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PORT OF LIVERPOOL.



ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

TO THE

PORT SANITARY AUTHORITY.

FOR THE YEAR

1921.

TOGETHER WITH OBSERVATIONS UP TO JUNE, 1922.

LIVERPOOL :

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1922.

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PORT SANITARY AUTHORITY

OF

LIVERPOOL.

REPORT FOR THE YEAR 1921.

BY THE

MEDICAL OFFICER OF HEALTH.

In accordance with the duty imposed by the Local Government Board in the General Order, dated March 23rd, 1891, the following Report of the operations of the Liverpool Port Sanitary Authority for the year 1921 is herewith submitted.

The Report covers the work of the Authority during the year, and includes references to the following:—

(a) Measures adopted under the Cholera, Plague and Yellow Fever, and Allied Orders of the Local Government Board, and under the Port Sanitary Authorities (Infectious Diseases) Regulations, 1920.

(b) The measures taken to reduce the number of rats on dock quays and on ships and to ascertain the existence of plague amongst any such rats.

(c) Action taken in regard to the Sanitation of Vessels.

(d) The inspection of imported foods under the Orders of the Local Government Board.

(e) The Medical Inspection of Aliens under the Aliens Order, 1920.

The trade of Liverpool is world-wide, as is indicated by the following list of ports from which vessels arrive in the Port Sanitary District.

FOREIGN.—Quebec, Montreal, Halifax, St. John's, New York, Boston, Philadelphia, Savannah, New Orleans, Galveston, Colon, Vera Cruz, West Indies, Demerara, Para, Manaos, Pernambuco, Bahia, Rio de Janeiro, Monte Video, Buenos Ayres, Rosario, Punta Arenas, Valparaiso, Callao, San Francisco, Vancouver, Stockholm, Copenhagen, Hamburg, Rotterdam, Antwerp, Havre, La Pallice, Bordeaux, Oporto, Lisbon, Cadiz, Barcelona, Valencia, Almeria, Bilbao, Marseilles, Genoa, Naples, Algiers, Tangier, Tripoli, Constantinople, Jaffa, Alexandria, Port Said, Las Palmas, Teneriffe, Dakar, Bathurst, Gambia, Freetown, Monrovia, Accra, Akassa, Secondee, Calabar, Lagos, Fernando Po, Benguela, Cape Town, East London, Port Elizabeth, Durban, Zanzibar, Mombasa, Beira, Karachi, Bombay, Colombo, Calcutta, Rangoon, Bangkok, Saigon, Singapore, Sourabaya, Hong Kong, Hankow, Shanghai, Yokohama, Nagasaki, Vladivostock, Australian and New Zealand Ports.

BRITISH.—London, Southampton, Bristol, Swansea, Cardiff, Dublin, Cork, Waterford, Belfast, Larne, Glasgow, Aberdeen, Leith, Isle of Man, and Welsh Coast.

Almost every conceivable kind of cargo is carried by Liverpool ships, but the principal items of import and export are:—

IMPORTS.—Corn, Grain, Cotton, Fish, Fruit, Hides, Leather, Meats, Oil, Rubber, Sugar, Tobacco, Wool.

EXPORTS.—Carriages, Chemicals, Chinaware, Cotton Goods, Linen, Machinery, Oil, Rubber, Soap, Tobacco, Woollen Goods.

TABLE 1.

AMOUNT OF SHIPPING ENTERING PORT SANITARY
DISTRICT DURING THE YEAR 1921.

	Number.	Tonnage.	NUMBER INSPECTED		Number reported to be defective.	Number of Orders issued.
			by Medical Officer of Health.	by Inspectors of Nuisances.		
	(1)	(2)	(3)	(4)	(5)	(6)
FOREIGN—						
Steamers ...	3,414	9,755,056	396	2,727	831	—
Sailing ...	39	30,105	—	5	5	—
Fishing ...	—	—	—	—	—	—
TOTAL—Foreign	3,453	9,785,161	396	2,732	836	—
COASTWISE						
Steamers ...	8,104	2,459,163	—	976	84	—
Sailing ...	702	49,051	—	221	18	—
Fishing ...	—	—	—	—	—	—
TOTAL—Coastwise	8,806	2,508,214	—	1,197	102	—

*** Infectious Diseases.**

The methods employed for the detection of infectious disease on board vessels entering the Port have been carried out in the same way as in previous years, boarding ships in the river being accomplished from tugs hired when required. At the end of 1921 negotiations were in progress for the purchase of a boarding launch, which has been acquired and which greatly facilitates the work of the Medical Officers. Further particulars of the launch are given on page 15.

The City Ambulance Staff and the City Disinfecting Apparatus have been at the disposal of the Port Sanitary Authority during the year for the removal of patients to the City Hospitals and the disinfection of large quantities of bedding, etc., from ships.

Plague.

During the year the world-wide distribution of Plague was maintained, but Liverpool was very fortunate in that not a single case of human Plague was brought into the Port during 1921, and of the 11,272 rats caught in ships and dock quays, 7,226 were bacteriologically examined, and not one was found to be plague-infected. Three cases presenting buboes of obscure origin were taken to the Port Sanitary Hospital, the ships from which they were removed being treated as plague-suspected until more detailed investigation of the patients and bacteriological examination of the contents of the buboes definitely proved that the condition was not due to plague infection.

The trapping of rats and the searching for sick or dead rats on ships and dock quays were actively carried on during the year and rat-proofing of sheds, offices, etc., was enforced whenever necessary and practicable. Tables showing the numbers of rats caught and bacteriologically examined may be found on pages 9 to 12.

Cholera.

No cases of Cholera were brought into Liverpool during the year, though three cases occurred on Liverpool-bound vessels.

Typhus Fever.

Though Typhus raged in Poland and Russia, no cases were brought into Liverpool. The system of delousing and quarantine of emigrants from the Central European Countries is now so highly organised and so thorough that there is little danger of the introduction of Typhus Fever into this country, in spite of the large number of persons from Central Europe who pass through en route to the U.S. America.

Smallpox.

As with Plague, so with Smallpox. Liverpool was very fortunate during the year, no case of this disease being brought into the Port.

In July a case of suspected Smallpox was reported on the s.s. "Caronia," homeward bound, but on arrival at Liverpool the disease was found to be chicken-pox. Twelve cases of Smallpox occurred on Liverpool ships and were landed at other Ports. There were no further cases of the disease when these ships arrived at Liverpool.

TABLE 2.

STATEMENT OF THE NUMBER OF VESSELS ARRIVING INFECTED OR SUSPECTED WITH PLAGUE AND FROM INFECTED PORTS, TOGETHER WITH PARTICULARS OF THE MEASURES OF RAT DESTRUCTION AND THE EFFECTS OF SUCH MEASURES DURING THE YEAR 1921.

NUMBER OF VESSELS ARRIVING IN THE PORT SANITARY DISTRICT.		NUMBER OF VESSELS SUBJECTED TO MEASURES OF RAT DESTRUCTION.				MEASURES EMPLOYED.	EFFECTS OF THESE MEASURES.		
		From infected Ports.	Plague infected.	Plague suspected.	From infected Ports.		Other Vessels.	On Rats— Number killed.	On Cargo.
Plague infected.	Plague suspected.								
—	—	*396	—	—	326	180	Searching, Traying, and Trapping. Fumigation by SO ₂ .	11,272	None (Vessels only fumigated when empty.)

*Include 70 Manchester bound vessels.

TABLE 3.

Table showing the number of Rats obtained on ships and quays by the Authority's rat-catchers.

Year.	NUMBER OBTAINED.			NUMBER			DESTROYED.		
	From Ships.		Total.	From Ships.		Total.	From Quays.		Total.
	From Ships.	From Quays.	Total.	From Ships.	From Quays.	Total.	From Ships.	From Quays.	Total.
1913	7,943	958	8,901	3,280	938	4,218	4,663	20	4,683
1914	10,083	944	11,027	5,264	917	6,181	4,819	27	4,846
1915	9,400	1,256	10,656	6,204	1,234	7,438	3,196	22	3,218
1916	10,881	1,678	12,559	7,064	1,312	8,376	3,817	366	4,183
1917	9,174	1,551	10,725	6,379	1,457	7,836	2,795	94	2,889
1918	7,251	1,188	8,439	5,541	1,159	6,700	1,710	29	1,739
1919	8,971	1,336	10,307	6,023	1,287	7,310	2,948	49	2,997
1920	8,088	1,593	9,681	5,276	1,517	6,793	2,812	76	2,888
1921	*8,864	2,405	11,272	5,031	2,195	7,226	3,836	210	4,046
Total.....	80,658	12,909	93,567	50,062	12,016	62,078	30,596	893	31,489

* 2,275 of these were obtained after fumigation and 245 mice are included in these figures.

TABLE 4.

CITY AND PORT OF LIVERPOOL.

RETURN OF RATS CAUGHT, EXAMINED OR DESTROYED.

DATE.	CITY.				PORT.			CITY.		PORT.		TOTAL CAUGHT (City and Port.)	
	Ware- houses, Stores, &c.	Sewers.	Other Sources.	Total.	Ships.	Quays.	Other Sources.	Total.	Ex- amined.	Des- troyed.	Ex- amined.		Des- troyed.
1921.													
January	597	385	414	1,396	971	14	124	1,109	527	869	499	610	2,505
February	504	311	538	1,353	602	81	94	777	464	889	580	197	2,130
March	565	424	385	1,374	756	99	85	940	458	916	517	423	2,314
April	665	354	462	1,481	921	130	92	1,143	486	995	735	408	2,624
May	636	364	650	1,650	909	142	77	1,128	454	1,196	771	357	2,778
June	599	453	727	1,779	465	88	123	676	505	1,274	549	127	2,455
July	365	452	561	1,378	520	177	59	756	420	958	531	225	2,134
August	653	408	544	1,605	636	134	24	794	423	1,182	518	276	2,399
September	666	511	862	2,039	861	199	15	1,075	605	1,435	658	417	3,115
October	643	484	743	1,870	957	253	9	1,219	507	1,363	664	555	3,089
November	349	442	467	1,258	836	180	4	1,020	378	880	706	314	2,278
December	321	325	330	976	433	202	—	635	291	685	498	137	1,611
	6,563	4,913	6,683	18,159	8,867	1,699	706	11,272	*5,518	12,642	7,226	4,046	29,432

* Including 331 sent for other examination.

TABLE 5.

STATEMENT OF THE RATS CAUGHT MONTHLY BY THE PORT SANITARY STAFF,
THEIR VARIETY AND NUMBERS EXAMINED.

Number of	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Black Rats ...	998	669	804	955	909	539	559	671	933	998	901	492	9,428
Brown Rats ...	74	80	128	173	200	116	152	111	125	202	116	122	1,599
*Rats Examined	463	554	509	722	764	528	486	506	641	645	703	477	*6,998
Rats Infected with Plague ...	—	—	—	—	—	—	—	—	—	—	—	—	—
Rats Not Infected ...	—	—	—	—	—	—	—	—	—	—	—	—	—

* In addition 228 Mice were Examined.

TABLE 6.

The combined returns of all rats and mice caught and destroyed by shipping firms employing their own rat-catchers, by rat-catching companies, and by the Public Health Authorities, are as follows:—

	Rats.	Mice.	Rats.	Mice.
PORT—				
On vessels	57,958	3		
On quays	2,163	242		
			60,121	245
CITY—				
In warehouses	6,554	9		
In sewers and from other sources ...	11,577	19		
			18,131	28
		TOTAL ...	78,252	273

Number of Visits to Vessels by Rat Catchers	3,655
Do. do. do. Rat Searchers	4,468
Do. do. Quays, Sheds, etc., by Inspectors ...	646
Do. do. do. do. Rat Searchers	992
Do. do. do. do. Rat Catchers	2,659

The method of advising the Port Sanitary Authority of the arrival of a ship from an infected port or with dangerous infectious disease on board is as follows:—

Every pilot is provided with a small card in book form, a facsimile of which is reproduced below:—

INSTRUCTIONS TO PILOTS.

1. Upon boarding all inward bound vessels the Pilot must ask the Master the following questions:—

(i) Are you all well on board?

(ii) Have you called at Bombay, Calcutta, Karachi, etc., mentioning ALL the ports shown on the opposite page.

2. If the Captain reports that he has called at any of these Ports, the Pilot *must report Formby Ship for the Doctor*, and *must before* passing Formby Ship, show the Quarantine Flag by day, and the Quarantine Light by night.

3. The Quarantine Flag and Light are not to be used except by vessels requiring the Port Medical Officer.

4. The boarding station is between the Princes' Landing Stage on the Lancashire side, and the Alfred Dock on the Cheshire side, and between Salisbury Dock on the Lancashire side and Egremont Ferry on the Cheshire side.

Infected Ports.

**Bombay, Calcutta,
Karachi, Madras,
Pondicherry, Colombo,
Rangoon, Guayaquil,
Bahia (Brazil), Ceara,
Pernambuco, Galveston,
Alexandria, Salonica,
Smyrna, Beyrout,
Mombasa, Tampico,
Constantinople,
Dakar.**

The list of ports is from time to time amended according to the prevalence of Plague, Cholera, and Yellow Fever, in different parts of the World. In case of any alteration, an amended list is supplied, which can be pasted in the booklet over the previous list.

Every inward-bound vessel from a foreign port must take on a pilot at Point Lynas. Formby Lightship is situated in the main channel 10½ miles out, and so, when telephonic communication is working satisfactorily, the Medical Officer receives three-quarters to one hour's notice of the arrival of a vessel requiring inspection. When telephonic communication breaks down, as it does from time to time, the first notifica-

tion of the arrival of a vessel is when she is seen in the river flying the yellow flag. In such circumstances inconvenience and delay to shipping may result.

The Customs Officers of the Water Guard are also provided with a list of infected ports, exactly similar to that which the Pilots receive. If the Customs Officers board a vessel in the river before the Medical Officer has arrived, or in rare instances when the Pilot omits to notify Formby Ship, or if communication between Formby Ship and the shore has broken down, as it occasionally does in stormy weather, the Customs Officers notify the Medical Officer by written memo. immediately they return from their visit to the ship. They detain the vessel in the river pending the arrival of the Medical Officer.

Further, when the Customs Officers receive information of illness on board vessels arriving from ports not in the infected list, they immediately notify the Medical Officer if there is any suspicion that the disease is of an infectious nature.

Vessels are for convenience boarded in all parts of the river. Any vessel found to be infected is detained at the Sloyne.

The technical boarding station is:—

“ For vessels ‘ infected ’ or ‘ suspected ’ as defined in article 1,
“ part 1, of the Order of the Local Government Board dated 25th
“ February, 1908—As nearly in the middle of the River Mersey as
“ possible, between the Princes’ Landing Stage on the Lancashire
“ side and the Alfred Dock on the Cheshire side, and between Salis-
“ bury Dock on the Lancashire side and Egremont Ferry on the
“ Cheshire side.”

By arrangement with the Mersey Docks and Harbour Board, no vessel coming from a port given on the list, will be admitted to any dock without production of the certificate of one of the Assistant Port Medical Officers after examination. This removes the possibility of any ship rushing into dock on top of the tide without the necessary examination.

Port Sanitary Authority's Steam Launch.

In the past the boarding of vessels in the Mersey under the Cholera, Plague, and Yellow Fever Orders has been carried out from tugs hired for the purpose when required. The disadvantages of this system have long been recognised by the Port Sanitary Authorities and in 1914 plans for a suitable launch were drawn up and a contract for the building of the vessel actually placed. Unfortunately the outbreak of war necessitated the cancelling of this contract, the shipyards having to turn at once to war work.

Since the war, tenders for the building of a similar type of launch have been obtained on several occasions, but prices have been prohibitive, and it was decided to look for a suitable second-hand launch. It was essential to obtain a boat of sufficient strength to be of use in winter, with enough power to give her a useful margin of speed over the strong tides in the Mersey, and yet one in which running costs would be low.

The urgent need for economy required that the annual cost of the launch to the Port Sanitary Authority should not be greater than the average annual expenditure on tug hire.

In October it was ascertained that the Mersey Docks and Harbour Board had for sale a steam launch, the "Snowflake," which they had used for some years for surveying work, but which they had recently laid up, having obtained a larger and faster boat better suited to their purpose.

Negotiations for the purchase of the "Snowflake" were commenced and the boat was dry-docked and examined by a Naval Architect and Consulting Engineer. She was then floated and tested for a week in the actual work of taking off the Medical Officer to board ships in the river. A Special Sub-Committee of the Port Sanitary Authority visited the vessel, examined carefully the report of the Naval Architect on the condition of the hull and engines, the suitability of the boat for the work, the cost of re-classing her 100 A1 at Lloyd's, and the probable annual expenditure on wages of crew, fuel, stores, upkeep and insurance.

It was felt that in times of less financial stringency a larger and more powerful launch would have been desirable. But the initial outlay and the running costs of such a boat would be greatly in excess of the expense of the "Snowflake," which appeared likely to do the work required under all ordinary circumstances and to promise a greater degree of efficiency in Port Sanitary Administration at an annual expenditure somewhat less than that under the system of hiring tugs. The purchase of the boat was therefore recommended.

The "Snowflake" had to be re-classed at Lloyds. Some delay resulted from a strike which occurred while the work was in progress, and it was not till April 25th, 1922, that she was placed in commission.

In order that the launch may be available for both tides in the 24 hours, two crews have been appointed, each consisting of a navigating officer, an engineer, a seaman and a boy.

