :—													
Number of complaints received ...	3	1	1	2	—	—	—	—	—	—	—	—	7
Number of recurrences reported ...	—	—	—	—	—	—	—	—	—	—	—	—	—
OFFENSIVE CARGOES (Bye-laws) :—													
Number of Infringements reported ...	—	—	—	—	—	—	—	—	—	—	4	—	4
STRUCTURAL AND OTHER DEFECTS :—													
Ventilation	28	39	33	21	40	35	26	23	20	8	13	32	318
Lighting...	35	30	37	24	56	44	35	20	16	7	14	33	351
Heating	48	34	22	12	17	7	8	7	5	15	16	10	201
Bare iron in crew's quarters	12	7	7	—	2	—	1	—	—	—	7	3	39
Leaky decks, hawse-pipes, cable casings, &c.	64	46	33	17	33	18	28	29	12	11	26	26	343
Defective bulkheads and floors ...	30	28	30	7	23	22	11	15	7	4	15	6	198
Sanitary conveniences	132	105	86	59	104	76	48	50	23	43	44	55	825
Ship's gear or stores stowed in crew's quarters	5	5	1	—	3	4	1	2	—	1	1	1	24
Foul bilges and peaks	1	4	1	—	—	—	—	—	—	—	—	—	6
Storage of drinking water (dirty or defective tanks)	2	5	1	1	3	1	5	3	—	—	—	1	22
Defective or inadequate clothes lockers	83	85	57	36	62	36	29	36	14	25	30	28	521
Defective or inadequate food lockers	34	19	17	11	16	12	9	10	10	8	9	6	161
Absence of washplace	75	67	46	24	51	34	19	24	21	17	31	27	436
Absence of messroom	84	64	55	36	76	39	29	26	18	21	28	29	505
Dirty and neglected paintwork or Distemper in quarters	46	41	28	19	53	20	12	9	14	15	9	10	276
Dirty quarters	169	145	122	121	109	84	133	104	96	100	115	118	1,416
Verminous quarters	19	11	7	13	17	4	3	4	7	8	8	8	109
Accumulation of offensive matter ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Miscellaneous Nuisances	18	59	44	35	75	57	30	35	44	30	32	41	500
Totals	888	795	628	438	740	493	427	397	307	313	402	434	6,262
Total number of vessels on which sanitary defects were reported ...	339	327	250	202	235	169	210	198	150	148	188	196	2,611
Total number of vessels on which sanitary defects were remedied ...	225	205	162	164	170	130	190	145	110	132	162	165	1,960

(Includes Orders made in previous years and reported carried out during 1938.)

NUMBER OF NUISANCES **IN THE RIVER** REPORTED AND DEALT WITH during the year ended 31st December, 1938.

Offensive condition of River Water ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Totals	—	—	—	—	—	—	—	—	—	—	—	—	—

APPENDIX XXVIII.

NUMBER OF NUISANCES ON **SHORE PREMISES** REPORTED AND DEALT WITH during the year ended 31st December, 1938.

DESCRIPTION OF NUISANCES.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	Totals.
SMOKE NUISANCES:—													
Number of complaints received ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Number of recurrences reported ...	—	—	—	—	—	—	—	—	—	—	—	—	—
STRUCTURAL AND OTHER DEFECTS:—													
Ventilation	—	—	—	—	—	—	—	—	—	—	—	—	—
Lighting...	—	—	1	—	—	—	—	—	—	—	—	—	1
Heating	—	—	—	—	—	—	—	—	—	—	—	—	—
Dilapidations	—	—	—	1	—	—	—	—	—	—	—	—	1
Sanitary Conveniences	—	—	—	—	—	—	—	—	—	—	—	—	—
Water Supply	—	—	—	—	—	—	—	—	—	—	—	—	—
Dirty Premises	51	50	32	61	61	38	49	30	34	47	48	81	582
Accumulation of Offensive Matter ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Drainage	—	1	1	2	—	—	—	—	—	—	—	—	4
Miscellaneous Nuisances	1	1	1	1	—	—	—	—	—	—	—	—	4
Totals	52	52	35	65	61	38	49	30	34	47	48	81	592
Number of shore premises on which sanitary defects were reported ...	52	52	33	63	61	38	49	30	34	47	48	81	588
Number of shore premises on which sanitary defects were remedied ...	52	52	33	62	61	38	49	30	34	47	48	81	587

APPENDIX XXIX.—Description of Meat Destroyed.

