

Quarantine : return to an order of the honourable the House of Commons, dated 5 August 1861, for : copy of the papers relating to quarantine, communicated to the Board of Trade on the 30th day of July / Edgar A. Bowring.

Contributors

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QUARANTINE.

RETURN to an Order of the Honourable The House of Commons,
dated 5 August 1861;—for,

COPY " of the PAPERS relating to QUARANTINE, communicated to the Board
of Trade on the 30th day of July 1861."

Board of Trade, }
6 August 1861. }

EDGAR A. BOWRING,
Registrar.

Sir,

3, Waterloo-place, 30 July 1861.

I HAVE the honour, in the name of the Quarantine Committee of the National Association for the Promotion of Social Science, to transmit for the consideration of the Lords of the Committee of Privy Council for Trade the accompanying document relating to quarantine, and which forms the complement to the two papers communicated last year to the Board and ordered, by the House of Commons, 22d May and 18th August 1860, to be printed.

It contains,—

I. Additional abstracts of information from the Despatches of Her Majesty's Consuls, and from the Governors of British Colonies, addressed to the Foreign and Colonial Principal Secretaries of State.

Vide p. 2.

II. A detailed Report on Quarantine, founded on the extensive information derived from official sources, with an Appendix.

Vide p. 10.

I have, &c.

(signed) *Gavin Milroy, M. D.,*
Honorary Secretary of the
Quarantine Committee.

The Secretary, Board of Trade.

"Since 1720 sanitary cordons have not been adopted, unless in a few rare cases where the isolation of shipwrecked seamen or deserters, on their way to the lazaret, has been ordered."

Marseilles.

In 1855	-	-	-	-	-	55 vessels were quarantined.
In 1856	-	-	-	-	-	72 " "
In 1857	-	-	-	-	-	108 " "
In 1858	-	-	-	-	-	60 " "
In 1859	-	-	-	-	-	50 " "
						<hr/> 345 <hr/>

Of these, 334 were from foul bills of health against yellow fever, three for suspicion of plague, five for suspicion of cholera, one for suspicion of smallpox, one owing to the vessel arriving from a country supposed to be infected, and without a bill of health, and one for not having the French consul's *visa* on a Spanish bill of health.

(Details alluded to, but not received.)

"Yellow fever, as well as typhus, often makes its appearance in ships during the passage from the countries where they prevail."

During the last five years, 1,372 persons were received into the lazaret, viz. :—

In 1855	-	-	-	-	-	-	-	4 admitted.
In 1856	-	-	-	-	-	-	-	711 "
In 1857	-	-	-	-	-	-	-	5 "
In 1858	-	-	-	-	-	-	-	468 "
In 1859	-	-	-	-	-	-	-	184 "
								<hr/> 1,372 <hr/>

In 1856, 709 sick persons, of whom 413 were cases of typhus, were received into the lazaret. The number of deaths was 102, of which 90 were from typhus, and the rest from other diseases.

In 1858, 15 cases of smallpox were received, eight of which proved fatal.

In 1856 the persons in attendance on the sick in the lazaret, who were attacked with typhus, were five health officers, two Sisters of Charity, one clerk, 39 male nurses; also one soldier of the garrison on the island.

Of the foregoing 12 died, as follows :—Two head doctors, one chief chemist, and nine male nurses. Two or three other persons attacked with typhus resided on the island, but they had not been in absolute contact with the sick.

No specific mention is made of any case of cholera having occurred in the lazaret, or of any case of yellow fever since 1821.

V I G O (additional).

In a valuable paper on quarantine, communicated by Consul Congreve Brackenbury, of the date of 5th May 1860, the following illustrations of the existing practice of the system at this great quarantine station of Spain are given.

Vigo.

On the 24th June 1859, Her Majesty's steam ship "Firebrand" arrived here from Plymouth, after being 12 days at sea, without a bill of health. A quarantine of 10 days was imposed. The "Firebrand," therefore, left on the 27th, leaving a mail for England, which was opened on board, the letters pierced and dipped in vinegar before the Board of Health would allow them to be put into their boat, although the mails arriving here from the Havannah in the Spanish packet during the period of interdiction were at that time only opened on board, the letters pierced, and then put in again into the boxes, and landed and fumigated in the town, but not dipped in vinegar.