Up to the time of writing the launch has proved very satisfactory. Further it has been found possible to dispense with the services of an Inspector on tidal duty at night who was responsible for receiving information of the arrival of vessels, obtaining a tug and communicating with the Medical Officer. The launch being always on the river, the master or mate is able to obtain information of the arrival of vessels and inform the doctor when he is required. The Sanitary Inspectors are now able to give their whole time to the inspection of ships, and there is no longer any necessity to keep one on telephone duty at night. This will save the appointment of a new Inspector to fill a vacancy which has recently occurred.

In future it is intended to visit more vessels than was possible with hired tugs, and it is hoped that pilots and masters of ships will appreciate that the Port Medical Officer is not solely concerned with Cholera, Yellow Fever, Plague, and Smallpox, but is ready to be consulted whenever they have the slightest doubt as to whether any sickness on board is of an infectious nature, and moreover that if the vessel can be visited in the river before docking it will save time and trouble for all concerned.

Fumigation of Ships.

The fumigation of ships for purposes of rat destruction is carried out :

- (1) When there is Plague amongst the rats on board ;
- (2) when there is evidence that a vessel is infested with rats ;
- (3) when a certificate of fumigation is required by the Government of some country to which the ship is sailing.

The fumigant used in Liverpool is sulphurous acid gas generated either by burning sulphur in open pots or by the use of cylinders of the liquefied gas. The quantity of sulphur used is 3 lbs. per 1,000 cubic feet of space, giving a concentration of about three per cent. of sulphur dioxide, and the period of exposure eight hours. This is ample to destroy all rats and vermin exposed to the gas. But there are certain well-known disadvantages attached to the use of SO_2 .

In the first place SO_2 is a bleaching agent, attacks metal, and leaves behind an objectionable odour which clings tenaciously to upholstery, bedding, etc. It is therefore quite unsuitable for use in passenger accommodation. Further it is a heavy gas and diffuses very slowly, requiring a long time to penetrate and a long time to clear after opening up. Finally, SO_2 damages many articles of cargo which fact, combined with its low diffusibility, renders it useless for fumigating the holds of ships until all cargo has been discharged, a serious disadvantage when plague-infected ships have to be dealt with.

It has now been realised that hydrocyanic acid gas, while even more efficient as a raticide, is free from all these disadvantages. It is a gas slightly lighter than air and readily diffusible; it does not damage upholstery, fittings or cargo and will penetrate rapidly into all parts of a laden ship. The period of exposure need only be two hours, and it clears rapidly leaving no smell behind. It can be easily and quickly generated at a reasonable cost. But it has one great disadvantage. Whereas sulphur dioxide in very small quantities is intensely irritating to the nose, throat and eyes and so gives warning of danger to the most unobservant, hydrocyanic acid gas is intensely poisonous to human

beings without having any irritant properties, and with only a slight smell which would not even attract the notice of any person unacquainted with its significance. Consequently persons may inhale a fatal dose of HCN without any knowledge or warning of the presence of danger. It is this fact which has hitherto prevented the adoption of HCN as a fumigant in this country. It has been considered better to put up with the disadvantages of SO₂ rather than risk human life by using HCN.

Prejudice has now had to be put on one side in Liverpool because the American Public Health Authorities who require that all ships trading between U.S.A. and a foreign country shall be fumigated simultaneously in all parts at least once every six months, have recently insisted that even the 1st and 2nd class passenger accommodation of our large Trans-Atlantic Liners shall be included in the fumigation.

On account of the elaborate decorations and fittings of such accommodation the use of SO₂ as a fumigant is impossible for the reasons indicated above and the only alternative is Hydrocyanic Acid Gas. The first ship to be fumigated with HCN in Liverpool and the first in this country was the Cunard liner "Scythia," on March 17th, 1922. This was followed by the White Star liner "Baltic," on March 30th, 1922. In each case the fumigation was successful and no accident occurred.

The Hydrocyanic Acid Gas is generated by the action of strong sulphuric acid on Sodium Cyanide according to the chemical equation:—



The reaction takes place in strong water-tight oak barrels pitched inside and of not less than 40 gallons capacity. These barrels are placed below in the wings of the holds and in the large public rooms or alleyways of the passenger accommodation. The American Regulations require that 5 ozs. of sodium cyanide shall be used per 1,000 cubic feet of space and that the duration of exposure shall be two hours. For each 5 ozs. of sodium cyanide there are required about 7½ fluid ounces of commercial sulphuric acid and 10 fluid ozs. of fresh water.

In the case of the "Scythia" one barrel was used for every 45,000 cubic feet of space, in the "Baltic" one barrel was made to do as much as 135,000 cubic feet. The required amount of water was first placed in the barrels and the sulphuric acid then carefully added. It remained to add the sodium cyanide, and this had to be done without any men going below, as the gas is generated in large quantities immediately the NaCN meets the H_2SO_4 . The method of effecting this differed in the two ships. On the s.s. "Scythia" the sodium cyanide was dissolved in just sufficient water to make a saturated solution. This was poured down three-quarter inch garden hose leading from the barrels up the lift wells, up stair-cases, and out through ventilators in doors or up hatches and out through a corner of the hatch gratings, to filling points on the open deck.

In the case of the "Baltic," the barrels were fitted with metal containers hinged to the top of the barrel and so arranged that a pull on ropes leading out on to the open deck would tip the container over and deliver its contents into the acid in the barrel. The necessary amount of solid sodium cyanide in small lumps was placed in the containers and the pulling ropes adjusted after everybody, except the fumigating staff, had left the ship.

All ports, doorways, hatches, ventilators, etc., leading to the open air or to parts of the ship not to be fumigated were sealed up so as to render the interior as nearly air tight as possible; while inside the sections to be fumigated every door, drawer, cupboard, etc., was left wide open so as to aid the diffusion of the gas into all parts. In order to lessen the risk of exposing men to sudden gusts of the gas, when opening up, ropes were attached to door handles, ventilator covers and hatch tarpaulins so that all could be removed by a pull exerted at a distance.

Great care was taken to prevent fatal accidents. Before the final step of mixing the sodium cyanide with the sulphuric acid was taken, the Medical Officer to the Port Sanitary Authority demanded certificates from the Marine Superintendent and from the chief of the fumigating staff that every man had been accounted for, and his safety assured immediately before fumigation commenced.

In charging the barrels with sodium cyanide the fumigating staff commenced to leeward and worked back into the wind, so that any escaping gas would be blown away from them.

When all the barrels were charged everyone left the ship for two hours, a watchman being placed at the foot of the gangway where a notice, printed in bold red type, announcing that the ship would be fumigated at a certain time with prussic acid gas and that to remain on board after the specified time would be fatal, had been exhibited from the early morning of the day of the fumigation, so that all persons going on board should be warned.

After the expiration of two hours the fumigating staff returned and proceeded to open up, working again from leeward to windward, and opening the highest points first. The ship was then left for a time for the gas to clear, the Assistant Port Medical Officer subsequently going below, wearing an oxygen breathing apparatus and carrying a cage of rats, to test the atmosphere in all parts of the ship. Holds were tested by lowering a cage of rats down from the hatches. When rats could be exposed for a few minutes in every part of the vessel without showing any signs of being affected by the gas, the Medical Officer issued a certificate stating that he had tested the vessel in all parts and that it was now free of hydrocyanic acid gas in quantities dangerous to human life and safe for any person to go on board.

The efficiency of the fumigation was tested in each case by placing cages containing live rats in various places remote from any of the barrels, the cages in some cases being covered by beds, life-belts, etc. In every case the rats were killed by the hydrocyanic acid gas.

In view of the many advantages of HCN as opposed to SO_2 , it appears reasonable to predict that it will become the routine fumigant in the near future, and the Port Sanitary Authority of Liverpool propose to acquire the apparatus necessary to fumigate plague-infected

ships with hydrocyanic acid gas. But the intensely poisonous nature of the gas must always be kept in mind, there must be no relaxation of the precautions against fatal accidents and, on the part of the fumigating staff, familiarity must not be allowed to breed contempt.

Venereal Diseases.

Venereal Diseases have long been recognised as one of the leading causes of death, a prolific source of sterility, still-birth, lunacy, blindness and other illness.

The Royal Commission on Venereal Diseases which reported in 1916 made the first suggestions for grappling with these diseases. The recommendations may be summarised as follows:—

1. That opportunities should be afforded to sufferers to have free and expert treatment.
2. That extended facilities should be provided for the diagnosis of these diseases.
3. That information as to the dangers of Venereal Diseases should be disseminated and particulars as to the facilities provided for free treatment.

It is now five years since free treatment centres and arrangements for expert diagnosis were established under the Liverpool V.D. Scheme.

The following summarises the work of the Treatment Centres for the year 1921.

The Clinics which were established are very serviceable and popular. Patients attending the Out-Patients' Department of the Hospitals and those suffering from Venereal Diseases are directed to the Department dealing with their special ailment, and particular care is taken that such patients are not singled out or made conspicuous.

The Clinics now in operation are—The Royal Infirmary, the Royal Southern Hospital, the David Lewis Northern Hospital and the Stanley Hospital. The Cancer and Skin Hospital V.D. Clinic was closed on December 31st, 1921.

During the year under review, there were 4,899 new patients, male and female, a reduction of 1,366 from the figures for 1920. A suggested explanation of this reduction is that on account of unemployment and other industrial conditions, there was a lack of means.

The attendances for the year at all the Clinics totalled 73,368 male and female. A table shewing attendances, etc., at each of the clinics is given, and also details of the diseases and sexes dealt with at the largest centre, namely, the Royal Infirmary.

DEFECTS OF THE SCHEME.—As will be seen from the table appended, large numbers of patients give up treatment when the local manifestations of the disease have subsided, and as there is no compulsion exercised over patients to continue this treatment, such persons remain in an infectious condition and consequently a great danger to the public. There is therefore the outstanding fact that nearly 50 per cent. of the patients give up attendance before they can be considered free from infection.

Free treatment is only availed of for such periods as the affected person thinks appropriate, to be discontinued at will. Efforts have been made in Liverpool to get the patients back to continue treatment, and the importance of steady and continuous attendance under the guidance of the doctor, has been emphasised in each case.

In some cases appropriate worded letter-cards have been sent to the patients asking them to return. In addition, in the case of women, special visits have been made by a member of the Female Staff of the Health Department who has been specially detailed for this work as a portion of her daily duties.

At present, therefore, although clinics have been established at very considerable cost, patients may come and go as they please, or not come at all.

There is no power to compel a patient who is known to be suffering, in a very infectious form, from any one of these diseases, to undergo treatment or to continue treatment.

TABLE SHOWING TOTAL NUMBER OF NEW CASES OF VENEREAL DISEASE AND THE ATTENDANCES AT THE VARIOUS CITY CLINICS DURING THE YEAR 1921.

Hospital.	Date of opening.	New cases. *	Attendances.	Number of Patients on the books.	Ceased to attend before cure completed.
Royal Infirmary.....	1/8/1917	2,631	33,863	4,260	2,115
Ulcer and Skin.....	31/1/1918	771	18,595	1,673	342
Royal Southern.....	7/9/1917	518	5,362	999	121
Mid Lewis Northern	23/6/1919	502	8,554	805	444
Saley	7/7/1919	467	6,376	856	264

TABLE SHOWING CLASSIFICATION OF CASES ATTENDING THE LIVERPOOL ROYAL INFIRMARY DURING 1921.

	NEW CASES. *			CEASED TO ATTEND BEFORE CURE COMPLETED.			TOTAL ATTENDANCES.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
Syphilis.....	840	174	1,014	824	250	1,074	13,389	3,381	16,770
Gonorrhœa.....	1,016	83	1,099	946	95	1,041	14,781	1,231	16,012
Soft Chancre	8	—	8	—	—	—	34	—	34
Suspected cases— examined and found to be free from V. D.	441	69	510	—	—	—	918	129	1,047
Total	2,305	326	2,631	1,770	345	2,115	29,122	4,741	33,863

* The figures in these columns include "Re-admissions," *i.e.*, old patients who had ceased attending for more than six months.

The occupations followed by patients registered at the Clinics at the Royal Infirmary during the year are of interest:—

MALES.		FEMALES.	
Seafaring people ...	703	Housewives ...	121
(Of these 59 were foreign)		Home duties ...	22
Artizans ...	565	Unemployed ...	5
Miscellaneous ...	486	Shop Assistants ...	3
(Clerks, Agents, Hawkers, &c.)		Factory Hands ...	14
		Kitchen Hands ...	2
		Housemaids ...	2
		Waitresses ...	5
		Domestic servants ...	10
		Other occupations ...	15
	1,754		199

There were also 27 infants and young children registered at this clinic during the year.

59 per cent. of the total male patients registered were discharged soldiers and sailors.

40 per cent. of the total male patients registered were seafaring people.

8.5 per cent. of the latter were not natives of the British Isles, and are classed as follows:—

U.S.A. and Canada, 21; Colonies, 20; Norway and Sweden, 7; other nationalities, 11.

The ages range from 15 to 67, but the majority of the patients were between the ages of 20 and 30 years.

Correct diagnosis being very important, arrangements have been made with the City Bacteriologist to examine material, and the following extract from his Report gives the numbers and particulars of the specimens examined for the Liverpool Clinics, Hospitals and Private Practitioners:—

Detection of Spirochaetes ...	41
„ „ Gonococci ...	524
Wassermann Reaction for Syphilis ...	5,783

The following drugs have been issued to Institutions and Medical Practitioners by the Department during the year 1921:—

VENEREAL DISEASES.

ISSUED TO	NEOKHARSIVAN.				NOVARSENOBILLON.				NOVARSENOBENZOL. C.				GALYL.				KHARSIBAN						
	0-30	0-45	0-60	0-75	0-90	0-15	0-30	0-45	0-60	0-80	0-15	0-30	0-45	0-60	0-90	0-15	0-20	0-30	0-40	0-40	0-60		
	Royal Infirmary	84	—	1188	—	1008	—	—	—	—	—	5	262	95	446	20	—	—	6	6	—	—	—
Northern Hospital ...	408	360	456	—	72	—	140	110	30	—	—	—	—	—	—	—	—	—	—	—	—	—	
Stanley Hospital ...	1116	—	444	—	—	—	300	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Southern Hospital ...	156	48	270	24	781	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Edge Lane Hospital ...	30	—	...42	—	30	20	70	70	60	60	—	—	—	—	—	—	—	—	—	—	—	—	
Cancer and Skin Hospital ...	672	173	480	—	—	80	420	140	350	—	—	—	—	—	—	—	—	—	—	14	—	—	
TOTAL CLINICS ...	2466	581	2880	24	1891	100	930	520	820	90	5	262	94	446	20	—	—	6	20	—	—	—	
Lower Breck Road Hospital	—	—	24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
St. Pauls' Hospital ...	24	—	24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Prison Hospital ...	—	—	—	—	—	—	220	240	210	620	—	—	—	—	—	—	—	—	—	—	—	—	—
Walton Institution ...	—	—	84	—	—	—	240	10	300	500	—	—	—	—	—	—	—	—	—	—	—	—	—
Brownlow Hill Hospital	—	—	—	—	—	—	—	120	—	80	—	—	—	—	—	—	—	—	—	—	—	—	—
Eye and Ear Hospital	—	—	—	—	—	10	50	50	30	10	—	—	—	—	—	—	—	—	—	—	—	—	—
Hahnemann Hospital	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Belmont Road Hospital	—	—	180	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mill Road Hospital	—	18	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alder Hey Hospital	82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Children's Hospital	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
TOTAL HOSPITALS ...	112	18	325	—	—	10	520	440	540	1210	—	—	—	—	—	—	—	—	—	—	—	—	—
32 PRIVATE PRACTITIONERS	220	197	442	132	114	50	120	100	170	90	3	40	3	40	3	47	74	99	112	—	—	—	
GRAND TOTAL	2798	796	3647	156	2005	160	1570	1060	1530	1390	8	302	97	486	23	57	74	105	132	6	6	6	6

Total Number of Doses of	To Clinics.		To Practitioners.		To Hospitals.	
	NEOKHARSIVAN	NOVARSENOBILLON	NOVARSENOBENZOL. C.	GALYL	NEOKHARSIVAN	NOVARSENOBILLON
NEOKHARSIVAN	...	7,842	...	1,105	...	455
NOVARSENOBILLON	...	2,460	...	530	...	2,720
NOVARSENOBENZOL. C.	...	827	...	89	...	—
GALYL	...	26	...	332	...	—
KHARSIVAN	...	—	...	—	...	12

Approximately one-eighth of the drugs enumerated above have been issued to 32 medical practitioners who applied for them.

SUGGESTIONS FOR IMPROVEMENT.—The Committee of the Liverpool Corporation dealing with these diseases have for some years felt that they should be dealt with under another system or the present schemes be strengthened by the addition of some compulsory powers which should be given to local Health Authorities to compel the patient to seek a doctor's advice and to follow it should he be found to suffer from the disease. Those who, after repeated warnings, deliberately refuse treatment should be punished, and public opinion would justly agree with this course.

The effects of legislation in Western Australia where notification is made compulsory, but without name or address, have been good.

The powers suggested in the proposals of the Liverpool Corporation need not of necessity be used, it might be left to local Health Authorities to adopt them as appeared desirable for their respective areas.