Year.	Beef.				Mutton and Lamb.				Veal, Pork, Offal.				Tinned.				Smoked and Salted, &c.				Total.			
	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.
									Pork and Veal—															
1929	8	17	3	4	367	12	1	8	0	13	2	12		Nil.			0	15	3	27	391	16	3	27
									Offal—															
									13	17	1	4												
									Pork and Veal—															
1930	21	12	0	16	52	18	0	21	1	10	0	25	0	4	1	27	1	0	2	27	95	17	2	4
									Offal—															
									18	11	3	0												
									Pork and Veal—															
1931	1	14	1	16	65	4	2	24	1	2	0	15	0	1	2	19	0	10	2	20	81	12	3	22
									Offal—															
									12	19	1	12												
									Pork and Veal—															
1932	3	19	3	15	56	8	3	9	0	6	2	16	1	3	3	22	0	2	2	19	72	6	3	12
									Offal—															
									10	4	3	15												
									Pork and Veal—															
1933	2	19	1	7	18	3	0	18	1	10	2	8	0	0	2	19	0	1	1	3	28	18	3	3
									Offal—															
									6	3	3	9												
									Pork and Veal—															
1934	10	10	3	20	17	14	1	21	0	15	2	4	1	5	3	9	33	0	2	15	67	2	2	12
									Offal—															
									3	15	0	27												
									Pork and Veal—															
1935	15	2	1	15	15	17	3	16	1	9	2	19	7	16	0	11	0	19	1	23	48	10	0	27
									Offal—															
									7	4	2	27												
									Pork and Veal—															
1936	15	11	0	18	18	3	3	5	1	3	0	20	0	17	2	21	0	12	2	12	49	11	3	28
									Offal—															
									13	3	2	3												
									Pork and Veal—															
1937	4	16	3	1	112	15	3	21	2	2	1	13	0	13	0	19	0	12	2	15	147	7	2	12
									Offal—															
									26	6	2	27												
									Pork and Veal—															
1938	78	19	3	12	35	19	3	27	11	5	1	21	2	3	0	3	0	1	1	16	142	2	2	7
									Offal—															
									13	12	3	12												
Total for ten years	164	4	2	12	760	19	0	25	147	19	2	19	14	6	2	10	37	18	0	9	1,125	8	0	9

APPENDIX XXX.

PORT OF LONDON AUTHORITY AIR-RAID PRECAUTIONS SCHEME.

Part I.—Denton Hospital.

The uses to which, it is suggested, Denton Hospital should be put are as follows :—

1. It will continue to fulfil its normal function, *i.e.*, the isolation and treatment of cases of infectious disease found in ships entering the Port.

2. As a decontamination centre for the crews and passengers of " gassed " ships entering the Port.

3. As a casualty clearing station for wounded crews and passengers consequent upon bombardment of ships in or entering the River.

(*a*) Its Normal Function.

It is suggested that the Cubicle Block should continue to be employed exclusively for the reception of infectious cases, and be rendered as far as possible gas-proof. It will be remembered that in an earlier scheme presented to your Worshipful Committee it was suggested that the Cubicle Block and the corridor linking it with the Administrative Block should as far as possible be rendered splinter-proof and gas-proof. To render the block splinter-proof would necessitate the protection of the walls and windows with sand-bags. This would take time, and when completed would exclude natural light from the building.