Consul Brackenbury applied to the Board of Health for the release from quarantine of the ship, on the grounds that Captain Dayman was not aware of the necessity of having a bill of health, and the medical officer on board was prepared to certify that not a single case of sickness had occurred during the voyage. The application was unavailing, and for these reasons: "This vessel, it is said, comes from Plymouth, but not having a bill of health, she cannot prove whether at the time of her departure from that port any of those diseases were prevalent which, according to the health regulations, entail the performance of quarantine; nor, on the other hand, if precautionary measures are taken at Plymouth as regards ports where such diseases reign,—circumstances comprised in every bill of health, which at the same time states the number of persons on board, also indispensable

Vigo.

to enable a judgment to be made of the hygienic and sanitary state of the vessel during the voyage; and in case of its not being good, the vessel is subjected to extra quarantine."

2. On the 17th July 1859, the United States schooner "Republican" arrived at Cadiz from Huron, in the State of Ohio, with a cargo of staves for Candia, but having no bill of health, she was ordered to Vigo or Port Mahon to perform quarantine before she could enter the port. The master was advised by some person at Cadiz to go to Tangier, as arrivals therefrom were only subject to three days' quarantine. He did so, and reached Tangier on the 20th; but on the circumstance being known there, he was ordered away, and he then proceeded to Vigo, where he arrived on the 9th of August. A quarantine of only three days was imposed, and this he rode out in the bay.

3. On the 23d September 1859, the English schooner "Azorian" arrived here from Teneriffe, having sailed from London for that port with a general cargo; she was sent from Teneriffe to Vigo to perform quarantine, on a report that the cholera prevailed in London.

4. On the 10th October 1859, the English ship "Golden Age," from Old Calabar for Liverpool, with a cargo of palm oil, put into this port with 10 feet water in her hold, and the crew exhausted. Although she had been 56 days at sea, having no bill of health, she was ordered to the lazaret to perform 10 days' quarantine. The master was obliged to embark 40 men to work her pumps.

5. On the 20th October 1859, two English vessels the "Estremadura" and the "Georgiana," put in here in consequence of heavy gales. Both were from Glasgow, the one bound for Oporto and the other for Seville, and they had clean bills of health duly certified by the Portuguese and the Spanish consuls. The former was at once admitted to pratique, but the latter was put in quarantine for three days in consequence of the Spanish consul having annexed to his certificate this note: "The cholera has disappeared from this port, and from others comprised in an area of 90 miles, and all vessels are admitted to free pratique, although coming from infected ports, provided there be no sickness on board."

6. On the 10th November 1859, the Peninsular mail ship "Ellora" arrived here from Southampton, whence she sailed on the 7th with a clean bill of health, on which the Spanish consul had made a note that the steamer "La Plata" had arrived at Southampton from St. Thomas, and that, although there had been two deaths on board from yellow fever on the passage, she had been admitted to free pratique. The "Ellora" was therefore considered as having a foul bill of health, and was not allowed to communicate. The same measures were adopted towards the steamer "Euxine," which left Southampton on the 17th November, and arrived here on the 21st; and towards the steamer "Tagus," which left Southampton on the 27th, and arrived here on the 2d December; although this vessel brought a certificate from the Spanish consul that Southampton was free from all contagious or epidemic diseases, and that precautionary measures were adopted at Southampton as regarded infected ports.

All these steamers were admitted to free pratique at Lisbon, and brought clean bills of health duly and favourably countersigned by the Spanish Consul General at Lisbon; but were nevertheless, and contrary to the health regulations, refused pratique here, on the plea that they came from Southampton, and had not performed quarantine at Lisbon. The "Tagus," which arrived here from Lisbon on the 8th December, and the "Sultan" on the 16th, were both refused pratique, even contrary to express orders sent from Madrid by the Spanish Government.

During the whole of the above-mentioned period, the Vigo Board of Health was admitting to free pratique the French steamers from Lisbon furnished with bills of health similar to those brought by the Peninsular steam packets, and knew that our steam packets were in free communication at Lisbon, but they kept our steamers in quarantine during their short stay here, and obliged the workmen sent on board to perform quarantine at the lazaret.

In contrast to the practice adopted towards healthy British steamers, Mr. Brackenbury cites the case of a Spanish steamer which arrived at Vigo on the 29th of April 1860 direct from Ceuta, with a battalion of Spanish infantry; and although it was publicly known that the cholera was then prevalent in Africa, yet she was admitted to pratique immediately on her arrival.