If it can be brought home to the patient that it is his duty to himself and to his fellow men to follow a full and proper course of treatment until free from liability to infect others, much good will be attained.

The Liverpool Health Committee think these ends can be reached by making it obligatory to everyone who suffers, as suspects he is suffering, to seek medical advice and to follow the doctor's instructions; in no case will secrecy be betrayed, and it would only be in cases of deliberate discontinuance that prompt action would be taken by the Health Authority in the public interest.

The real bar to much of the work of treatment and eradication of these diseases is because they are not respectable by reason of the moral stigma attached to having acquired them.

In Australia the Act has been administered equally for man or woman and health regulations enacted for this purpose would be so carried out in this Country.

In Canada a system of notification and compulsory treatment of venereal diseases is in force in the Government of Ontario, where the Canadian Venereal Diseases Prevention Act, 1918, provides for the notification to the Medical Officer of Health of any case of venereal disease as soon as it comes under the treatment or care of any private practitioner, or the head of any hospital, or institution, for the first time; this notification is anonymous, being recognised by serial number. Every person suffering from venereal disease must seek medical treatment from a legally qualified practitioner. He is also bound to continue treatment until pronounced non-infective. Should he fail to do so, he becomes liable to a fine or imprisonment.

The Canadian Authorities regard the Act as extremely useful in the case of patients who deliberately refuse treatment, or who give it up without adequate explanation. The law is, however, only invoked in extreme cases. Persuasive measures are used, and if they fail, then the threat of legal proceedings usually suffices.

It is, of course, obvious that under compulsory treatment the facilities for medical attendance would have to be extended, not only in perfecting our present venereal clinics, but in giving facilities to private practitioners and in the training of young students more fully in venereal diseases before they enter the medical service.

A suitable site for the building of a Seamen's Dispensary has now been secured, and it is hoped that the Ministry of Health will shortly give approval to a scheme for the treatment of seamen affected with these diseases.

TABLE 7.

INFECTIOUS DISEASE.

The actual number of cases of Infectious Sickness amongst civilians landed from vessels arriving in the Port of Liverpool during the years 1920 and 1921, and the comparison with the average of the preceding 10 years, is shown in the following table:—

Diseases.	Number of Cases.		Average for the 10 years preceding 1920.
	1920.	1921.	
Smallpox	1	0	5·8
Scarlatina	12	10	14·4
Cerebro Spinal Meningitis	0	0	0·4
Poliomyelitis	0	0	0·0
Typhus	0	0	0·1
Enteric Fever	14	13	34·0
Do. (suspected)	5	5	5·1
Diphtheria.....	16	9	9·4
Measles	63	15	26·8
German Measles	0	0	1·7
Whooping Cough	0	0	0·1
Erysipelas	2	6	6·3
Chicken Pox	6	12	9·1
Cholera and Choleraic Diarrhœa .	0	0	0·3
Yellow Fever.....	0	0	0·4
Plague	0	0	0·2
Suspected Plague	0	3	2·0
Puerperal Fever	0	0	0·0
Phthisis	48	57	0·1
Tuberculosis (other forms of).....	0	2	0·2
Anthrax	0	0	0·1
*Pneumonia and Influenza	22	15	8·6
*Malaria.....	26	28	8·3
*Trench Fever	0	0	0·0
*Dysentery.....	3	7	0·0
Totals.....	218	182	133·4

* Notifiable from 1st March, 1919.

TABLE 8.

INFECTIOUS DISEASE.

The number of cases of Infectious Sickness reported to have occurred on Liverpool-bound ships during the years 1920 and 1921, and which were disposed of prior to the arrival of the vessel at this port, and the average of such cases for the preceding 10 years, are as follows:—

Diseases.	Number of Cases.		Average for the 10 years preceding 1920.
	1920.	1921.	
Smallpox	17	12	17·2
Scarlatina	1	4	1·1
Cerebro-Spinal Meningitis	0	0	1·3
Enteric Fever	10	19	14·5
Para-Typhoid	1	0	0·0
Diphtheria.....	1	6	3·0
Measles	49	28	7·4
German Measles	0	0	1·0
Erysipelas	2	0	1·1
Chicken Pox	13	8	3·5
Cholera and Choleraic Diarrhœa..	0	0	5·1
*Malaria	817	537	38·0
Yellow Fever	0	0	2·1
Plague	1	0	2·3
Suspected Plague.....	1	0	0·5
Phthisis.....	17	8	4·1
Tuberculosis (other forms of) ...	3	6	0·6
*Pneumonia and Influenza	38	29	2·3
*Dysentery	6	7	0·2
Totals.....	977	664	105·3

* Notifiable from 1st March, 1919.

The following Table gives particulars of the 316 vessels Disease on Board, with the measures adopted in each case:—

TABLE 9.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Jan. 2	Baltic ...	New York ...	Scarlatina ...	Netherfield Road
Jan. 3	Victorian ...	St. John's ..	Measles ...	Fazakerley ...
Jan. 3	New Columbia	New Orleans	Enteric Fever	Fazakerley ...
Jan. 5	Barracos ...	West Coast of Africa	Malaria ... (10 cases)	... ..
Jan. 6	Orcoma ...	South America	Phthisis ...	... ..
Jan. 6	Orcoma ...	South America	Scarlatina ...	... ..
Jan. 6	Orcoma ...	South America	Chicken-pox	... ..
Jan. 6	Hildebrand ...	Manaos ...	Phthisis ...	... ..
Jan. 6	Linmere ..	West Coast of Africa	Malaria ... (8 cases)	... ..
Jan. 8	Bassam ...	West Coast of Africa	Malaria ...	... ..
Jan. 10	Egori ...	West Coast of Africa	Malaria .. (3 cases)	... ..
Jan. 11	Suevic ...	Australia ...	Chicken-pox	Port Sanitary...

reported on their arrival as having, or having had, Zymotic

REMARKS.

The patient was one of the stewards, and was removed to hospital on arrival in the Port.

The patient was removed to hospital and the usual disinfection carried out.

The patient was one of the crew (an apprentice), and was removed to hospital on arrival in the Port.

The patients were all members of the crew who had suffered during the voyage.

The patient (a fireman) proceeded to his home in Seaforth.

The sickness occurred on the voyage, and the patient was landed at Valparaiso

The sickness occurred during the voyage.

The patient was landed at Lisbon on the home passage.

The sickness occurred amongst the crew during the voyage.

One of the crew had Malaria during the voyage.

One patient was landed at Sierra Leone, the other cases occurred during the voyage.

The patient was removed to hospital and the vessel and bedding disinfected.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Jan. 12	Dardanus ...	Colombo ...	Malaria ... (5 cases)	... ..
Jan. 14	City of London	Bombay ...	Malaria ... (2 cases)	... ..
Jan. 14	Akabo ...	West Coast of Africa	Malaria ... (11 cases)	... ..
Jan. 15	Hyson ...	Colombo ...	Malaria (1 case) Dysentery (7 cases)	... ..
Jan. 17	Massilia ...	Bombay ...	Malaria ...	... ..
Jan. 21	Ekari ...	West Coast of Africa	Malaria ... (13 cases)	... ..
Jan. 21	City of Birmingham	Colombo ...	Chicken-pox	... ..
Jan. 25	Ulysses ...	Australia ...	Measles ... (8 cases)	... ..
Jan. 26	Bantry ...	West Coast of Africa	Malaria ... (11 cases)	... ..
Jan. 27	Clan Lamont	Calcutta ...	Malaria ...	... ..
Jan. 28	Celtic ...	New York ...	Scarlatina ... (3 cases)	... ..
Jan. 29	Cilurnum ...	Buenos Ayres	Enteric Fever	... ..
Jan. 31	Canada ...	Portland ...	Measles ... (4 cases)	... ..

REMARKS.

All the patients were members of the crew who suffered during the voyage.

Two passengers had the sickness during the voyage.

Eleven of the crew suffered during the voyage.

Eight deaths occurred—one from Malaria, and seven from Dysentery—between Jeddah and Singapore.

The patient, a Lascar, ill on arrival at this Port, was being medically treated on board.

Six passengers and seven of the crew had suffered during the voyage.

The patient, a native seaman, was landed at Colombo.

The patients, all passengers, were landed at Capetown and London on the home passage, and the bedding and vessel disinfected.

The cases occurred amongst the crew during the voyage.

The patient was treated by the ship's Doctor.

The patients, three passengers, developed the sickness after arrival at their home in Tunbridge Wells. One of them was treated on board for Tonsillitis.

The patient, one of the crew (a steward), was landed at Buenos Ayres.

Four children had the sickness, and were landed at Halifax on the outward voyage. The bedding and vessel were disinfected.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Jan. 31	Canada ...	Portland ...	Tuberculosis	... ..
Jan. 31	Minnedosa ...	St. John's ...	Measles (1 case) Chicken-pox (1 case)	Fazakerley ...
Jan. 31	Minnedosa ...	St. John's ...	Scarlatina ...	Grafton Street
Feb. 1	Francis ...	Maceio ...	Phthisis ...	... ..
Feb. 1	Berridale ...	West Coast of Africa	Malaria ... (3 cases)	... ..
Feb. 1	Panmure ...	Port Lanyen	Erysipelas ...	Mill Road Infirmery
Feb. 1	Clan McPhee	Calcutta ...	Chicken-pox	... ..
Feb. 9	Awa Maru ...	Colombo ...	Tuberculosis	Royal Infirmery
Feb. 8	Manaar ...	Calcutta ...	Tuberculosis	... ..
Feb. 9	Vestris ...	Buenos Ayres	Pneumonia...	... ..
Feb. 9	Mandalay ...	Rangoon ...	Pneumonia...	... ..
Feb. 10	Bonny ...	West Coast of Africa	Malaria ... (6 cases)	... ..

REMARKS.

The patient proceeded to his home in Manchester.

Both patients were removed to hospital, and the bedding and vessel disinfected.

Patient was removed to the City Hospital, and the bedding and vessel disinfected.

The patient left the vessel at Antwerp.

Three of the crew suffered during the voyage

The patient, an engineer, was removed to hospital, and the bedding and vessel disinfected.

The patient was landed at Glasgow.

The patient was a third class passenger, and was removed to the Royal Infirmary.

The patient, one of the crew, was landed at Glasgow.

The patient died while on board and was buried at sea.

The patient was one of the native seamen, and had suffered during the voyage.

All the patients were members of the crew who had suffered during the voyage.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Feb. 10	Vedic ...	New York ..	Measles ..	... ..
Feb. 10	Vedic ...	New York ...	Pneumonia...	... ..
Feb. 11	Hematite ...	Swansea ...	Malaria ...	Royal Infirmary
Feb. 11	Demodocus ...	Shanghai ...	Pneumonia...	... ..
Feb. 11	Flaxmere ...	West Coast of Africa	Malaria ... (5 cases)	... ..
Feb. 15	Cedric ...	New York ...	Phthisis ...	... ..
Feb. 15	Cedric ...	New York ...	Measles ... (2 cases)	... ..
Feb. 15	Darro ...	River Plate...	Phthisis ...	... ..
Feb. 15	Clan McVicar	Madras ...	Malaria ...	... ..
Feb. 19	Orbita ...	South America	Malaria ...	... ..
Feb. 19	Orbita ...	South America	Measles ...	... ..
Feb. 19	Empress of Britain	St. John's ...	Enteric Fever (?)	Fazakerley ...
Feb. 21	Elysia ...	Bombay ...	Enteric Fever	Fazakerley ...

REMARKS.

The sickness occurred on the outward passage to New York.

A steward had suffered during the voyage.

The patient was a fireman. The bedding and vessel were disinfected.

The patient was left in hospital at Shanghai.

The sickness occurred amongst the crew during the voyage.

The patient, a steward, proceeded to his home in Walton.

The patients were two children who developed the sickness and were landed at Ellis Island on the outward voyage.

The patient died and was buried at sea. The vessel was disinfected by the ship's Surgeon.

One of the crew suffered during the voyage.

A second cabin passenger had suffered during the home passage.

The patient was landed at La Pallice.

The patient was removed to the City Hospital, and the bedding and vessel disinfected. The sickness proved to be non-infectious.

The patient was removed to the City Hospital, and the usual disinfection was carried out.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Feb. 23	Elysia ...	Bombay ...	Malaria ... (14 cases)	... ..
Feb. 23	Elysia ...	Bombay ...	Pneumonia... (2 cases)	... ..
Feb. 23	City of Karachi	Karachi ...	Pneumonia... (2 cases)	... ..
Feb. 23	Clan Ross ...	Karachi ..	Pneumonia...	Toxteth Infirmery
Feb. 23	Oswestry ...	West Coast of Africa	Malaria ... (3 cases)	... ..
Feb. 24	Sapele ...	West Coast of Africa	Malaria ... (2 cases)	... ..
Feb. 24	Appam ...	West Coast of Africa	Malaria ...	... ..
Mar. 2	Glen Nevis ...	Buenos Ayres	Tuberculosis	... ..
Mar. 2	Memnon ...	Glasgow ...	Malaria ...	... ..
Mar. 4	Eboe ...	West Coast of Africa	Malaria ... (17 cases)	... ..
Mar. 4	Magician ...	Calcutta ...	Phthisis ...	... ..
Mar. 7	Woodville ..	West Coast of Africa	Malaria ... (3 cases)	... ..
Mar. 7	Ebani ...	West Coast of Africa	Malaria ... (2 cases)	... ..

REMARKS.

The sickness occurred amongst members of the crew during the voyage.

Both patients were landed at Marseilles.

The patients were removed to hospital at Karachi.

The patient, a native fireman, was admitted into the Toxteth Institution hospital.

One patient was left in hospital at Sierra Leone, the other cases occurred during the voyage.

The sickness occurred amongst the crew during the voyage.

The ship's steward had suffered during the voyage.

The patient, an apprentice, was landed at Buenos Ayres.

A seaman had the sickness on the home voyage.

One passenger and sixteen of the crew had suffered during the voyage. All were well on arrival here.

The patient, a native trimmer, died while on the voyage.

Three of the crew suffered during the voyage.

Two of the crew suffered during the voyage.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Mar. 7	Lancashire ...	Rangoon ...	Pneumonia...	...
Mar. 7	Umtali ...	Durban ...	Pneumonia...	...
Mar. 8	Barbadian ...	New Orleans	Pneumonia... (3 cases)	...
Mar. 9	Salaga ...	West Coast of Africa	Malaria ... (4 cases)	...
Mar. 9	New Bruns- wick	West Coast of Africa	Malaria ...	...
Mar. 10	Bodnant ...	West Coast of Africa	Malaria ...	...
Mar. 10	New Bruns- wick	Cape Town ...	Enteric Fever ...	...
Mar. 10	Amarapoora	Glasgow ...	Pneumonia... (2 cases)	...
Mar. 11	Minnedosa ...	St. John's ...	Pneumonia...	Northern ...
Mar. 11	Akabo ...	West Coast of Africa	Malaria ...	...
Mar. 11	Melville ...	West Coast of Africa	Malaria ... (2 cases)	...
Mar. 13	City of Genoa	Karachi ...	Pneumonia...	Fazakerley ...
Mar. 14	Desna ...	South America	Measles ... (2 cases)	...

REMARKS

The patient died while on the voyage and was buried at sea.

The patient, a native fireman, was removed to hospital at London.

Two of the patients died on the outward voyage, the other had recovered on arrival here.

Four of the crew had suffered from the sickness during the voyage.

A seaman had the sickness and was landed at Lagos.

The patient, one of the crew, a deck hand, proceeded to his home.

The second officer and a cadet, suffering from the fever, were landed at Capetown on the home passage.

Two lascars, having the sickness, were left in hospital at Glasgow.

The patient, a steward, was removed to hospital.

A distressed British seaman suffered from the sickness on the homeward passage.

Two of the crew suffered during the home passage, but were well on arrival in this port.

The patient, a Lascar, was removed to the City Hospital.

The patients were landed at Buenos Ayres on the outward passage.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Mar. 14	Clan Sinclair	Madras ...	Enteric Fever	... ..
Mar. 15	Anchises ...	Colombo ...	Enteric Fever (?)	Fazakerley ..
Mar. 15	Corsican ...	St. John's ...	Phthisis ...	... ..
Mar. 15	Lalande ...	Buenos Ayres	Pneumonia...	Bootle ...
Mar. 17	Oakmere ...	West Coast of Africa	Malaria ... (5 cases)	... ..
Mar. 19	Biafra ...	West Coast of Africa	Malaria ... (7 cases)	... ..
Mar. 19	Empress of Britain	St. John's ...	Diphtheria ... (3 cases)	Mill Lane ...
Mar. 20	Oanfa ...	Yokohama ...	Phthisis ...	... ..
Mar. 22	Prah ...	West Coast of Africa	Malaria ...	... ..
Mar. 22	Tudor Star ...	Zarate ...	Enteric Fever	... ..
Mar. 23	Haverford ...	Philadelphia	Chicken-pox	... ..
Mar. 24	Metagama ...	St. John's ...	Phthisis ... (2 cases)	... ..

REMARKS.

The patient, a Lascar member of the crew, was removed to hospital in Glasgow.

The patient, a trimmer, one of the crew, was removed to the City Hospital. The bedding and vessel were disinfected. The sickness proved to be non-infectious.

The patient, a Canadian deport, proceeded to his home in Bristol.

The patient was removed to the Bootle Borough Hospital.

The patients were all members of the crew who suffered from the sickness during the voyage.

The patients, all members of the crew, were ill during the voyage.