Your Medical Officer, after consultation with Admiral Oldham, is rather inclined to suggest that this protection, though of great value, is impracticable as a permanent or semi-permanent scheme, though it might be decided that it should be done as part of urgent measures after the outbreak of hostilities. As a permanent scheme it would seem sufficient to render the Cubicle Block gas-proof to the extent of supplying removable frames composed of a double layer of wire mesh with blanket material interposed, tacked on to a wooden stretcher made to fit on to the inside of the windows, and to supply a quantity of tongued and grooved matchboarding for the construction of an air-lock chamber immediately outside the entrance of the ward. The interior glass partitions would have to be protected from fracture by pasting cellophane sheets on to the glass.

In the event of an air-raid the Gravesend area would no doubt be " blacked out," and it would be necessary to supply light-proof blinds for the windows of the Cubicle Block. Alternatively, it may be possible to exclude all light by employing light-proof blanketing in the window frames referred to above.

A supply of candles in suitable carriers must be available as an alternative means of illumination.

It is suggested that estimates of the cost of this work should be made as soon as possible, and that the work should be carried out forthwith.

It might be necessary to restrict admission to the more dangerous types of epidemic disease (with the exception of smallpox) and to make arrangements with the Gravesend Isolation Hospital or possibly with some other isolation hospital in the near vicinity for the removal and treatment of the less dangerous types of infectious disease.

The question of smallpox presents a difficulty, and later in this Report it will be suggested that the Smallpox Block should be used for other purposes. Smallpox cases are not likely to occur frequently or in any number, and it is suggested that should smallpox be found on board a ship arriving in the Port, arrangements should be made for transport and isolation to a smallpox hospital deep in the country. Possibly the Kent County Council would agree to receive cases of this kind.

(*b*) Decontamination Centre.

The decontamination of crews and passengers who have been subjected to aerial bombardment by gas, and of their clothing and effects, is likely to present serious and urgent problems and Denton Isolation Hospital, in view of its situation, could serve a very useful purpose. In the first place, means are already available in the Hospital for stoving quantities of clothing and equipment, and very little alteration of the plant would be needed for this purpose ; the exhaust from the Washington Lyons Disinfector, which would contain noxious gases, would have to be led into some sort of decontaminating pit but that, as far as can be estimated, is all that would be necessary in the way of reconstruction of the existing plant and premises.

The existing delousing rooms could without much difficulty be converted for use as decontaminating rooms, for which they are well adapted. Persons whose clothing was contaminated would enter the " dirty " side and there be undressed, then take their bath and emerge into the " clean " side to receive fresh clothing. It might be necessary to erect screens in order completely to separate the " dirty " from the " clean " side, but this could be done quite cheaply and effectively by means of blankets saturated with decontaminating material. At present, waste water from the baths and showers runs into open gutters and thence into a drain outside the building. These gutters would have to be closed in, otherwise they would give off noxious gases. This could probably be done by means of matchboarding.

It would be necessary to erect a small wooden shed (12 ft. by 10 ft.) outside the " dirty " entrance, wherein to remove the more heavily contaminated external clothing, in order as far as possible to reduce the contamination of the " dirty " side.

The windows of the delousing block would have to be gas-proofed in the manner described above.

Contaminated Wounded.

Arrangements would have to be made for the emergency treatment of wounded who were at the same time contaminated, and it is suggested that the Smallpox Block should be adapted for this purpose. The

wounded would receive first-aid, their contaminated clothing would be removed, and their bodies decontaminated as far as possible in one ward of the block. They would then be transferred to the other ward pending the removal by ambulance to a general hospital. To this end one side of the block at least would have to be rendered gas-proof in the same manner as described above in the case of the Cubicle Block, *i.e.*, by preparing removable gas-proof frames to be fitted into the windows.

Casualty Clearing Station.

Casualties to crews and passengers that have been subjected to attack but have not been contaminated by gas would be landed at Denton Hospital and taken at once to the Typhoid Block to receive first-aid whence they would be transported by ambulance to the appropriate base hospital.

Staff and Equipment.