During the whole of the winter of 1859-60, while the cholera was raging in Africa, and it was well-known that the Spanish army suffered severely from the distemper, having lost, according to public report, as many as 10,214 of its number, yet all vessels arriving from Ceuta or Tetuan with sick and wounded on board have been freely admitted to pratique in the ports of Spain, whilst at some, as at Malaga and Alicante, English arrivals from England have been subjected to three days' quarantine.

Mr. Brackenbury alludes to the circumstance that the length of the voyage is not taken into consideration as regards the imposal of quarantine: a steamer arriving from the Havanna in 17 days, and a sailing vessel in 53 days, are each subjected under like circumstances to an equal quarantine.

"With respect to the lazaret, I will only say, that such is the conduct of the officials, that Spaniards themselves have made repeated complaints to the Government at Madrid."

So

So recently as April 1860, a quarantine of three days was imposed on a vessel from Glasgow, with a clean bill of health, on the alleged ground "to prevent vessels leaving a port infected with cholera from receiving pratique in Spain until 10 days had elapsed from the date of their departure from the infected port; for instance, that a vessel from a continental port where cholera prevailed, should not be able to obtain pratique in Spain by touching at an English port, and taking a clearance from thence."

The Vigo Board of Health, however, did not impose any quarantine whatever on vessels coming from Cadiz, or ports in the Mediterranean, which were not only in free communication with Ceuta and Tetuan where the cholera was prevalent, but which vessels were actually conveying convalescents from cholera to those ports; whilst the same Board imposed a quarantine of three days on the schooner "Wavre" from Glasgow, which port the Spanish Vice Consul certified was free from all contagious or epidemic diseases,—thus placing Glasgow as a clean port in a less favourable condition than Cadiz and Alicante, which might justly be considered, according to the Spanish health regulations, as at least suspected ports.

The expenses incurred by the "Wavre," notwithstanding that the quarantine imposed on the vessel was at once cancelled by the Minister of the Interior at Madrid when the case was made known to him, amounted to reals vella 390, or about 4*l.*, viz., health guard, 30 reals; fumigation, 48 reals; expenses of ship for three days, 312 reals.

Vigo.

CADIZ.

FROM Consul W. Brackenbury's replies, it appears that the quarantine regulations here respecting the yellow fever and the plague are the same as in other ports of Spain, no suspected or infected vessels being admissible until after they have performed the required quarantine either at Vigo or at Port Mahon.*

Vessels arriving without a bill of health are inadmissible, and all bills of health must be endorsed by the Spanish Consul in the port of departure.

With respect to the cholera, "arrivals from a country where the disease exists are, if any of the crew have died on the passage or be ill on arrival, liable to a quarantine of 10 days in the harbour of Cadiz; and of five days, should there be no sickness on board. Arrivals from ports adjoining to those where cholera exists, are liable to a quarantine of three days in the harbour."

"Typhus, small-pox, dysentery, or any infectious disorder, render vessels liable to quarantine of from three to 15 days, according to circumstances."

No remission of quarantine is ever made in favour of any class of vessels, or of any persons whatever. A period of 30, 20, or 10 days must have elapsed after the cessation of the plague, yellow fever, or cholera, in a place, before free pratique is granted.

There is no lazaret at or near to the town or port of Cadiz.

In the event of sickness on board a vessel, a medical officer is sent alongside the vessel; but should the gravity of the case require it, the medical officer would be put on board at the ship's expense, to remain during the period of quarantine, or to accompany her to Vigo or Mahon.

No sanitary inspection is required previous to granting a clean bill of health to a vessel on leaving the port.

No sanitary cordon or quarantine measures by land have been adopted at Cadiz.

"No disease for which quarantine is liable to be imposed has occurred in Cadiz within the last 20 years, with the exception of the cholera, which appeared in the summer of 1854, and in the neighbouring towns in the summers of 1855 and 1856.

In 1855	-	-	-	-	-	-	164 vessels were put in quarantine.
In 1856	-	-	-	-	-	-	40
In 1857	-	-	-	-	-	-	58
In 1858	-	-	-	-	-	-	196
In 1859	-	-	-	-	-	-	138

Besides these 138 vessels which performed quarantine of observation at Cadiz last year (1859), 27 were sent off to a foul lazaret. Of these 27 vessels, nine were Spanish and 18 were foreign.