A member of the crew and a third class passenger were left in hospital at St. John's and Halifax, respectively. On arrival in this port the cook was removed to the City Hospital, and the bedding and vessel were disinfected.

The patient was a member of the crew, an engineer, who proceeded to his home in Kent.

One of the crew, a deck boy, suffered during the voyage.

The patient was removed to hospital at Zarate where the vessel was disinfected.

The patient was convalescent on arrival.

The patients were two passengers who proceeded to Belgium.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Mar. 24	Olympia ...	Bombay ...	Malaria ... (3 cases)	... ..
Mar. 25	Holbein ...	River Plate...	Tuberculosis	... ..
Mar. 28	Brodholme ...	Alexandria ...	Malaria ... (2 cases)	... ..
Mar. 30	Ceramic ...	Sydney ...	Diphtheria ...	... ..
Mar. 30	Penure ...	West Coast of Africa	Malaria ...	... ..
Mar. 30	Badagry ...	West Coast of Africa	Malaria ... (5 cases)	... ..
April 1	Empress of France	St. John's ...	Phthisis ...	... ..
April 2	Burma ...	Rangoon ...	Mumps ...	Fazakerley ...
April 4	City of Calcutta	Karachi ...	Measles ... (2 cases)	... ..
April 4	City of Calcutta	Karachi ..	Dysentery ...	... ..
April 4	Albania ...	New York ...	Phthisis ...	Fazakerley ...
April 6	Onitsha ...	West Coast of Africa	Enteric Fever	... ..
April 6	Onitsha ...	West Coast of Africa	Malaria ..	... ..

REMARKS.

Two female passengers having the sickness were landed at Marseilles; a steward also suffered during the voyage.

The patient was a saloon passenger who died and was buried at sea.

A Malay seaman and a Chinese fireman died during the voyage.

The patient, a passenger, was removed to hospital at Southampton. The bedding and vessel were disinfected.

One of the crew had the sickness on the home passage.

The patients were all members of the crew who suffered during the voyage.

The patient proceeded to Belgium.

The patient, a seaman, was removed to the City Hospital.

The patients were landed at Plymouth, and the bedding and vessel disinfected.

The patient was landed at Plymouth.

The patient, a cook, was removed to the City Hospital.

The patient was a seaman who died during the voyage.

The chief steward suffered from the sickness during the home passage.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
April 6	Rabymere ...	West Coast of Africa	Malaria ... (2 cases)	... ..
April 8	Zaria ...	West Coast of Africa	Malaria ...	... ..
April 8	Castalia ...	Bombay ...	Malaria ... (3 cases)	... ..
April 9	Laurel Branch	West Coast of Africa	Enteric Fever	Fazakerley ...
April 11	Minnedosa ...	St. John's ...	Chicken-pox	... ..
April 11	Minnedosa ...	St. John's ...	Pneumonia...	Northern ...
April 14	Therese ...	Pensacola ...	Enteric Fever (?)	Fazakerley ...
April 14	Canada ...	Portland ...	Scarlatina ..	... ..
April 14	Burutu ...	West Coast of Africa	Malaria ... (9 cases)	... ..
April 19	Assyria ...	Bombay ...	Chicken-pox	Fazakerley ..
April 19	Assyria ...	Bombay ...	Measles ... (4 cases)	Fazakerley ...
April 21	Circassia ...	Bombay ...	Chicken-pox	Port Sanitary ...
April 21	Circassia ...	Bombay ...	Pneumonia... (2 cases)	... ..

REMARKS.

Two of the crew suffered during the voyage.

A trader suffered from the sickness during the homeward voyage.

The sickness occurred amongst the crew during the voyage.

The patient, an apprentice, was removed to the City Hospital, and the bedding and vessel disinfected.

The patient was convalescent on arrival in this port.

The patient, an engineer, was removed to hospital on arrival here.

The patient, a Lascar, was removed to hospital, and the bedding and vessel disinfected. The sickness proved to be non-infectious.

A third class passenger, having the sickness, was landed at Halifax.

The sickness occurred amongst the crew during the voyage.

The patient, a passenger, was removed to the City Hospital.

Three of the patients—an adult and two children—were removed to the City Hospital; the fourth patient proceeded to her home in Glasgow.

The patient was one of the native crew who was removed to hospital on arrival in this port.

The patients were two members of the native crew and were left in hospital at Glasgow.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
April 21	Broxvik ...	Gambia River	Malaria ... (25 cases)	... ..
April 22	E. H. Whar- ton Davies	Burutu ...	Tuberculosis	... ..
April 22	E. H. Whar- ton Davies	Burutu ...	Malaria ...	... ..
April 22	Assyria ...	Bombay ...	Chicken-pox	Port Hospital...
April 22	City of Cairo	Bombay ...	Malaria ...	... ..
April 23	Teespool ...	Mauritius ...	Malaria ...	... ..
April 23	Appam ...	West Coast of Africa	Malaria ... (8 cases)	... ..
April 25	Victorian ...	St. John's ...	Measles ...	... ..
April 25	Carmania ...	New York ...	Scarlatina ...	Netherfield Road
April 25	Cedric ...	New York ...	Measles ...	Fazakerley ...
April 27	Belgie ...	New York ...	Enteric Fever	Fazakerley ...
April 28	Balzac ...	River Plate...	Enteric Fever	... ..
April 29	Empress of France	St. John's ...	Pneumonia ...	... ..

REMARKS.

The patients were all seamen who suffered during the voyage.

The patient, a Cook, died and was buried at sea

The patient was one of the crew who was landed at Fayal.

The patient, one of the native crew, was removed to hospital on arrival in this port.

The patient was left in hospital at Glasgow.

The patient, a seaman, was left at Port Louise.

Six passengers and two of the crew suffered during the voyage.

The patient was landed at St. John's on the 3rd of April.

The patient, a stewardess, was removed to the City Hospital, and the bedding and vessel were disinfected.

The patient, a child, was removed to the City Hospital.

One of the crew of this vessel, who had gone to his home in the City, was removed to the City Hospital, and disinfection carried out.

The patient, one of the crew, was left in hospital at Rotterdam.

One of the passengers suffered during the home passage.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
April 29	Tamba Maru	Colombo ...	Malaria ...	... ..
April 29	City of Palermo	Alexandria ...	Phthisis ...	... ..
April 30	Linmere ...	West Coast of Africa	Malaria (3 cases)	... ..
May 1	Megantic ...	St. John's ...	Tuberculosis	... ..
May 1	Megantic ...	St. John's ...	Diphtheria .	Mill Lane ...
May 1	Megantic ...	St. John's ..	Measles ...	... ..
May 1	Aguila ...	Teneriffe ...	Enteric Fever	Royal Infirmary
May 1	Aguila ...	Teneriffe ...	Malaria ...	Royal Infirmary
May 5	Melita ...	St. John ...	Tuberculosis (2 cases)	... ..
May 5	Darro ...	Buenos Ayres	Phthisis ...	... ..
May 9	Caronia ...	New York ...	Diphtheria ...	Fazakerley ...
May 9	Caronia ...	New York ...	Scarlatina ...	Fazakerley ...
May 9	Caronia ...	New York ...	Pneumonia...	Fazakerley ...

REMARKS.

One of the crew suffered during the voyage.

The patient was a passenger who proceeded to his home in Ireland.

Three of the crew had the sickness during the voyage.

The patient, one of the stewards, went to his home.

The patient, a steward, was removed to the City Hospital, and the bedding and vessel were disinfected.

The sickness occurred during the voyage.

The patient, a passenger, was removed to hospital and the bedding and vessel disinfected.

The patient was admitted into hospital.

Both patients proceeded to their homes.

The patient died and was buried at sea.

A ship's steward was removed to the City Hospital, and the bedding and vessel were disinfected.

A third class passenger had the sickness and was removed to the City Hospital.

Patient was removed to the City Hospital.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospita. to which Patient was removed.
May 10	Oswestry ..	West Coast of Africa	Malaria ...	... ..
May 11	Gladiator ...	Rangoon ...	Mumps ...	... ..
May 16	Canada ...	Montreal ...	Phthisis ...	... ..
May 16	Canada ...	Montreal ...	Diphtheria ... (?)	... ..
May 16	Minnedosa ...	Montreal ...	Erysipelas Pneumonia	Fazakerley ...
May 16	Metagama ...	Montreal ...	Pneumonia...	Brownlow Hill Infirmery
May 16	Abinsi ...	West Coast of Africa	Smallpox ...	... ..
May 19	Ardeola ...	Teneriffe ...	Tuberculosis	Royal Southern Hospital
May 19	Batanga ...	West Coast of Africa	Malaria ... (2 cases)	... ..
May 20	Flaxmere ...	West Coast of Africa	Malaria ... (3 cases)	... ..
May 21	Mayumbe ...	Congo ...	Malaria ... (2 cases)	... ..
May 23	Bantry ...	West Coast of Africa	Malaria ... (4 cases)	... ..
May 24	Tregenna ...	Mauritius ...	Malaria ...	... ..
May 25	Gmel Haman	Valencia ...	Enteric Fever (?)	... ..

REMARKS.

A seaman suffered from the sickness during the voyage.

One of the native stewards had the sickness during the home passage.

The patient, a passenger, proceeded to his home in Newcastle-on-Tyne.

The patient was a passenger who was convalescent on arrival here and proceeded on journey.

Both patients, passengers, were removed to the City Hospital.

The patient, a passenger, was removed to hospital.

The patient, one of the crew, was left at Sierra Leone. On arrival, crew and passengers were examined and all found well. Vaccination and disinfection of vessel carried out.

The patient was the ship's barber, and was removed to hospital on arrival in this port.

The chief officer and carpenter suffered during the voyage.

Three of the crew suffered during the voyage.

Two cases occurred during the voyage—one proving fatal.

Two engineers and two greasers suffered during the voyage.

The cook suffered on the voyage.

The third engineer proceeded to Manchester.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
May 25	Manhattan ...	Hamburg ...	Small-pox ... (?)	... ..
May 25	Vestris ...	River Plate...	Pneumonia...	... ..
May 26	Carmania ...	New York ...	Scarlet Fever (2 cases)	Fazakerley ...
May 26	Carmania ...	New York ...	Pneumonia...	... ..
May 26	Carmania ...	New York ...	Parotitis ..	... ..
May 27	Desna ...	Buenos Ayres	Broncho- Pneumonia	... ..
May 30	Norman Star	Colombo ...	Pneumonia...	... ..
May 30	Victorian ...	Montreal ...	Chicken-pox (2 cases)	Fazakerley ...
May 30	Parattah ...	Antwerp ...	Measles ... (2 cases)	Fazakerley ...
May 31	Cyclops ...	Brisbane ...	Pneumonia...	... ..
June 1	Empress of France	Quebec ...	Measles ...	... ..
June 6	City of Baroda	Calcutta ...	Cholera ..	... ..

REMARKS.

The fourth engineer was landed at Norfolk Va.; with suspected Small-pox on the 4th April. Vaccination and fumigation was carried out by the U.S.A. authorities.

The patient died on the outward voyage.

The patients, pantry men, were removed to the City Hospital, and the bedding and vessel disinfected.

The patient, a passenger, was removed to a nursing home in Duke Street.

The patient was a passenger who proceeded on the journey.

The patient, a steward, proceeded to his home.

One of the crew died on the homeward passage.

Two children passengers were removed to the City Hospital.

The patients, two firemen, were removed to the City Hospital.

The patient was a Chinese fireman, who died suddenly—cause of death Pneumonia.

The patient was a third class passenger who suffered on the voyage.

The patient, an engineer, died at Calcutta on the 26th of February. The surgery and berth were fumigated. The fresh-water tanks were emptied, cleansed and disinfected and limewashed by the Sanitary Authorities of Calcutta.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
June 8	Ascanius ...	Melbourne ...	Chicken-pox & Diphtheria	...
June 8	Celtic ...	New York ...	Phthisis	...
June 8	City of Karachi	Bombay ...	Dysentery ... (2 cases)	Royal Infirmary
June 8	City of Karachi	Bombay ...	Malaria ... (4 cases)	...
June 10	Bonny ...	West Coast of Africa	Malaria	...
June 10	Zaria ...	West Coast of Africa	Malaria .. (4 cases)	...
June 11	Ramon de Larrinaga	Galveston ... for Manchester	Pulmonary Tuberculosis	...
June 11	Ortega ...	West Coast of S. America	Chicken-pox	...
June 11	Ortega ...	West Coast of S. America	Enteric Fever (5 cases)	...
June 13	Minnedosa ...	Montreal ...	German Measles	...
June 13	Minnedosa ...	Montreal ...	Whooping Cough	...
June 15	Empress of Britain	Quebec ...	Erysipelas ...	Fazakerley ...
June 16	Haverford ...	Philadelphia	German Measles	...

REMARKS.

Both patients were landed at Capetown where the usual disinfection was carried out.

The patient was a U.S. Deport who proceeded to his home in Carrickfergus, Ireland.

One patient, the fourth cook, was removed to hospital on arrival in this Port. The other patient, the surgeon, died suddenly at Bombay.

Four cases occurred during the voyage.

The quarter-master suffered during the voyage.

Two passengers and two of the crew suffered during the voyage.

The patient, a carpenter, proceeded to Manchester.

A passenger suffered on the outward passage.

The patients, members of the crew, suffered on the outward passage—one proving fatal. On arrival at this Port there were no cases of sickness.

A passenger who was convalescent proceeded to his home.

A passenger who was convalescent proceeded to his home.

The patient, a passenger, was removed to the City Hospital on arrival in this Port.

The patient, a passenger, being convalescent, proceeded to his home.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
June 17	Eboe	West Coast of Africa	Malaria (6 cases)	... ..
June 17	Eboe	West Coast of Africa	Pneumonia ... ..	... ..
June 20	Cedric	New York	Measles	Fazakerley
June 20	City of Florence	Glasgow	Enteric Fever ... ..	... ..
June 20	Atreus	Glasgow	Enteric Fever ... ..	... ..
June 27	Appam	West Coast of Africa	Phthisis ... ..	... ..
June 27	Appam	West Coast of Africa	Malaria (4 cases)	... ..
June 27	Megantic	Montreal	Phthisis ... ..	... ..
June 28	Peleus	Java	Malaria ... ..	... ..
June 28	Empress of France	Quebec	Pneumonia ... ..	... ..
July 4	Victorian	Montreal	Tuberculosis ... ..	... ..
July 4	Masirah	Bombay	Erysipelas	Fazakerley
July 5	Buteshire	Australia	Tuberculosis	Walton Infirmary

REMARKS.

Six members of the crew suffered during the voyage.

The patient, a passenger, died at Bathurst.

The patient, a passenger, was removed to the City Hospital.

The patient, a Lascar member of the crew, was landed and taken to hospital at Glasgow.

One of the crew, a cadet, was left in hospital at Glasgow.

The patient, a passenger, on arrival in this Port, proceeded to his home.

Four patients suffered during the voyage; one of these, a steward, died on the home passage.

The patient, a fitter, proceeded to his home in Leicester.

The patient, a Chinese, died and was buried at sea.

The patient was convalescent on arrival here and proceeded to his home.

The patient, a lady passenger, died on arrival in the River.

The quarter-master of this vessel was removed to the City Hospital on arrival in this Port.

The patient, the mess-room boy, was removed to hospital.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
July 8	Demerara ...	River Plate...	Scarlatina ...	... ..
July 8	Demerara ...	River Plate...	Pneumonia...	... ..
July 10	Caronia ...	New York ...	Chicken-pox	Fazakerley ...
July 11	Canada ...	Montreal ...	Phthisis ...	... ..
July 12	Akabo ...	West Coast of Africa	Malaria ... (2 cases)	... ..
July 13	Winifredian	Boston ...	Measles (3 cases)	Fazakerley ...
July 13	Dardanus ...	Batavia ...	Malaria ...	... ..
July 16	Ebani ...	West Coast of Africa	Malaria .. (20 cases)	... ..
July 16	Aidan ...	Ceara ..	Malaria ...	... ..
July 16	City of London	Montreal ...	Pneumonia...	Royal Infirmary
July 18	Minnedosa ...	Montreal ...	Phthisis ... (2 cases)	... ..
July 18	Elmina ...	West Coast of Africa	Phthisis	Fazakerley ...
July 18	Elmina ...	West Coast of Africa	Malaria ... (5 cases)	... ..

REMARKS.

The patient, a child, was landed at Vigo, and the bedding and vessel disinfected.

The patient was a passenger who died prior to the vessel's arrival in the Port.

The patient was removed to the City Hospital.

The patient was a passenger who proceeded to his home in Birmingham.

The patients were one of the crew and a passenger who suffered during the voyage.

The patients were three children who were removed to the City Hospital. The bedding and vessel were disinfected.

One of the crew suffered during the home passage.

Twenty of the crew suffered from the sickness during the home passage.

One of the stewards had the sickness during the voyage.

The patient was the third officer, who was removed to hospital on arrival here.

Both these patients—third class passengers—proceeded to their homes in Upper Holloway, N., and Banbury.

The patient, a first class passenger, was removed to the City Hospital.