It is clear that the peace-time staff and equipment at the Denton Hospital would be quite inadequate to meet the needs of the emergency scheme outlined above. The scheme of Air-raid Precautions for the Port includes measures for the evacuation and treatment of wounded coming into the Port, and the Port of London Authority would, under that scheme, furnish the necessary additional staff and equipment.

Arrangements would be made by the Port of London Authority to draft doctors, nurses, first-aid men and decontamination personnel to the hospital by the most rapid means available.

Part 2.—Inspection of Arriving Ships for Contamination.

Under the scheme envisaged the Assistant Port Medical Officers stationed at Gravesend would, in addition to their normal duties, board all ships flying the " Gas " signal and would also undertake to board other ships that had been bombed, but not gassed, on which casualties had occurred, for the purpose of arranging for the disposal of urgent casualties. The Medical Officers, whose number might have to be increased to cope with the work, would have attached to them a certain number of qualified Gas Inspectors, whose duty it would be to assist the Medical Officers in detecting the presence of lethal gas, and in deciding whether the cargo in the holds had been involved. Instructions would then be issued, in the case of contamination, to the ship to proceed to the mooring station set apart by the Port of London Authority. Here again such additional staff as was considered necessary would be furnished by the Port of London Authority under their Air-raid Precautions scheme.

On the arrival of the contaminated ship at the decontaminating mooring a further inspection would be necessary to decide by closer scrutiny to what extent the cargo had been affected, and whether the whole or part of it was safe for discharge after entering the dock or so contaminated that it must be discharged into lighters for eventual destruction or for disposal in some other manner. The Port of London Authority suggests that seeing that many ships carry food cargoes of some kind and, in any event, the question of safety to health in handling contaminated cargo would arise in each instance, your Inspectors might take over the duty of examining all cargo suspected of contamination and of determining its ultimate disposal.

It is obvious that your Worshipful Committee could not spare for this purpose more than two or three of its trained Inspectorate, and that the rest of the Inspectorate for duty at the decontamination mooring would have to be supplied by the Port of London Authority to work under the direction of the trained Inspectors.

Part 3.—Inspection of Cargo on Discharge.

One of the principal duties of the Port of London Health Authority in time of war would be, as it is now, the supervision of foodstuffs entering the Port and the decision as to their fitness for human consumption. In the case of a ship that had been contaminated by a persistent gas, such as mustard gas or lewisite, each individual parcel of food would have to be carefully inspected for contamination and a selection made somewhat as follows : (*a*) fit for human consumption ; (*b*) fit for human consumption after suitable treatment ; (*c*) unfit, and to be destroyed under special precautions.

There would remain the problem of safety of handling contaminated cargo by stevedores, and it is suggested that your Inspectorate might assume this duty. The added responsibility not only of inspecting and dealing with contaminated foodstuffs, but of inspecting all cargoes for safety in handling, would involve a very considerable increase of labour and time, and it would be necessary considerably to augment the Inspectorate. The Port of London Authority would share the responsibility of recruiting the additional personnel and of collaborating with your Worshipful Committee in their training in the duties they will perform under the direction of your Inspectors.

Part 4.—Certification of Cargo for Export as free from Contamination.

The Government Air-raid Precautions scheme includes machinery for the declaration at the point of manufacture, during transit, and at the point of loading of cargoes as free from gas contamination, and consequently safe to handle, and in the case of foodstuffs, for human consumption. Your Inspectorate already deals with the certification of foodstuffs for export or re-export, and the inspection of all cargoes to ensure freedom from contamination could be encompassed in the existing machinery. In the proposed scheme of co-operation with the Port of London Authority, the latter would share recruiting the additional personnel.

Part 5.—Central Administration.

It seems clear, even in times of emergency, that the Port of London Health Authority must retain control of the duties which devolve upon it by statute, and even if a wide and close co-operation were to be established with the Port of London Authority, the individuality of the Port of London Health Authority must be safeguarded.

The central office of the Port of London Health Authority should continue as a distinct Department exercising supervision over the routine work of the Authority and, at the same time, if necessary with an augmented staff, effecting, co-ordinating and supervising the necessary liaison between the Authority and the Port of London Authority.