The sickness occurred amongst the crew during the voyage.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
July 20	West Tacook	New York ...	Enteric Fever	Fazakerley ...
July 24	Megantic ...	Montreal ...	Phthisis ... (2 cases)	... ..
July 24	Serbino ...	Beira ...	Malaria ...	... ..
July 26	Dio	Conakry ...	Malaria ... (3 cases)	... ..
July 26	Assiout ...	Alexandria ...	Enteric Fever ... (?)	... ..
July 26	Clan Kenneth	Indian Ports	Small-pox ...	... ..
July 27	Empress of France	Quebec ..	Diphtheria .. (2 cases)	Mill Lane ...
July 27	Abinsi ...	West Coast of Africa	Malaria ... (4 cases)	... ..
July 28	Ala	Baltimore ...	Enteric Fever	Royal Infirmary
July 28	Rabymere ...	West Coast of Africa	Malaria .. (2 cases)	... ..
July 30	Oriana ...	Valparaiso ...	Phthisis ...	... ..
July 31	Celtic ...	New York ...	Phthisis ..	... ..
Aug. 1	Adour ...	Las Palmas	Malaria ... (4 cases)	... ..

REMARKS

The patient, one of the crew, was removed to the City Hospital, and the bedding and vessel disinfected.

Both patients were passengers who proceeded to their homes.

The patient was a fireman who had suffered during the home voyage.

Three of the crew suffered on the home voyage and were landed at Las Palmas.

The patient, the second officer, was landed at Alexandria.

The patient, the fourth engineer, was left in hospital at Colombo. Disinfection and vaccination was carried out at Cochin.

Two children passengers, who were removed to the City Hospital. The bedding and vessel were disinfected.

All patients were members of the crew who suffered during the voyage.

The patient, a fireman, was removed to the Infirmary, and the bedding and vessel were disinfected.

Two of the crew had the sickness during the voyage.

The patient was landed at Corunna.

The patient proceeded to his home in Co. Clare, Ireland.

All were members of the crew who had suffered during the voyage.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which patient was removed.
Aug. 6	Melita ...	Montreal ...	Diphtheria ...	Mill Lane ...
Aug. 8	Trecarrel ...	Buenos Ayres	Dysentery ...	Fazakerley ...
Aug. 8	Baltic ...	New York ...	Scarlatina ...	... ..
Aug. 11	Tropic ...	Sydney ...	Enteric Fever ...	... ..
Aug. 13	Euryades ...	Yokohama ...	Malaria ... (3 cases)	... ..
Aug. 15	Minnedosa ...	Montreal ...	Tuberculosis	... ..
Aug. 15	Cedric ...	New York ...	Measles ...	Grafton Street
Aug. 15	Cedric ...	New York ...	Tuberculosis	... ..
Aug. 16	Francis ...	Ceara ...	Chicken-pox	... ..
Aug. 16	Zaria... ...	West Coast of Africa	Malaria ... (13 cases)	... ..
Aug. 19	Empress of France	Quebec ...	Chicken-pox	Fazakerley ...
Aug. 22	Megantic ...	Montreal ...	Tuberculosis	... ..
Aug. 22	Carmania ...	New York ...	Scarlatina ...	Netherfield Road

REMARKS.

The patient, a cabin passenger, was removed to the City Hospital and the bedding and vessel were disinfected.

The patient, the carpenter, was removed to the City Hospital.

The patient, a passenger, died on the outward passage to New York.

The patient, one of the crew, was landed at Gladstone, Queensland.

All members of the crew who suffered during the voyage.

The patient proceeded to her home in Poland.

The patient, a child passenger, was removed to the City Hospital.

The patient proceeded to his home in Roumania.

The patient had recovered on arrival in this Port.

Seven passengers and six of the crew had suffered during the voyage.

The patient was a third class passenger.

The patient died on the homeward passage; the body was buried at sea.

The patient was a waiter—one of the crew. The bedding and vessel were disinfected.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Aug. 24	Appam ...	West Coast of Africa	Malaria .. (5 cases)	...
Aug. 25	Oswestry ..	West Coast of Africa	Malaria ... (4 cases)	...
Aug. 26	Biafra ...	West Coast of Africa	Malaria .. (19 cases)	...
Aug. 27	Doonholm ...	Australia ...	Phthisis ...	...
Aug. 28	Victorian ..	Montreal ...	Phthisis .. (3 cases)	...
Aug. 29	Celtic ...	New York ...	Phthisis ... (2 cases)	...
Aug. 30	Benue ...	West Coast of Africa	Scarlatina ..	Fazakerley ...
Sept. 5	Canada ..	Montreal ...	Pneumonia...	...
Sept. 5	Canada ...	Montreal ...	Phthisis .. (2 cases)	...
Sept. 5	Darro ...	Buenos Ayres	Phthisis ..	...
Sept. 7	Akabo ...	West Coast of Africa	Malaria .. (4 cases)	...
Sept. 8	City of Calcutta	Calcutta ..	Typhoid Fever (3 cases)	Fazakerley ...
Sept. 12	Trevithick ...	Buenos Ayres	Phthisis ..	...

REMARKS.

All patients were members of the crew who had suffered during the voyage.

Four of the crew had the sickness during the voyage.

All patients were members of the crew who had suffered during the voyage.

The patient died on the 12th of August and was buried at Las Palmas.

The patients, all third class passengers, proceeded to their homes.

Both of these patients were passengers, one proceeded to Yorkshire and the other to her home in this City.

The patient was removed to the City Hospital, and the bedding and vessel were disinfected.

Patient proceeded.

Both patients proceeded to their home in Doncaster.

Patient proceeded to his home in Winston, Darlington.

Two passengers and two of the crew suffered from the sickness during the voyage.

One patient, a native saloon steward, was removed to the City Hospital. Two other patients were left abroad—one at Colombo and the other at Dunkerque. The bedding and vessel were disinfected.

The patient, a fireman, proceeded to his home in Penzance.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Sept. 14	Wingate ...	Constantinople	Typhoid Fever	... ..
Sept. 14	War Romance	Tampico ...	Pneumonia...	... ..
Sept. 16	City of Baroda	Karachi ...	Malaria ...	... ..
Sept. 16	Patani ...	West Coast of Africa	Suspected Plague	Port Sanitary
Sept. 16	Patani ...	West Coast of Africa	Pneumonia...	... ..
Sept. 16	Patani ...	West Coast of Africa	Malaria ... (8 cases)	... ..
Sept. 17	Empress of Britain	Quebec ...	Diphtheria ...	Mill Lane ...
Sept. 17	Abinsi ...	West Coast of Africa	Malaria ... (30 cases)	... ..
Sept. 19	Megantic ...	Montreal ...	Mumps ...	Fazakerley ...
Sept. 21	Orcoma ...	South America	Phthisis ...	... ..
Sept. 22	City of Baroda	Karachi ...	Dysentery ...	Brownlow Hill Infirmery
Sept. 26	Victorian ...	Montreal ...	Phthisis ...	... ..
Sept. 26	Ortega ...	West Coast of S. America	Chicken-pox (2 cases)	Sparrow Hall...

REMARKS

The patient was landed at Volo, and disinfection was carried out by the ship's crew.

The patient was one of the crew, a Chinaman, who died during the voyage.

The patient was one of the crew who suffered during the voyage.

The patient, one of the crew (a steward's boy), having symptoms suspicious of Plague, was removed to the Port Hospital, and disinfection of the vessel was carried out. The sickness proved to be venereal.

The patient was a Kroo boy, who died and was buried at sea.

Eight of the crew suffered from the sickness during the voyage.

The patient, a cook, was removed to the City Hospital, and the bedding and vessel were disinfected.

Thirty of the crew had suffered from the sickness during the voyage.

The patient was removed to the City Hospital.

The patient proceeded to his home in the City.

One of the crew, a Lascar, was admitted into hospital.

The patient proceeded to his home in Doncaster.

Two children passengers, on arrival in this Port, were removed to the City Hospital.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Sept. 27	Amarna ...	Alexandria ...	Enteric Fever	Fazakerley ...
Sept. 27	Bendu ...	West Coast of Africa	Malaria ... (2 cases)	... ..
Sept. 27	Aguila ..	Las Palmas	Phthisis ...	... ..
Sept. 27	Bereby ...	West Coast of Africa	Malaria ... (2 cases)	... ..
Sept. 28	Hegre ...	Naples ...	Dysentery ... (2 cases)	Royal Infirmary
Sept. 28	Deseado ...	Buenos Ayres	Measles ...	... ..
Oct. 1	Caloric ...	Tampico ...	Dysentery ...	Toxteth Infirmary
Oct. 1	Melita ...	Montreal ...	Phthisis ...	... ..
Oct. 2	Canada ...	Montreal ...	Measles ... (3 cases)	... ..
Oct. 2	Baltic ...	New York ...	Phthisis ... (3 cases)	... ..
Oct. 7	Minnedosa ...	Montreal ...	Phthisis ... (2 cases)	... ..
Oct. 7	Elmina ...	West Coast of Africa	Phthisis ..	... ..
Oct. 7	Elmina ..	West Coast of Africa	Malaria ... (17 cases)	... ..

REMARKS.

The patient was a galley boy, who was removed to the City Hospital. The bedding and vessel were disinfected.

Two of the crew suffered during the voyage.

The patient, a passenger, proceeded to his home in Nottingham.

Two of the crew suffered during the voyage.

Both patients were members of the crew, who, on arrival here, were removed to the Tropical Ward at the Infirmary.

The patient, a passenger, was landed at Lisbon.

One of the crew, a seaman, was removed to the Institution Infirmary.

The patient, a passenger, was removed to a nursing home in the City.

The sickness occurred abroad, and the patients were left in hospital at Montreal.

The patients, all passengers, proceeded to their homes.

Both of the patients proceeded to their destination.

The patient, one of the crew (a cook), went to his home in the City.

Seventeen of the crew had suffered from the sickness during the voyage.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Oct. 8	Browning ...	Buenos Ayres	Enteric Fever ...	... ..
Oct. 8	Canada ...	New York ...	Measles ...	... ..
Oct. 8	Egba ...	West Coast of Africa	Enteric Fever (?)	Fazakerley ...
Oct. 11	Olympia ...	Bombay ..	Malaria ..	... ..
Oct. 11	Pomaron ...	Calcutta ...	Malaria .. (7 cases)	... ..
Oct. 11	Empress of Britain	Quebec ...	Diphtheria ..	... ..
Oct. 13	Palm Branch	South America	Diphtheria ..	... ..
Oct. 17	Boma ...	West Coast of Africa	Malaria ... (8 cases)	... ..
Oct. 18	Egori... ...	West Coast of Africa	Pneumonia...	... ..
Oct. 18	Ascanius ..	Colombo ..	Malaria ... (4 cases)	... ..
Oct. 24	Celtic ...	New York ..	Phthisis .. (2 cases)	... ..
Oct. 24	Cuthbert ..	Para ..	Phthisis ...	... ..
Oct. 27	City of Marseilles	Karachi ..	Malaria ... (6 cases)	... ..

REMARKS

The patient died and was buried at sea.

The patient developed the sickness after arrival at his home in Poplar.

The third officer was removed to the City Hospital, and the bedding and vessel were disinfected. The sickness proved to be non-infectious.

The Serang was found to be ill on board and receiving medical treatment.

Seven of the crew suffered from the sickness during the voyage.

The sickness occurred abroad.

The patient, the second officer, was left in hospital at Hamburg.

All the patients were members of the crew who suffered from the sickness during the voyage.

The patient, a Kroo boy, died during the voyage.

Four members of the crew had suffered from the sickness during the voyage.

The two patients proceeded to their homes, one in Galway, and the other in this City.

The patient, a first class passenger, proceeded to his home in Saltburn-on-Sea.

The sickness occurred amongst the crew.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Oct. 31	Scindia ...	Bombay ...	Malaria ... (2 cases)	Royal Infirmary
Oct. 31	Baltic ...	New York ...	Phthisis ...	... ..
Oct. 31	Eboe ...	West Coast of Africa	Malaria ... (4 cases)	... ..
Oct. 31	Badagry ...	West Coast of Africa	Malaria ... (8 cases)	Royal Southern Hospital
Nov. 1	Coria ...	Colombo ...	Dysentery ...	... ..
Nov. 1	Prometheus	Singapore ...	Malaria ..	... ..
Nov. 1	Berwickshire	Australia ... for Manchester	Phthisis ... (3 cases)	... ..
Nov. 2	Akabo ...	Opobo ...	Malaria .. (5 cases)	... ..
Nov. 3	Adour ...	West Coast of Africa	Malaria ..	... ..
Nov. 4	Rabymere ...	West Coast of Africa	Malaria ...	... ..
Nov. 7	Cedric ...	New York ...	Phthisis ...	... ..
Nov. 7	Zaria ...	West Coast of Africa	Malaria ... (6 cases)	... ..
Nov. 8	Alfred O'Hedley	Barbadoes ...	Malaria ... (2 cases)	... ..

REMARKS

The patients, a cook and a distressed British seaman, were removed to the Tropical Ward.

The patient proceeded to his home in Ireland.

Four of the crew had suffered during the voyage.

One patient, a cadet, was removed to hospital on arrival here; the other patients had the sickness during the voyage.

One of the crew had the sickness on the voyage.

The patient, one of the crew, a seaman, died abroad.

The patients were three of the crew who were taken to hospital in Manchester.

Five of the crew had suffered from the sickness during the voyage.

This patient was left at Sierra Leone on the home passage.

One of the crew had suffered on the voyage.

The patient was a third class passenger, who proceeded to his home in Galway.

The patients were members of the crew who suffered from the sickness during the voyage.

The patients, two of the crew, were landed at Bardadoes.

Date 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Nov. 12	Ningchow ...	Yokohama ..	Cholera ... (2 cases)	...
Nov. 13	Megantic ...	Montreal ...	Pneumonia...	...
Nov. 13	Ebani ...	West Coast of Africa	Malaria ... (3 cases)	...
Nov. 13	Abinsi ...	West Coast of Africa	Phthisis ... (3 cases)	...
Nov. 13	Abinsi ...	West Coast of Africa	Malaria ... (3 cases)	...
Nov. 14	City of Marseilles	Bombay ..	Dysentery ...	Tranmere Institution
Nov. 16	Lerke ...	West Coast of Africa	Enteric Fever (?)	Fazakerley ...
Nov. 17	Idomeneus ..	Java ..	Dysentery ...	...
Nov. 17	Idomeneus ...	Java...	Malaria ... (10 cases)	...
Nov. 18	Theseus ...	China	Typhoid ...	Fazakerley ...
Nov. 18	Theseus ...	China	Malaria ...	...
Nov. 19	Nevisian ...	Galveston ...	Enteric Fever	Fazakerley ...
Nov. 20	Falernian ...	Alexandria ...	Enteric Fever	...

REMARKS

The patients, the cook and the boatswain, were left at the Port of Shanghai. Disinfection was carried out at Shanghai and again at Marseilles.

The patient, one of the crew, died on the voyage.

Three of the crew had suffered during the voyage.

The patients, two saloon passengers and a member of the crew, proceeded to their homes.

One of these patients, a passenger, died; the other patients, also passengers, had recovered on arrival.

The patient was a native fireman.

The patient, one of the crew, a fireman, was removed to the City Hospital, and the bedding and vessel were disinfected. The sickness proved to be non-infectious.

The sickness occurred during the voyage.

Ten of the crew had suffered during the voyage.

The patient, one of the crew, was removed to the City Hospital, and the bedding and vessel disinfected.

One patient had the sickness during the voyage.

A seaman who had gone to his home in the City developed the sickness, and was removed to the City Hospital. The usual disinfection was carried out.

The patient, the carpenter, was left in hospital at Alexandria.

Date, 1921.	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Nov. 20	Metagama ..	Montreal ..	Erysipelas ...	Fazakerley ...
Nov. 20	Metagama ...	Montreal ...	Phthisis ... (2 cases)	... ..
Nov. 20	Hororata ...	Australia ...	Chicken-pox	... ..
Nov. 23	City of London	Bombay ...	Malaria ... (4 cases)	... ..
Nov. 23	City of London	Bombay ...	Pneumonia..	... ..
Nov. 23	Justin .	Ceara ...	Plague ... (?)	Port Sanitary
Nov. 23	Worsley Hall	Biera ...	Dysentery ...	... ..
Nov. 25	Tempus .	West Coast of Africa	Malaria ... (7 cases)	Royal Infirmary
Nov. 26	Bata	West Coast of Africa	Malaria ... (3 cases)	... ..
Nov. 28	Salaga ...	West Coast of Africa	Malaria ... (18 cases)	... ..
Nov. 29	Canada ...	Montreal ...	Phthisis ..	... ..
Nov. 29	Matadi ...	West Coast of Africa	Malaria ... (2 cases)	... ..
Nov. 30	Ekari ..	West Coast of Africa	Malaria ... (2 cases)	Royal Infirmary

REMARKS.

A child passenger was removed to the City Hospital.

Both of these passengers proceeded to their homes in Colne and London, respectively.

A steerage passenger who suffered on the outward passage.

Four natives (saloon boys) suffered from the sickness during the voyage.

The ship's butcher died from the sickness during the home passage.

Two of the crew of this vessel, having symptoms suspicious of Plague, were removed to the Port Hospital, New Ferry. The sickness proved to be non-infectious.

One of the crew (a trimmer) suffered from Dysentery during the voyage.

Two of these patients were removed to hospital on arrival in this port. The other cases occurred during the voyage.

Three of the crew suffered during the voyage.

All patients were members of the crew who suffered during the voyage.

The patient, a third class passenger, proceeded to his home in Glossop.

Two of the crew had the sickness during the voyage.

Both patients were removed to the Tropical Ward in the Infirmary.

Date 1921.	Name of Vessel.	Where from	Nature of Sickness.	Hospital to which Patient was removed.
Dec. 3	Metagama ...	Montreal ...	Enteric Fever	Bootle Borough Hospital
Dec. 3	Politician ...	Calcutta ...	Phthisis ...	... ..
Dec. 5	Cedric ...	New York ...	Measles ...	... ..
Dec. 5	Lepanto ...	West Coast of S. America	Tuberculosis	... ..
Dec. 6	Median ...	Tampico ...	Malaria ... (2 cases)	... ..
Dec. 7	Berwickshire	Brisbane ...	Mumps ...	Port Sanitary...
Dec. 7	Martaban ...	Rangoon ...	Malaria ...	... ..
Dec. 12	Appam ...	West Coast of Africa	Malaria ... (5 cases)	Royal Infirmary
Dec. 12	Celtic ...	New York ...	Phthisis ...	... ..
Dec. 13	City of London	Bombay, via Antwerp	Malaria ... (13 cases)	... ..
Dec. 14	Coatsworth ...	West Coast of Africa	Malaria ... (9 cases)	... ..
Dec. 14	Westlake ...	Baltimore ...	Pneumonia...	Bootle Borough Hospital
Dec. 15	Minnedosa ...	Montreal ...	Phthisis ...	... ..

REMARKS

Patient was removed to hospital, and the bedding and vessel were disinfected.

The patient died and was buried at sea.

The patient, a saloon passenger, was ill on the voyage, but had recovered on arrival in this Port.

The patient was left at Panama on the home passage.

Two of the crew had Malaria during the voyage.

The patient, one of the crew, a native steward, was removed to hospital.

The patient, one of the crew, was landed at Port Said.

Three of the crew and two passengers had the sickness during the voyage, and on arrival in this Port the passengers were removed to the Infirmary.

The patients, two passengers and a steward, all proceeded to their homes.

All the patients were members of the native crew who were treated at the Tranmere Hospital.

Nine of the crew suffered during the voyage.

The patient was one of the crew who was removed to hospital.

The patient, a passenger, proceeded to her home in Leytonstone.

Date, 1920.	Name of Vessel	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Dec. 19	Massilia ...	Bombay ...	Malaria ...	... ..
Dec. 20	Collegian ...	San Francisco	Chicken-pox	Fazakerley ...
Dec. 20	Haverford ...	New York ...	Pneumonia...	... ..
Dec. 20	City of Bristol	New York, via Hull	Small-pox ...	... ..
Dec. 21	City of Genoa	Karachi ...	Pneumonia...	... ..
Dec. 21	Stentor ...	Batavia ...	Dysentery ...	... ..
Dec. 22	Thomas Holt	West Coast of Africa	Malaria ... (6 cases)	... ..
Dec. 22	Prahsu ...	West Coast of Africa	Malaria ... (11 cases)	... ..
Dec. 23	Stad Hampen	Hamburg ...	Phthisis ...	... ..
Dec. 24	Baltic ...	New York ...	Measles ...	Fazakerley ...
Dec. 26	Aba ...	West Coast of Africa	Malaria ...	Royal Infirmary
Dec. 26	Biafra ...	West Coast of Africa	Malaria ... (5 cases)	... ..
Dec. 26	Alban ...	Ceara ...	Malaria ... (2 cases)	... ..

REMARKS

One of the passengers suffered during the voyage.

The patient, one of the crew, a Lascar, was removed to the City Hospital.

The patient died before arrival in this Port.

Four of the native seamen were removed to hospital at Hull, where the disinfection was carried out.

A native seaman suffered during the voyage.

The man, one of the crew, was left in hospital at Batavia.

All patients were members of the crew who suffered during the voyage.

Eleven of the crew had the sickness during the voyage.

The patient, a coal trimmer, was removed to hospital in Manchester.

The patient was removed to the City Hospital.

The patient, a steward, was removed to the Infirmary.

Five of the crew had suffered during the voyage.

Two Portuguese passengers suffered on the voyage.

Date, 1921	Name of Vessel.	Where from.	Nature of Sickness.	Hospital to which Patient was removed.
Dec. 29	Logician ...	New Orleans	Enteric Fever	... ..
Dec. 30	Haverford ...	New York ...	Tuberculosis	... ..
Dec. 30	Melita ...	St. John's ...	Scarlatina ...	Grafton Street
Dec. 30	Desna ...	River Plate...	Typhoid Fever	Fazakerley ...
Dec. 31	Peleus ...	Colombo ...	Small-pox ... (5 cases)	... ..
Dec. 31	Cardita ...	Tampico ...	Malaria ...	... ..
Dec. 31	Manzanares	Jamaica ...	Enteric Fever	Fazakerley ...

REMARKS.

The patient, a fireman, was landed at New Orleans, and the usual disinfection was carried out.

The patient was a passenger who proceeded to his home in Ireland.

The patient, a child passenger, was removed to the City Hospital, and the bedding and vessel were disinfected.

The patient, a fireman, was removed to the City Hospital, and the usual disinfection was carried out.

The patients were five pilgrims who died in September. Disinfection and vaccination was carried out by the ship's Surgeon.

The storekeeper had Malaria during the voyage.

The patient was removed to the City Hospital, and the bedding and vessel were disinfected.

Diseases incident upon Sailors.—Sanitation of Vessels.

The diseases to which sailors are peculiarly liable may be classified under four headings:—

(a) Those which are caused by the peculiar stresses of the work.

(b) Those attending the vices to which sailors in foreign ports are particularly liable to be attracted. Alcoholism and Venereal Disease.

(c) Tropical Disease, including Malaria, Beri-beri, etc.

(d) Those associated with the peculiar environment of the sailor such as damp forecastles, contaminated water supplies and close association of the sick with the healthy in the confined quarters on shipboard.

It is against the latter classes of disease that the efforts of the Port Sanitary Authority for improving the sanitation of vessels are directed.

The defects are classified under three headings as arising from—

(a) Faulty construction;

(b) Wear and tear;

(c) Lack of cleanliness and nuisance.

WORK OF THE PORT SANITARY INSPECTORS.

The area of the Port is divided into four districts, those of the North Docks, the North Central Docks, the South Docks and the outlying districts, comprising Birkenhead and Garston. These are each in charge of an Inspector who visits all vessels lying within his district to examine into their sanitary state and also to enquire concerning the health of those on board and as to the occurrence of sickness during the voyage, particularly stringent enquiries being made in the case of all vessels from ports where Plague, Cholera and Smallpox are prevalent. Enquiries are also made as to the occurrence of sickness or mortality amongst the rats on vessels, and one and a half days per week are devoted by each Inspector to conditions likely to afford harbourage for rats in his area of the dock estate.

In addition to the daily routine inspection of the sanitation of vessels special visits require to be made to many vessels in respect of sickness. Smallpox contacts have to be kept under daily observation. Disinfection has to be carried out or supervised on all vessels which have had cases of actual or suspected infectious disease on board. Inspectors also supervise the fumigation of the holds of vessels for the destruction of rats when certificates of fumigation are required by foreign sanitary authorities. The whole time of one Inspector has been occupied in supervising the landing of cattle from coastwise cattle boats.

Canal Boats.

The Port Sanitary Inspectors have been appointed Canal Boat Inspectors under the Canal Boats Acts 1877 and 1884. This is rendered necessary by the large number of Canal Boats which are to be found lying in the Liverpool Docks. By rotation, one Inspector devotes one whole day per week for a period of five months at a time to this work, as it has been found that in this way it is easier to follow up any boat that may be defective. These boats are for the most part kept in very good repair.

616 boats were inspected during the year, of which number 18 were found to have some condition contravening the regulations.

By rotation the Inspectors spend a month each on Tidal Duty. This work consists in attending at the Port Sanitary Office for three hours before and one hour after high water each tide in order to receive information regarding the arrival of vessels requiring to be visited by the Medical Officer, to communicate information to the Medical Officer, and arrange for a launch, and to assist when necessary in the removal of infectious cases to hospital.

Since the acquisition of a steam launch for boarding purposes it has been found possible for these tidal duties to be carried out by the Master or Mate of the launch. This will save the whole time of one Sanitary Inspector who will now be available for duty in the daytime on ships in the docks.

INSPECTION OF SHIPPING.

Year 1921.

TABLE 10.

Nationality.	Visits.	Re-visits.	Total.
British	3,155	1,754	4,909
Norwegian	192	142	334
Swedish... ..	72	42	114
Spanish... ..	87	129	216
Danish	48	20	68
Japanese	23	19	42
Italian	10	2	12
Russian... ..	1	—	1
French	37	12	49
Dutch	59	23	82
Greek	11	17	28
American	182	120	302
Belgian	5	3	8
German	20	4	24
Esthonian	2	—	2
Finn	23	12	35
Jugo Slav	1	—	1
Uruguayan	1	—	1
Total	<u>3,929</u>	<u>2,299</u>	<u>6,228</u>

TABLE 12.

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THE FOLLOWING TABLE SHOWS THE NUMBER AND NATIONALITIES OF THE VESSELS ON WHICH DEFECTS WERE DETECTED DURING THE YEAR 1921.

NATIONALITY.	Number of Ships.	Dirty Forecasts.	Dirty Wash-houses, Stairs-houses, etc.	Foul Water Casks.	Foul Bilge.	Foul W.C's.	Accumulations of offensive refuse.	Gear stowed in Crew's Quarters.	Dirty Quarters.	Water lodging in Forepeak Tank.	Animals kept causing nuisance.	Leaky Deck overboard.	Defective Stoves.	Defective Bulkheads.	Defective Decks and Sky Lights.	Defective Ventilators.	Defective Flooring Boards.	Defective Hatches and Lockers.	Defective Chain Pipes.	Defective Hose Pipes.	Defective W.C. Fittings.	Defective Soil Pipes.	Inadequate Ventilation.	Inadequate Lighting.	Inadequate Drainage.	Bare Iron not Sheathed.	W.C's. deficient in Ventilation and situation bad.	Total number of Defects.	Total Remedied.	
British ...	813	2208	123	6	...	637	16	6	25	...	...	55	20	17	59	16	3	2	2	5	38	2	40	6	10	9	2	3307	3200
Norwegian ...	38	50	5	...	...	27	1	...	1	...	...	1	1	3	8	...	...	...	...	...	...	...	...	...	...	...	...	92	88
Swedish ...	10	8	...	...	...	8	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	1	...	...	...	...	2	20	17
Spanish ...	21	38	...	...	...	11	...	...	...	...	...	1	3	...	...	...	...	...	...	...	...	...	2	...	...	...	...	55	53
Japanese ...	4	10	1	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	12	12
Italian
Greek ...	4	10	4	...	...	4	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	18	18
Dutch ...	7	6	1	...	...	7	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	14	14
American ...	28	26	3	...	...	19	5	...	2	...	...	2	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	59	52
French ...	4	8	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	9	9
Finn ...	4	7	1	...	...	3	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	11	11
Danish ...	3	1	...	...	...	2	...	...	...	...	...	2	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	5	3
German ...	1	2	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	3	3
Esthonian ...	1	1	...	...	...	...	...	...	...	...	...	...	...	...	1	...	...	...	...	...	...	...	...	...	...	...	...	2	2
Total ...	938	2375	138	6	...	720	23	6	28	...	...	61	24	22	64	16	3	2	2	5	38	3	42	6	10	9	4	3607	3482

THE FOLLOWING TABLE SHOWS THE NUMBER OF PARTS WHICH WERE

Country	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	Total
British	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
French	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Italian	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Japanese	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
U.S.A.	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Germany	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Spain	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Sweden	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Belgium	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Canada	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
China	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
India	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
South Africa	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Others	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
Total	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29

SUMMARY OF INSANITARY CONDITIONS.

TABLE 11.

Class of Vessels.	Number Inspected.	Number on which nuisances were found.	Per cent.
FOREIGN—			
Steamers	2,727	831	30·47
Sailing	5	5	100·00
Total... ..	2,732	836	30·60
COASTWISE—			
Steamers	976	84	8·61
Sailing	221	18	8·14
Total... ..	1,197	102	8·52

Nationality.	Number Inspected.	Number on which Nuisances were found.
British	3,165	818
Foreign	764	125
	3,929	938

Nuisances arising through

Defects of Original Construction. (a)	Per cent. of Total Defects.	Structural Defects through wear and tear. (b)	Per cent. of Total Defects.	Dirt, and other conditions prejudicial to health.	Per cent. of Total Defects (c)
71	1·97	240	6·65	3,296	91·38

(See Table 11a).

SUMMARY OF PORT SANITARY CONDITIONS
Aliens.

The Aliens Order, 1919, came into operation on 1st April, 1920, the medical examination of Aliens being carried out by the Assistant Port Medical Officers.

The object of the medical examination is the exclusion of those Aliens (i) whose presence is likely to be a danger to the health of this country; (ii) who are likely to become a charge upon public funds, either by reason of their existing or probable future incapacity to support themselves and their dependants, or because their condition is such as to render it probable that they will need treatment and care which they are unable to provide from their own resources.

The medical examinations are still conducted on board the ships, no accommodation on shore being available for this purpose. In cases where the Medical Inspector wishes to make an examination under better conditions than exist on the ships, or when he wishes to consult with his colleague on a question of diagnosis, arrangements are made for the Alien to be conducted to the Port Sanitary Offices. This is practicable for isolated cases but not for all Aliens requiring to be examined, because the safe custody of a number of Aliens not technically landed in passing from the ship to the Port Sanitary Offices presents great difficulties, and further, there is no waiting-room accommodation in the Office.

The largest passenger vessels arrive from the U.S. America, Canada, South America, India, and W. C. Africa. In addition, smaller vessels arrive with a few passengers from all parts of the world. The larger vessels usually come to the Landing Stage, but sometimes have to be visited by tender while lying in the river, or they may even run straight into dock. The smaller vessels are always dealt with either by tender or in dock. All the larger vessels are visited by one of the Medical Inspectors, but it is impossible, with only two Medical Officers, having other duties to perform, to visit all the smaller vessels. Frequently the Immigration Staff will be dealing with two or three vessels in different parts of the port at the same time. In such cases the

Immigration Officers bring any Aliens, who have to be medically examined, to the Immigration Offices, and communicate with the Medical Officer who inspects the Aliens as soon as he is free.

A great deal of the work is done in the mornings, vessels coming to the Stage at 7 or 8 a.m. Sundays, too, usually provide some alien work, and though shipping companies naturally try to land their passengers early in the day, delays due to fog or bad weather not infrequently result in passenger vessels arriving in the evenings. In the medical examination of Aliens, as in other branches of the Port Sanitary administration, it is inevitable that the hours of work of the Port Medical Officers should be irregular.

The restrictions imposed by the Ministry of Labour on Aliens desiring to take up employment in this country are still in force, consequently few Aliens arrive to take up permanent residence in this country, and therefore few require examination as to their earning capacity. The great majority of Aliens arriving are visitors coming here for business, travel, or to see their relations in this country. They have to be examined for disease likely to affect the public health, but conditions affecting their earning capacity do not enter into the question.

At Liverpool there is no cross channel traffic, except with Ireland. Those Aliens who arrive have usually come long distances entailing the expenditure of a considerable sum of money, consequently they are mainly people in comfortable financial circumstances, clean and in good health, serious sickness rendering such long journeys impossible. They are a very different class of person from many of those arriving in the daily cross-channel steamers at such ports as Dover, Folkestone, Newhaven, etc., and consequently the number of medical rejections at Liverpool is small compared with the number at the South Coast ports.

The transmigrants passing through from America to Europe are also of a much higher standard of health and cleanliness than those travelling from Europe to the States. They have learned habits of cleanliness, and further, they are for the most part those who have made

good in America and can afford to visit their home country or return and settle down there. There is little fear of the importation of disease into this country by the eastward-bound transmigrants.

The following table, in which the Alien passengers arriving in Liverpool during 1921 are classified according to their reasons for coming to this country, will prove of interest:—

Visitors on Holidays, Tourists, etc.	Business Visitors.	In transit to other Countries.	Aliens normally resident in this country and returning after being abroad.	Aliens coming to reside permanently in this country.
14,090	1,280	2,135	463	619
Aliens holding Ministry of Labour Permits to take up employment in this country.		Diplomats and Persons on Foreign Government Missions.	Seamen under Contract to join Ships in British Waters.	Other Seamen.
42		188	136	282

Thus, out of a total of 19,235 Aliens (other than transmigrants) arriving in Liverpool during 1921, the great majority are likely to stay for a short time in this country, only 42 coming definitely to take up employment.

Of the 619 other Aliens coming to reside in this country the majority are British-born people who have become naturalised in America, and who in old age or on the death of husband or wife return to their friends and relations in this country.

During the year 13 certificates were issued by the Medical Inspectors: 2 on account of Mental Disease, 3 for Acute Infectious Disease, 4 on account of Pulmonary Tuberculosis, and 4 on account of disease likely to cause them to become a public charge.

This does not mean that all the other Aliens examined were found to be in perfect health. A number of diseases were discovered by the

Medical Inspectors, but as they were not likely to affect the Public Health or cause the persons to become a public charge, no certificates were issued.

Verminous Persons.

Facilities for the cleansing and disinfection of verminous persons and their belongings have been arranged for by the Port Sanitary Authority.