In addition to his normal duties your Medical Officer of Health should, it is thought, be permitted considerable liberty of action. He will endeavour generally to supervise the organisation at Gravesend, though it will obviously be necessary to have a responsible Medical Officer, carefully chosen, to direct the work on the spot. The organisation and supervision of food inspection and of inspection of cargoes from the point of view of contamination will obviously require administrative control, and this will be another principal preoccupation of your Medical Officer of Health.

(Signed) M. T. MORGAN,
Medical Officer of Health of Port of London.

COPY OF MEMORANDUM BY REAR-ADMIRAL R. OLDHAM, AIR-RAID PRECAUTIONS OFFICER TO THE PORT OF LONDON AUTHORITY.

I am in general agreement with Dr. Morgan's Memorandum and the remarks which follow aim at setting out a skeleton organisation rather than a criticism of the views expressed.

GENERAL.

I think that the Port Anti-gas Service should be made a part of the Port Medical Service. There seems to be no point in divided control, the work is almost entirely medical and sanitary, and it would be better to expand an existing organisation rather than set up a rival alongside it, however close the co-operation may be. If this arrangement is agreed to, it would, of course, be understood that the Port of London Authority would give every assistance in their power in the development and working of the organisation.

With regard to cost, I think the first requirement is to produce a practical arrangement and refer it to the Government for consideration with regard to cost. It would appear that ships which become contaminated by gas are in exactly the same position as ships and cargoes which may be subjected to any other form of enemy action in war and the cost of any services in connection with gas should be met in the same way as salvage operations for dealing with damage due to shell fire or mine.

INCOMING SHIPS.

It is proposed that Denton Hospital should act as a base for the service at Gravesend. The contaminated anchorage is handy, and there appears to be sufficient accommodation both at the Hospital and at the Hulk " Hygeia " to provide for medical and anti-gas requirements, staff, cleansing, first-aid facilities, etc.

The procedure visualised is that a ship would arrive at the examination anchorage and would be required to hoist a signal similar to L.I.M. if the ship or her cargo had been exposed to gas. It would probably be necessary to tighten up the existing regulations and make it necessary for the master to hoist a signal for medical assistance if he had any form of illness on board, including the results of accident or injury, as this may be the only means of detecting slight contamination.

An affected ship would then be ordered to go to the decontamination anchorage, where she would be inspected, the inspecting party consisting of Medical Officer and Orderly, Gas Detection Officer and Inspector.

The following action would be required :—

(1) Decide on extent of contamination.

(2) Land medical and cleansing cases at Denton Hospital.

(3) If material contamination affects the ship only, it will probably be possible to decontaminate her on the spot. If so, parties would be sent to deal with her or to assist the crew to do so.

(4) If the cargo is contaminated the ship will probably have to be discharged at a special berth, but in any case she must be decontaminated sufficiently to make her reasonably safe for normal handling before proceeding.

In certain cases where ships' cargo is badly contaminated, it might be desirable to discharge one or more holds into barges or hoppers in the River and dump the affected cargo at sea.

There would seem to be no point in taking cargo into the Docks when it is evident that it will have to be destroyed.

DOCK SERVICES.

In each dock system there are at present :—

Food Inspector ;
Sanitary Inspector ;
Rat Searchers.

These are fully trained men, and with the Food Inspector in charge could inspect all suspect cargoes on arrival.

The contaminated ship, having been made reasonably safe at the contamination anchorage, would proceed to the docks with an Inspector from Gravesend on board, who would report the situation to the Food Inspector, and a decision would be arrived at on the action to be taken.

The cargo would then have to be discharged by stevedores, some of whom would be working in protective clothing.

It might be desirable to discharge cargo which is considered impossible to save into barges or hoppers for dumping, otherwise facilities for destruction would have to be provided in or near the docks. The remaining cargo would be decontaminated by the decontamination parties under the supervision of the Food Inspector, and released when safe.

It will probably be considered necessary to increase this staff, and perhaps appoint a Medical Officer-in-Charge, with a Gas-detector, at each dock, but the existing organisation should provide a nucleus for immediate requirements.

The possibility of ships being exposed to gas on the way up river and of cargoes being exposed, either on the quays or in the warehouses, etc., must not be overlooked. The duty of dealing with such cases would fall on the above services, and provides an additional reason for increasing the present staff.

Outgoing Ships and Cargoes.

The issue of Gas-free Certificates in the case of outgoing ships and cargoes is required. This would also be the responsibility of the Inspectorate in the Docks. Whether or not it would be necessary to endorse this certificate at Gravesend to confirm freedom from the exposure while in passage down the river seems doubtful, but it would seem to be sufficient if it were left to the master to hoist the signal for medical assistance at Gravesend if he had been exposed to attack. The ship would then be dealt with as for outgoing ships.

Organisation.

In the attached list an attempt has been made to frame a skeleton organisation to meet the requirements described. In the provision of personnel it might be arranged for the existing medical service to recruit the professional staff required, while the Port of London Authority would be responsible for providing the stevedores and decontamination parties. Additional boats and ambulances should be requisitioned.

Gravesend—*Based on Denton Hospital*—

In charge	1 Chief Medical Officer. 1 Chief Gas Detector.
Inspection Staff	3 Medical Officers. 3 Orderlies or Stewards trained in First-aid. 3 Gas Detectors. 3 Inspectors.
Decontamination Parties	36 men (in 6 squads of 6 men each, working in 3 shifts of 12).
Staff on Duty	Inspection Staff and Decontamination Parties would be accommodated in " Hygeia."
Transport	3 Inspection Craft. 2 Hospital Boats (capable of carrying 10 stretcher and 40 walking cases).
Hospital Staff	1 Medical Officer-in-Charge. 1 Assistant Medical Officer.
For First-aid and Cleansing Duties	6 Nurses. 10 Orderlies. Laundry and Disinfecting Staff.
Transport	2 improvised Ambulances for evacuating cases to other Hospitals.
Pontoon	It will be desirable to put a pontoon at Denton Pier so as to ensure that it can be used at all states of the tide.

At each Dock—	1 Medical Officer. 1 Gas Detector. 2 Food Inspectors. 3 Sanitary Inspectors. Rat Searchers.

Decontamination Personnel—

At each Decontamination Berth	12 trained Stevedores. 24 Decontamination with their own foremen.

Decontamination Site or Sheds and Barges.—Provision would have to be made for transport of cargo to a decontamination shed and for subsequent transfer to a " clean " shed. Barges and hoppers would also be required for removal of cargo for destruction unless a destructor is available near the berth.

APPENDIX XXXI.

DOCKS WITHIN THE JURISDICTION OF THE PORT OF LONDON HEALTH AUTHORITY.

Docks.	Water Area. Acres.	Water Area. Yards.	Lineal Quayage. Miles.	Lineal Quayage. Yards.
Regent's Canal	11	38	—	966
St. Katharine	10	488	—	1,654
London	34	4,460	3	119
Surrey Commercial	161	2,717	16	200
West India	97	3,957	4	1,134
East India	31	2,878	1	1,242
Millwall	35	3,217	2	155
Royal Victoria	95	1,772	5	1,479
Royal Albert	87	213	3	905
King George V.	64	997	3	663
Tilbury	104	2,166	3	1,667

The River distance between the Western and Eastern limits of the Port is about 68½ miles.

APPENDIX XXXII.

POWERS.

The work of the Port of London Health Authority is carried out under the following Acts of Parliament and Statutory Rules and Orders :—

Existing Acts and Orders applicable to the Port of London Health Authority.

CONSTITUTION OF THE AUTHORITY.

Public Health (London) Act, 1936

ASSIGNMENT OF POWERS.