The bathing of these persons has been carried out at the Netherfield Road and Sparrow Hall Hospitals, where an ample number of baths are available. The disinfectors of the hospitals, which are of large size, are, if necessary, utilised for the destruction of vermin in the clothing and belongings of these persons. As a rule, the alien immigrants and transmigrants arriving in the Port of Liverpool on inward-bound vessels are in a clean condition, and do not require the cleansing referred to.

The presence of typhus, which is a vermin-transmitted disease, in Poland and in the neighbouring Continental countries, has caused the Ministry of Health and also American Health Authorities to view with some concern the arrival of emigrants and transmigrants in this country en route to America.

The Emigration Houses in which these people are housed pending the sailing of the vessel are kept under strict supervision; they are visited daily, and all cases of infectious illness promptly reported to the Company's doctor and the Local Health Authority. The bedding is also constantly examined and attention is given to the occupation of the rooms to prevent overcrowding and to ensure cleanliness. The Medical Officer of Health, at the request of various shipping companies acting under the instructions of the American Consul, arranged that certain Polish and other emigrants, together with their effects, should be bathed and disinfected. This work is carried out at the Netherfield Road and Sparrow Hall Hospitals, where the special steam disinfectors have been made use of. The cost of the disinfection is defrayed by the shipping company concerned.

Supervision of Food Importations.

The Unsound and Foreign Meat Regulations have been strictly carried out during the year in the Port of Liverpool.

The number of the permanent staff employed on this work has remained the same as in previous years.

Some observations on the importations of meat during the year may be of interest.

In the early part of the year a consignment of 880 bags of boneless beef arrived from Hamburg. These were rolled and frozen, and had to be de-frosted before examination could be carried out. A large proportion was found to be diseased, and was destroyed under a Magistrate's Order.

In May, 1,351 hindquarters of Australian beef were landed, and on examination 10 per cent. were found to be affected with worm nodules (*Onchocerca Gibsoni*).

Certain consignments, approximating 2,592 bags, of rolled mutton were landed from South America; these consisted of whole sides of mutton, boned and rolled. It was necessary to de-frost this consignment before examination. When this was done a large number of sides were found to have abscesses in many of the lymphatic glands, due to a disease known as epizootic lymph-adenitis. The diseased portions were allowed to be sold for boiling down for the manufacture of tallow.

A few consignments of meats, for example, canned goods such as "lunch tongue," "pork loaf," etc., have been landed from time to time from the United States bearing the labels "Second Grade Sterilised Lunch Tongue," "Corned Pork," or "Pork Loaf." These products are prepared from diseased or unsound animals passed for sterilisation.

The firms interested in putting these goods on the British market are known, and communication has passed between the Local Authority and the Government Department concerned regarding this class of meat. The Liverpool Provision Trade Association guaranteed in 1916 that no further shipments of this meat would be made to this country.

In August, 50 tierces of pickled pork tongues were landed from America, and were found to be decomposing and were dealt with for industrial purposes.

During the year, export notices have been served as follows:—

- 11,239 cases pork kidneys.
- 48 cases sterilised canned pork, beef and lunch tongue.
- 116 cases of pig tripe.
- 2,541 cases of pig livers.
- 594 cases of pig hearts.

These notices to export were issued under the Foreign Meat Regulations, 1908, meats of this class not being allowed into this country unless properly certified.

Arrangements have been completed with the United States, Argentine and Brazilian Governments by which *fresh pork*, i.e., pork which has been chilled or frozen but not salted or cured, can be admitted into this country. Carcasses slaughtered in an official establishment in these countries can be imported into Great Britain provided the pork is derived from carcasses which, together with the viscera, were found on post-mortem examination to be free from disease and from tuberculosis in any degree. The packages or containers of this pork will bear the *modified meat inspection stamp* of the Government Departments. On this stamp, from the U.S. America, is printed, in salmon-coloured letters, the statement "Pork from animals free from disease at the time of slaughter." An export certificate will accompany each consignment of such pork. Packages which do not bear this certificate will not be accepted. A stamp bearing a distinctive design is also issued by the Argentine and Brazilian Governments, as seen in the following notices.

The following is the text of the Notices issued May 1st, and June 2nd, 1922, containing a description of the labels and marks each of which is declared to be admissible as an official certificate in respect of pork and other edible portions of the pig which have been subjected to inspection in the United States of America, Argentine, and the United States of Brazil:—

NOTICE.

THE PUBLIC HEALTH (FOREIGN MEAT) REGULATIONS, 1908.

THE PUBLIC HEALTH (FOREIGN MEAT) AMENDING REGULATIONS, 1909.

The Minister of Health, in pursuance of the above Regulations, hereby gives notice that, for the purposes of those Regulations the Official Certificates of which the details are set forth in the representations or designs in the Schedules appended to and forming part of this Notice are hereby declared to be admissible, from the date of the publication of this Notice, in the manner, to the extent, and subject to the rules and conditions prescribed in this Notice, as evidence that the pig from which has been derived the meat in relation to which any such Certificate is used, has been certified by a competent authority in the place of origin to be free from disease at the time of slaughter, and that the meat has been certified by the like authority to have been dressed or prepared, and packed with the needful observance of all requirements for the prevention of danger arising to public health from the meat as an article of food;

AND FURTHER, with respect to the manner, to the extent, and to the rules and conditions in, to, and subject to which every Official Certificate is admissible as evidence for any such purpose as is hereinbefore described, the Minister of Health hereby prescribes as follows, that is to say:—

(i) An Official Certificate used in relation to foreign meat, or in relation to a box, case, receptacle or package containing foreign meat, shall be admissible as aforesaid only where the meat is derived from a pig.

(ii) The mark or stamp of the Argentine Government shall be admissible if impressed on each box, case, receptacle or package, or if impressed on a label.

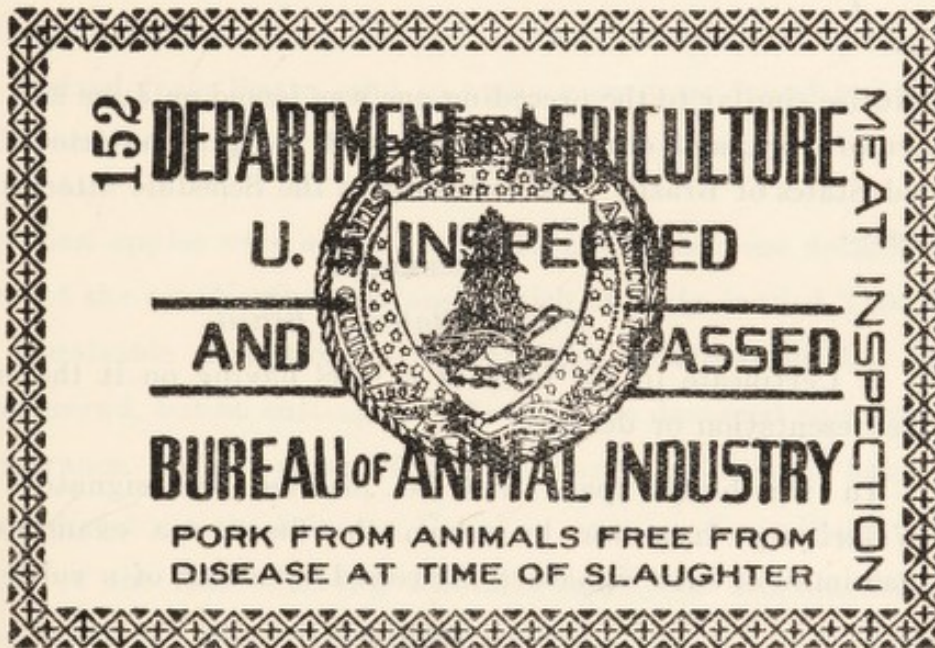
(iii) An Official Certificate in the form of a label shall be admissible as aforesaid only where the label is securely affixed or attached to any foreign meat, or to any box, case, receptacle or package containing foreign meat; and where the label so affixed or attached has not in any other circumstances, or on any other occasion, been used as an Official Certificate.

(iv) In this Notice, any word or expression to which a special meaning is assigned by the Public Health (Foreign Meat) Amending Regulations, 1909, has the same meaning as in those Regulations.

SCHEDULE I.

United States of America.

A Certificate in the form of a label having on it the subjoined representation or design, except that the circular device in the centre of the label, the words "Pork from animals free from disease at time of slaughter" and the serial number are printed in orange colour, and that in place of the serial number 152, other serial numbers may be substituted.



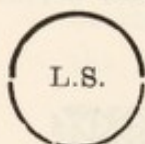
SCHEDULE II.

Argentine Republic.

A Certificate in the form of a mark or stamp having on it the subjoined representation or design with or without the addition of a number signifying the official number of the slaughter-house and being impressed in blue colour upon the box, case, receptacle or package, or upon a label.



Given under the Official Seal of the Minister of Health this First day of May, One thousand nine hundred and twenty-two.



A. B. MACLACHLAN.

Assistant Secretary.

A Notice similar to the preceding one was issued on June 2nd, 1922, in respect of pork and other edible parts of the pig imported from the United States of Brazil. The following is the Schedule attached to this Notice:—

SCHEDULE.

United States of Brazil.

A Certificate in the form of a label having on it the subjoined representation or design.

In the blank space will be inserted the signature of the Veterinary Inspector by whom the meat was examined, or a facsimile of such signature impressed by means of a rubber stamp.



Ministerio da Agricultura, Industria e Commercio.

CARNE INSPECCIONADA E BÔA PARA A EXPORTAÇÃO.

O Inspector Veterinario :.....

Given under the Official Seal of the Minister of Health this
Second day of June, One thousand nine hundred and twenty-two.

L.S.

A. B. MACLACHLAN.

Assistant Secretary.

Certain consignments of corned canned beef, tomatoes, cherries, etc., which have been returned from France were found to be in such a condition that complete examination of the consignment was necessary. The goods were sent to various warehouses for this purpose, and the rejects were disposed of to the satisfaction of the Medical Officer of Health.

During the early part of the year a large quantity of oranges and lemons arrived from Spain, and in many cases were found to be in an unsound condition; these were dealt with on the quays.

Australian apples were again landed in Liverpool; one notable cargo was that of the s.s. Northumberland, which in July landed 3,500 boxes in an unsaleable condition. On external examination the apples appeared sound, but on cutting were found to be damaged and abnormal in appearance. Californian fruits in large quantities have been imported direct via the Panama Canal in very good condition. From a perusal of the table showing a total quantity of different kinds of unsound foodstuffs supervised during the year 1921, it will be seen that, as compared with last year, there has been a great reduction in the quantities of foodstuffs condemned. This may be partly attributed to smaller imports, to the exhaustion of the huge Government stocks which accumulated during the war, and to the non-arrival of ship-damaged cargoes.

The following table shews the number and description of samples sent for examination to the City Analyst and City Bacteriologist during the year ending December, 1921:—

TABLE 13.

CITY ANALYST.					CITY BACTERIOLOGIST.				
CANNED GOODS—					CANNED GOODS—				
Milk	...	...	...	2	Beef	...	...	...	2
Tomatoes	...	...	...	6	Tomatoes	...	...	...	4
Peas	...	...	...	52	Pears	...	...	...	1
Eggs	...	...	...	1	Pelotas	...	...	...	1
Sardines	...	...	...	1	Milk	...	...	...	4
Haricot Beans	...	...	...	16	Peaches	...	...	...	2
Whale Steak	...	...	...	1	Mussels	...	...	...	1
Pears	...	...	...	1	Water	...	...	...	2
Lobsters	...	...	...	5	Apples	...	...	...	1
Cream	...	...	...	1	Pork	...	...	...	1
Oats	...	...	...	1	Brine	...	...	...	1
Apples	...	...	...	2					
Rice	...	...	...	1					
Cockles	...	...	...	1					
Water	...	...	...	2					
Ham	...	...	...	1					
Brine	...	...	...	21					
Rats	...	...	...	11					
				<hr/>					<hr/>
				Total ...					Total ...
				126					20

The City Bacteriologist reports that of these food-stuffs, 9 samples were sterile, 8 contained putrefactive organisms, 5 contained staphylococci, and 1 contained B. coli. The mussels were quite satisfactory.

TABLE 14.

SHOWING THE NUMBERS OF CATTLE, SHEEP, AND SWINE EXPORTED FROM IRELAND TO LIVERPOOL DURING THE YEAR 1921, AND SHOWING THE PORTS IN IRELAND AT WHICH THE ANIMALS WERE SHIPPED.

	Cattle.	Sheep.	Swine.
Ballina	137	6,680	262
Belfast	2,024	2,825	—
Cork	34,257	31,858	2,997
Drogheda	30,727	40,259	376
Dublin	75,335	149,353	6,509
Dundalk	14,574	33,845	1,573
Londonderry	5,492	9,483	84
Newry	1,639	16,847	295
Sligo	269	13,518	3,530
Waterford	32,257	21,706	3,021
Total	196,711	326,374	18,647

TABLE 15.

SHOWING THE TOTAL NUMBERS OF THE SEVERAL KINDS OF CATTLE, SHEEP AND PIGS EXPORTED FROM IRELAND TO LIVERPOOL DURING THE YEAR 1920.

CATTLE.		No.	SHEEP.		No.
Fat		168,717	Fat		118,745
Stores (for fattening)		19,020	Stores ... ..		...
Milch Cows		932	Lambs		207,629
Springers		178			
Calves		7,864	Total Sheep		<u>326,374</u>
Total Cattle		<u>196,711</u>			
			PIGS.		
			Fat		18,647
			Stores ... ..		...
			Total Swine		<u>18,647</u>

TABLE 16.

STATEMENT SHOWING THE NUMBER OF LIVE CATTLE, &c., LANDED AND SLAUGHTERED AT THE FOREIGN ANIMALS WHARF (BIRKENHEAD, ALFRED AND WALLASEY LAIRAGES) DURING THE YEARS 1905 to 1921 INCLUSIVE.

Year.	LANDED.				SLAUGHTERED.			
	Oxen.	Calves.	Pigs.	Sheep, Lambs and Goats.	Oxen.	Calves.	Pigs.	Sheep, Lambs and Goats.
1905	276,725	5	—	160,105	276,273	4	—	163,705
1906	270,853	5	—	94,948	270,245	5	—	95,250
1907	214,061	2	—	97,688	215,821	2	—	94,714
1908	180,283	—	—	76,334	179,872	—	—	79,315
1909	148,233	2	—	8,053	147,812	2	—	8,053
1910	89,613	3	—	304	90,430	—	—	304
1911	78,232	2	—	40,338	79,215	1	—	39,314
1912	19,167	—	—	14,251	19,167	—	—	14,251
	143,114	819	69,016	335,291	140,854	810	67,586	334,880
1913	3,482	—	—	—	3,482	—	—	—
	351,276	930	104,274	449,344	90,857	174	15,498	131,241
1914	—	—	—	1,707	—	—	—	1,707
	333,115	248	65,242	357,528	171,716	121	16,876	158,562
1915	235,620	—	60,791	288,260	100,560	—	2,353	94,237
1916	270,117	2	84,509	377,753	137,346	—	2,210	134,794
1917	257,781	14	48,013	424,992	127,436	4	655	171,720
1918	178,898	17	28,723	446,039	102,174	—	409	219,915
1919	252,790	977	29,052	362,137	175,302	—	591	241,247
1920	247,015	6,230	31,050	341,350	110,688	9	569	164,669
1921	195,785	—	19,224	325,982	63,178	—	2,766	165,963
	49,434	—	—	6,706	49,224	—	—	6,706

Ordinary type represents Foreign. Heavy type represents Irish.

TABLE 17.
SHOWING THE IMPORTS OF MEATS (EXCEPT POULTRY AND GAME) INTO THE
PORT OF LIVERPOOL DURING THE YEARS 1915, 1916, 1917, 1918, 1919 and 1920.

Description.	Years.					
	1915.	1916.	1917.	1918.	1919.	1920.
Bacon	£ 10,719,819	£ 15,827,493	£ 18,181,829	£ 36,832,954	£ 38,708,464	£ 21,746,024
Beef, fresh and refrigerated ...	11,378,711	8,880,454	8,297,884	16,470,701	11,916,393	17,754,543
Beef, salted... ..	70,777	67,426	86,563	66,238	180,015	—
Hams	3,383,667	4,114,569	3,983,618	6,843,531	7,404,202	109,461
Mutton, fresh and refrigerated ...	2,443,754	2,751,913	2,116,322	2,128,352	2,219,436	5,702,678
Pork, fresh and refrigerated ...	324,167	966,652	469,406	424,056	310,654	} 1,639,590
Pork, salted	71,083	85,791	55,604	17,544	100,808	
Rabbits	159,215	168,667	180,106	123,468	143,983	342,821
Unenumerated, fresh refrigerated and salted	801,044	1,101,843	1,214,946	930,022	2,588,273	973,877
Preserved, otherwise than by salting	1,941,040	3,663,457	6,160,807	9,443,132	13,012,291	2,638,774
Totals	£31,293,277	£37,628,265	£40,748,085	£73,279,998	£76,584,519	£50,907,768

TABLE 18.

SHOWING THE QUANTITY OF UNSOUND MEATS SUPER-
 VISED AND UTILISED DURING THE YEARS 1911 TO 1921.

Year.	Beef.				Mutton.				Pork.			
	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.	Tons.	cwts.	qrs.	lbs.
1911.....	659	10	2	24	18	7	0	13	6	4	2	20
1912.....	684	8	3	0	475	12	1	2	9	12	3	18
1913.....	88	0	3	12	76	16	0	13	1	4	2	15
1914.....	441	5	2	0	47	5	2	2	1	5	0	2
1915.....	221	7	0	10	23	14	0	4	2	8	3	21
1916.....	103	16	0	13	4	10	0	24	1	14	1	16
1917.....	510	9	3	14	24	11	3	20	0	14	3	16
1918.....	281	9	0	25	55	15	0	22	4	14	1	4
1919.....	150	12	3	22	45	18	0	16	—	8	0	8
1920.....	30	8	2	23	95	8	0	6	—	16	0	16
1921.....	25	14	2	19	8	13	0	8	1	9	2	22

TABLE 19.

SHOWING THE QUANTITY OF UNSOUND OFFAL SUPER-
 VISED AND UTILISED DURING THE YEARS 1911 TO 1921.

Year.	Beef.	Mutton.	Pork.	Veal.
1911.....	32,816 pieces.	56,596 pieces.	8,629 pieces.	1,070 pieces.
1912.....	68,272 „	57,163 „	8,229 „	196 „
1913.....	28,055 „	66,705 „	12,946 „	64 „
1914.....	36,561 „	41,298 „	1,919 „	44 „
1915.....	55,219 „	185,551 „	5,644 „	233 „
1916.....	63,900 „	126,110 „	2,765 „	15 „
1917.....	39,466 „	13,212 „	12,460 „	946 „
1918.....	27,216 „	51,755 „	24 „	—
1919.....	103,613 „	61,844 „	76,814 „	19 „
1920.....	207,412 „	358,744 „	261 „	722 „
1921.....	31,695 „	32,989 „	3,699 „	100 „

DURING THE YEAR 1921.

Name of Organ.	Beef.		Mutton.		Pork.		Veal.	
	Number.	Weight, Pounds.	Number.	Weight, Pounds.	Number.	Weight, Pounds.	Number.	Weight, Pounds.
Livers...	3,541	36,767	24,842	27,615	1	2	—	—
Kidneys ...	2,603	2,654	4,018	442	3	2	—	—
Sweetbreads ...	203	115	864	63	—	—	—	—
Tripe ...	4,777	47,761	—	—	—	—	—	—
Skirts ...	6,185	6,647	—	—	—	—	—	—
Hearts ...	2,861	8,679	2,662	1,186	777	8,705	100	118
Tongues ...	1,761	9,358	—	—	7,250	8,700	—	—
Tails ...	447	710	—	—	—	—	—	—
Heads ...	—	—	—	—	268	2,912	—	—
Lungs ...	—	—	3	2	—	—	—	—
Maws ...	—	—	—	—	400	196	—	—
Cheeks ...	9,317	18,431	—	—	—	—	—	—
Feet ...	—	—	600	336	—	—	—	—
Melts ...	—	—	—	—	—	—	—	—
Fries ...	—	—	—	—	—	—	—	—
Totals ...	31,695	131,122	32,989	29,644	8,699	20,517	100	118

The organs dealt with above were rejected for various reasons, notably, decomposition and diseased conditions, such as Cysts, Inflammation, &c.

TABLE 21.
 TABLE SHOWING THE QUANTITY AND DESCRIPTION OF UNSOUND MEATS
 SUPERVISED* DURING THE YEAR 1921.

DESCRIPTION.	TOTAL WEIGHT.		CAUSE OF DESTRUCTION.			
	Tons	lbs.	Tubercular.	Brine Stained, Mouldy and Decomposed.	Other causes. (Emaciation, Dropsy and Pleurisy).	
	Tons	lbs.	Tons	qrs.	lbs.	
Beef	25	14 2 19	—	23	6 0 12	2 8 2 7
Mutton.....	8	13 0 8	—	8	4 2 0	0 8 2 8
Pork	1	9 2 22	—	1	9 1 4	0 0 1 18
Veal	1	17 1 3	—	1	17 1 3	—
Total.....	37	14 2 24	—	34	17 0 19	2 17 2 5

* These were destroyed or allowed to go for industrial purposes to the satisfaction of the Medical Officer.

TABLE 22.

SHOWING QUANTITIES OF UNSOUND GENERAL FOOD-STUFFS SUPERVISED AND UTILISED DURING THE YEAR 1921.

Description.	No. of Tins.	Weight in Pounds.	Description.	No. of Tins.	Weight in Pounds.
Canned Goods—			Strawberries ...	—	—
Almonds ...	—	—	Beef	144427	367917
Apples ...	1831	11086	Mutton	2654	15924
Apricots ...	25116	40103	Pork and Beans	12072	36216
Apricot Pulp ...	4390	33972	Ox Tongues ...	418	2504
Apricot & Peach	—	—	Ox Tails ...	—	—
Greengages ...	10	25	Tripe	—	—
Orange Pulp ...	1488	16246	Soups	—	—
Cherries ...	5814	12291	Stew	—	—
Fruit Pulp ...	—	—	Lobsters ...	759	378
Logan Berries	644	1288	Pilchards ...	7	11
Peaches ...	3305	5452	Sardines ...	4611	3324
Peach Pulp ...	—	—	Salmon ...	5967	5966
Pears	525	818	Crab	4222	2110
Pine Apple ...	9855	11914	Fowl	—	—
Plums	34	85	Rabbits ...	—	—
Mixed Fruit ...	436	436	Spaghetti ...	—	—
Haricot Verts	5776	6120	Milk Condensed	12123	15309
Tomatoes ...	59210	165997	Milk Evaporat- ed	—	—
French Beans	44	33	Egg Pulp ...	18000	792000
Tomato Sauce	—	—			

Description.	Packages.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Fruit (Fresh)—					
Apples	4057	110	14	3	8
„ loose	—	—	—	—	—

TABLE 22—continued.

Description.	Packages.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Fruit (Fresh) continued—					
Melons	311	6	17	0	1
„ loose	—	3	0	0	0
Pears	326	20	3	3	10
Bananas... ..	4,150	213	1	3	14
„ loose	—	28	0	0	0
Grapes	275	1	5	0	0
Tomatoes	49	2	1	2	15
Lemons... ..	1,070	24	9	3	8
„ loose	—	4	0	0	0
Oranges	3,972	16	12	2	14
„ loose	—	212	0	0	0
Grape Fruit	3	0	3	0	24
Peaches	—	—	—	—	—
Cocanuts	197	11	6	1	0
Brazil Nuts	110	11	18	2	16
Pomegranates	111	5	19	1	4
Fruit (Dried)—					
Figs	321	2	0	0	0
Raisins	5	0	0	2	3
Prunes	4,571	104	2	2	3

TABLE 22--continued.

Description.	Packages.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
Vegetables—					
Potatoes... ..	65	3	5	0	0
„ loose... ..	—	13	15	0	0
Onions	17	0	17	2	0
„ loose	—	3	0	0	0
Carrots	40	1	15	2	24
Cereals—					
Wheat	890	312	18	3	12
Maize	—	236	11	3	19
Oats	—	70	6	1	17
Barley	—	—	3	2	18
Peas	—	4	2	0	16
Beans	2	—	2	0	0
Flour	—	137	2	3	19
Rice	1,025	60	15	0	14
Corn Flour	252	16	12	1	9
Maize Meal	37	2	16	0	18
Rolled Oats	2	4	11	1	0
General—					
Macaroni	380	2	0	2	24
Geese single	5	0	0	1	6
Ducks „	3,775	6	13	2	11
Chickens „	26	0	0	2	4
Rabbits	—	365	3	2	13

TABLE 22—*continued.*

Description.	Packages.	Weight.			
		Tons.	Cwts.	Qrs.	Lbs.
General—<i>continued.</i>					
Corn Sugar	12	—	15	0	15
Dessicated Eggs	42	1	17	2	0
Salmon	807	3	11	2	14
White Fish	1	—	1	0	17
Salt Mackerel	7	—	10	0	0
Sugar Sweepings	—	—	—	1	27

TABLE 23.

SHOWING THE TOTAL QUANTITIES OF THE DIFFERENT UNSOUND FOODSTUFFS SUPERVISED DURING THE YEAR 1921.

	Tons.	Cwts.	Qrs.	Lbs.
Beef, Mutton, Pork and Veal...	37	14	2	24
Offal (Beef, Mutton, etc.) ...	80	19	2	17
Canned Goods	690	17	0	21
Fruit and Vegetables	800	10	1	4
Cereals	846	2	3	2
General (Fish, Poultry, Rabbits, etc.)	380	14	2	19
	2,836	19	1	3

TABLE 24.
Showing comparative Value of the more important Food Stuffs imported at the principal Ports during the year 1920.

	London. 1	Liverpool. 2	Hull. 3	Bristol. 4	Glasgow. 5	Man- chester. 6	South- ampton. 7	Leith. 8	Harwich. 9	Newcastle. 10
	£	£	£	£	£	£	£	£	£	£
Animals	42,872	—	—	—	—	—	—	960,654	—	—
Butter	9,330,115	2,058,538	1,805,992	60,799	—	303,453	649,732	440,283	3,227,572	4,052,992
Cheese	12,685,804	3,496,098	205,577	1,466,084	781,678	700,385	360,062	—	136,786	73,947
Cocoa	6,483,921	6,221,623	225,555	287,156	71,831	—	28,612	—	421,430	206,606
Coffee	3,838,406	437,350	—	—	—	—	70,906	8,468,938	—	58,167
Grain.....	54,033,567	46,266,146	22,891,066	19,203,522	17,870,105	15,344,280	1,833,634	1,454,407	15,346	3,840,925
Eggs	6,036,764	2,948,048	633,809	22,147	1,085,566	324,506	241,060	423,986	2,854,240	1,496,242
Fish	4,760,946	4,763,045	638,508	95,833	207,543	46,475	419,271	404,171	376,361	337,186
Fruit	19,781,087	15,896,436	2,696,849	4,051,411	3,193,931	1,957,367	3,065,854	28,839	300,045	635,918
Lard	2,322,292	5,976,148	698,875	658,213	596,737	1,944,372	521,728	737,206	35,781	—
Margarine	1,531,296	1,913,443	2,205,124	—	47,159	85,868	—	—	1,258,158	321,744
MEAT :—										
Bacon	8,813,026	21,746,024	2,156,701	3,360,798	3,279,133	3,586,943	689,887	557,003	4,054,540	591,060
Beef	23,405,155	17,754,543	316,418	382,851	598,088	228,069	2,408,710	—	—	61,299
Hams	962,544	109,461	—	88,843	889,481	244,655	466,064	—	—	—
Mutton	15,536,060	5,702,678	770,481	1,169,811	447,221	799,842	1,356,269	—	233,540	—
Pork	1,742,105	1,639,590	—	—	—	—	—	—	162,825	—
Rabbits	1,106,193	342,821	—	—	—	81,898	—	—	—	—
Unenumerated..	—	—	—	—	—	—	—	—	—	—
Preserved	4,587,157	3,612,671	549,162	117,325	216,327	—	205,411	27,180	94,163	106,495
Milk, Condensed	6,348,320	2,707,889	832,820	380,142	477,133	631,207	434,891	339,902	15,774	266,932
Poultry and Game	423,715	262,590	6,525	—	—	—	—	—	27,333	—
Sugar.....	35,981,137	26,903,650	642,752	1,438,107	1,050,864	1,484,589	388,799	521,060	—	292
Vegetables	3,097,579	2,241,514	1,812,819	119,377	272,835	381,969	2,062,041	223,701	338,079	371,104

EMIGRATION.

There was a marked decrease in the number of emigrants leaving the Port of Liverpool during the year 1921, the number being 115,554, a decrease of 89,314 compared with the previous year, when the number of emigrants leaving the Port was 204,868.

The following is a return of the number of emigrants and clearances of ships, including those passenger vessels in which medical inspection was not required, from 1901-1921:—

TABLE 25.

In 1901, 167,452	Emigrants, and	761	Clearances of Ships.
„ 1902, 214,113	„	791	„
„ 1903, 265,918	„	902	„
„ 1904, 274,584	„	924	„
„ 1905, 277,536	„	983	„
„ 1906, 352,818	„	1,090	„
„ 1907, 385,797	„	1,102	„
„ 1908, 212,155	„	1,113	„
„ 1909, 253,400	„	1,117	„
„ 1910, 336,088	„	1,149	„
„ 1911, 312,027	„	1,153	„
„ 1912, 323,187	„	1,165	„
„ 1913, 347,541	„	1,199	„
„ 1914, 232,954	„	1,065	„
„ 1915, 75,387	„	677	„
„ 1916, 58,749	„	562	„
„ 1917, 18,908	„	379	„
„ 1918, 13,588	„	287	„
„ 1919, 120,187	„	673	„
„ 1920, 204,868	„	769	„
„ 1921, 161,132	„	714	„

The following Tables, Nos. 26 and 27, relating to Emigration have been kindly supplied by the Board of Trade.

TABLE 26.

Statement showing the number of Passengers (Emigrants and others), distinguishing British subjects and Aliens, that left the Port of Liverpool for places out of Europe in the year 1921:—

DESTINATION.	British Subjects.	Aliens.	Total.
British North America ...	63,660	13,927	77,587
Australia and New Zealand	2,624	29	2,653
British South Africa ...	313	8	321
India (including Ceylon)...	8,340	192	8,532
Other British Colonies and Possessions ...	6,259	391	6,650
Total British Empire ...	81,196	14,547	95,743
United States	29,394	29,969	59,363
Other Foreign Countries	4,964	1,062	6,026
Total Foreign Countries...	34,358	31,031	65,389
Grand Total ...	115,554	45,578	161,132

TABLE 27.

Number of Passengers (Emigrants and others), distinguishing British subjects and Aliens, as given in Table No. 26, that left the Port of Liverpool in each month of the year 1921:—

MONTH.	British Subjects.	Aliens.	Total.
January	7,221	6,255	13,476
February	8,485	4,692	13,177
March	10,655	2,288	12,943
April	15,288	2,407	17,695
May	13,315	3,033	16,348
June	10,441	3,115	13,556
July	9,773	3,790	12,563
August	9,505	5,472	14,977
September	12,499	6,534	19,033
October	8,711	4,200	12,911
November	6,152	2,041	8,193
December	3,509	1,751	5,260
Total	115,554	45,578	161,132

Emigrant Inspections.

All emigrants travelling second class or steerage on board vessels outward bound are subject to inspection by the Medical Officers of the Board of Trade, Dr. Tinker and Dr. Macintyre. The crews of all such vessels bound for America are also subjected to inspection by these Officers. An Inspector of the Port Sanitary Authority attends these clearances in order to supervise the removal of all persons who may be rejected on account of actual or suspected infectious disease.

There were 157 such inspections, and 24 persons were rejected on account of infectious disease, most of whom were removed to the various City Hospitals.

TABLE 28.

Date 1921.	Name of Vessel.	Nature of Sickness.	Where taken to	Description of Patient.
Jan. 1	K. A. Victoria	Measles (2) ...	City Hospital, Fazakerley	Children
„ 7	Haverford ...	Measles (3) ...	City Hospital, Fazakerley	Children
„ 14	Victorian ...	Chicken-pox ...	City Hospital, Fazakerley	Child
„ 22	Metagama ...	Ringworm (2) ...	Boarding House, Paradise Street	Children
		Trachoma ...	Boarding House, Paradise Street	Adult
Mar. 24	Empress of Britain	Tuberculosis (5) ...	Returned home to Letterkenny, Co. Donegal	Adult (3) Children (2)
April 1	Corsican ...	Chicken-pox ...	City Hospital, Sparrow Hall	Child
„ 21	Canada ...	Chicken-pox ...	City Hospital, Fazakerley	Child
June 18	Canada ...	Chicken-pox (2) ...	City Hospital, Sparrow Hall	Children (2)
„ 25	Cedric ...	Tuberculosis ...	Fazakerley Sanatorium ...	Adult
Sept. 1	Empress of Britain	Chicken-pox (2) ...	City Hospital, Fazakerley	Children
„ 10	Canada ...	Measles ...	City Hospital, Grafton Street	Child
Oct. 14	Minnedosa ...	Ringworm ...	Returned Home ...	Adult
Nov. 11	Minnedosa ...	Chicken-pox ...	City Hospital, Fazakerley	Infant

The Medical Officer to the Port Sanitary Authority desires to express his appreciation of the valuable assistance received from H.M. Collector of Customs and Staff, the Mersey Docks and Harbour Board and their Officers, and the various Shipping Companies who have co-operated with the Port Sanitary Authority in preventing disease, and have worked harmoniously together in every particular. The Consular Body have at all times given courteous assistance.

E. W. HOPE, M.D.

MUNICIPAL OFFICES,

LIVERPOOL, 1st July, 1922.

No.	Name of Vessel	Name of Captain	Where taken to	Date
1	K. A. Victoria	Shedden (2)	City Hospital	1922
2	Harford	Shedden (2)	City Hospital	1922
3	Victoria	Shedden (2)	City Hospital	1922
4	Melburn	Shedden (2)	City Hospital	1922
5	Empire of Britain	Shedden (2)	City Hospital	1922
6	Canada	Shedden (2)	City Hospital	1922
7	Canada	Shedden (2)	City Hospital	1922
8	Canada	Shedden (2)	City Hospital	1922
9	Canada	Shedden (2)	City Hospital	1922
10	Canada	Shedden (2)	City Hospital	1922
11	Canada	Shedden (2)	City Hospital	1922