L.G.B. Order, Port Sanitary Authority Assignment of Powers, Port of London	25th March, 1892.
L.G.B. Order, Port Sanitary Authority Assignment of Further Powers, Port of London	29th December, 1894.
L.G.B. Order, Port Sanitary Authority Assignment of Powers, Port of London	30th June, 1898.
S.R. & O. 1922, No. 781. London Port Sanitary (Additional Powers) Order, 1922	18th July, 1922.
S.R. & O. 1923, No. 812. London Port Sanitary (Additional Powers) Order, 1923	16th July, 1923.
S.R. & O. 1933, No. 803. The Port of London (Assignment of Powers) Order, 1933	11th August, 1933.

ADMINISTRATION.

Port Sanitary Administration and Medical Inspection of Aliens under the Aliens Order, 1920 (Grants in Aid)	14th July, 1920.
City of London (Various Powers) Act, 1922. Part IV. Section 30.	
City of London (Various Powers) Act, 1933. Part III. Sections 6 and 7.	
S.R. & O. 1926, No. 552. Sanitary Officers Order, 1926	27th May 1926.

INFECTIOUS DISEASE.

Infectious Disease (Notification) Acts, 1889 to 1899.

Public Health Act, 1896.

Public Health (Ports) Act, 1896.

S.R. & O. 1910, No. 1165. Prevention of Epidemic Diseases Regulations as to Plague, Destruction of Rats, 1910	10th November, 1910.
S.R. & O. 1912, No. 1226. Public Health (Cerebro-spinal Fever and Acute Poliomyelitis) Regulations, 1912	15th August, 1912.
S.R. & O. 1918, No. 67. Public Health (Notification of Infectious Diseases) Regulations, 1918	19th January, 1918.
S.R. & O. 1926, No. 972. Public Health (Notification of Puerperal Fever and Puerperal Pyrexia) Regulations, 1926	31st July, 1926.
S.R. & O. 1927, No. 1207. Infectious Diseases (London) Regulations, 1927.	22nd December, 1927.
S.R. & O. 1930, No. 299. Parrots (Prohibition of Import) Regulations, 1930	24th April, 1930.
S.R. & O. 1933, No. 38. The Port Sanitary Regulations, 1933	4th February, 1933.

CANAL BOATS.

Public Health Act, 1936.

FOOD.

Public Health (Regulations as to Food) Act, 1907.

S.R. & O. 1924, No. 1432. Public Health (Meat) Regulations, 1924 (Part IV)	20th December, 1924.
S.R. & O. 1925, No. 775 ,, 1926, No. 1577 ,, 1927, No. 577 } Public Health (Preservatives, &c., in Food) Regulations	1928.
S.R. & O. 1926 No. 820. Public Health (Imported Milk) Regulations, 1926	6th July, 1926.
S.R. & O. 1937 No. 329. Public Health (Imported Food) Regulations, 1937 ...	16th April, 1937.

SHELLFISH.

S.R. & O. 1934, No. 1342. Public Health (Shellfish) Regulations, 1934 ...	7th December, 1934.
S.R. & O. 1935, No. 1221. The Medway (Shell-Fish) Regulations, 1935 ...	11th December, 1935.

RATS AND MICE.

Rats and Mice (Destruction) Act, 1919.

SMOKE ABATEMENT.

Public Health (London) Act, 1936.

ABATEMENT OF NUISANCES and REMOVAL OF REFUSE.

Public Health (London) Act, 1936.

FERTILISERS AND FEEDING STUFFS.

Fertilisers and Feeding Stuffs Act, 1926.

S.R. & O. 1932, No. 658. Fertilisers and Feeding Stuffs Regulations, 1932 ...	11th August, 1932.
S.R. & O. 1928, No. 439. Order appointing 1st July, 1928, as the date for the coming into operation of the Fertilisers and Feeding Stuffs Act, 1926	30th May, 1928.

DANGEROUS DRUGS.

S.R. & O. 1923, No. 1095. Dangerous Drugs (No. 3) Regulations, 1923 ...	10th September, 1923.

ALIENS.

S.R. & O. 1920, No. 448. The Aliens Order, 1920.

AIRCRAFT.

S.R. & O. 1938, No. 229. Public Health (Aircraft) Regulations, 1938 ...	7th April, 1938.

IMPORTATION OF CATTLE.

Ministry of Agriculture and Fisheries Animals (Importation) Order, 1930, dated 4th November, 1930. Part III, Article 22 ; Part IV, Articles 23, 24 and 25.

Ministry of Agriculture and Fisheries Animals (Landing from Ireland, Channel Islands and Isle of Man) Order, 1933, dated 17th January, 1933. Part II, Article 17.

BYE-LAWS.

Bye-laws have been made by the Port of London Health Authority :—

1. For preventing nuisances arising from barges or vessels carrying offensive cargoes.

2. For removing to hospital any person suffering from dangerous infectious disorders, and for keeping therein of such persons as long as may be deemed necessary.

3. With respect to Houseboats used for human habitation within the limits of the Port of London.

PORT OF LONDON HEALTH ADMINISTRATION ACCOUNT.

Dr. REVENUE ACCOUNT for Year ended 31st March, 1939. *Cr.*

	£ s. d.	£ s. d.	£ s. d.
Salaries—Medical Officer, Deputy and Assistants		4,977 7 4	
Travelling Expenses—Ditto		84 12 1	
Salaries—Inspectors		5,921 4 11	
Uniforms, Travelling Expenses—Inspectors		257 0 6	
CLERICAL ASSISTANCE :—			
Salaries	2,855 13 9		
Other Expenses	144 10 1		
		3,000 3 10	
Assistant Rat Officers :—			
Salaries	1,097 12 0		
Other Expenses	106 13 7		
		1,204 5 7	
PROVISION AND MAINTENANCE OF HOSPITAL :—			
Capital Expenditure	1,251 0 7		
Rent, Rates, Taxes and Insurance...	215 3 5		
Furniture, Equipment and Renewals	43 8 4		
Repairs	239 4 4		
Heating, Lighting and Cleansing	428 9 8		
Interest on Loans	426 1 2		
Salaries—General	422 16 11		
Nursing	567 0 2		
Domestic	142 7 9		
	1,132 4 10		
Cost of Food	314 15 8		
Drugs and Medical Requisites	58 18 2		
Uniforms	26 15 4		
Miscellaneous	140 3 7		
		4,276 5 1	
EXPENSES OF LAUNCHES :—			
Wages	4,445 17 7		
Uniforms	127 9 1		
Upkeep and Running Expenses	1,144 16 7		
Capital Expenditure	1,403 2 2		
Interest on Loans	266 5 6		
		7,387 10 11	
Laboratory Facilities, Chemical and Bacteriological Examinations		339 3 0	
Examination and Analysis of Food		258 16 8	
Disinfections		81 18 4	
OFFICE EXPENSES :—			
Rent, Rates, Water, Taxes and Insurance	275 3 3		
Furniture and Equipment	42 4 2		
Repairs	26 4 7		
Lighting, Heating and Cleansing	153 19 9		
Printing and Stationery	540 11 4		
Postages, Telegrams, Telephones	330 18 2		
		1,369 1 3	
Part Proceeds of Sale of Unsound Food returned to Consignees		314 8 11	
Expenses of Delegates to Congresses		106 0 10	
Miscellaneous		85 8 8	
Legal Expenses		31 8 8	
National Insurance		72 3 4	
Corporation's Contribution to Pension Funds		2,240 8 10	
Central Administration Charges		973 0 0	
Air-Raid Precautions		526 1 0	
		£33,506 9 9	

	£ s. d.
Contribution from General Rate	15,986 9 6
Contribution from Ministry of Health	14,920 10 0
Sundry Fees	95 1 6
Proceeds, Sale of Unsound Food	344 13 5
Deratisation Receipts	2,029 15 6
Miscellaneous Receipts	29 12 0
Repayment by Hospital Patients	100 7 10
Reimbursement of Damage to Launches	— — —
	£33,506 9 9

CHAMBER OF LONDON,
July, 1939.