* From "London Gazette," 29 June 1860.

A Spanish Royal Decree revises the Quarantine Regulations hitherto in force at the ports of Spain, and provides that—

1. All vessels arriving with foul bills of health, or proceeding from ports infected with the plague or the yellow fever;
2. Those which may have had or have on board dead bodies, or persons suffering from typhus, scurvy, smallpox, or other contagious maladies;
3. Those that have no bill of health, and cannot satisfactorily account for the want of it;
4. And those which are in a bad state of health, shall perform quarantine in the lazarets of San Simon and Mahon. Also that ships having a foul bill of health for cholera shall be sent to one of the lazarets of observation, established in the first-class ports, and will undergo the quarantine which the 35th Article of the law imposes.

Ships proceeding from foreign ports, and not having a bill of health countersigned by the Spanish consular agents, whenever there are such at the port of clearance, will be sent to the same quarantine stations.

Cadiz.

Cadiz.

foreign. No information is given as to their ports of departure, cause of quarantine, &c. Of the above 138 vessels, 74 were Spanish, and 64 were foreign.

During the year, the entire number of arrivals in the port, including coasting vessels and men of war, was 5,067. Of 1,428 merchant vessels from abroad, 499 were Spanish, and 929 were foreign, of which last number, 362 were British, 227 were French, and the rest were from Sweden, Russia, and America, &c.

PIRÆUS.

Piræus.

MR. CONSUL NEALE states in his replies to the Queries of the National Association, that—

"Syria, Alexandria, and Barbary are ordinarily in quarantine, as well as other ports communicating with the above places, when, perhaps, the suspicion of sickness exists."

"The diseases for which quarantine is imposed, are cholera, plague, smallpox, and scarlet (yellow?) fever. The quarantines for *persons* are five, 12 or 21 days, and for *goods*, eight, 15 or 28 days.

"By a Royal decree of March 1856, very stringent regulations were issued respecting vessels infected with typhus, or arriving from a place where that fever prevailed on departure.

"No difference is made between men-of-war and merchantmen; but the former, as well as yachts, have this advantage, that having no merchandise on board, the quarantine can only date from the time of arrival, and not as with merchantmen only from the time of the landing of the cargo.

"No exception is ever made in favour of any passengers, and even his Majesty the King of Greece has had to conform to the laws. But during the late Russian war, there being a military occupation here, the French authorities forced the health officer to give *pratique* to Prince Napoleon.

"There is no doubt also that the health office can do what they like. Thus, in 1850, when Admiral Parker's squadron hove in sight, the Quarantine Board suddenly came to a decision, and put the Piræus into quarantine. It is a general opinion in the Levant that political motives are often at the bottom of the measures taken in respect of quarantine."

It must be eight days after the date of the official declaration of the ceasing of a malady before clean bills are given here, and the same number of days after a disease is declared to have ceased at a foreign port, before arrivals from such port are admitted to *pratique*. The Greek authorities are much regulated on this subject by the reports of their consuls.

Formerly, and until 1854, there was a stone building adjoining the Custom-house, which was used as a lazaret, and the *parlatorio* is still there. But during the occupation of the Piræus by the English and French, the latter having taken the building for barracks, it was and has since been abandoned by the Government as a lazaret. In 1854, eight wooden huts were erected on the side of the port opposite the town, and about a mile distant. Tents would be a luxury to such habitations; the situation is most desolate, and the place altogether so unfit for a civilised being, that I have known several instances of English families, who, rather than subject themselves to this uncomfortable duration, have abandoned their visit to Athens, and proceeded on their voyage. A large lazaret is in course of construction. Cargoes are landed at the lazaret; they are opened and aired. Copper and lead are immersed in water, and coins in vinegar. Letters are fumigated. Non-susceptible goods are grain, iron, coals, oil, paints, wood, barrels and staves, liquids, and wines and spirits, bottles without labels, &c. The *spoglio* is abolished.

There is a Government medical officer who charges for attendance on the sick according to a moderate tariff. There is also a priest belonging to the lazaret; but other doctors and priests would, on application, be allowed to attend.

Before a vessel receives a clean bill on leaving, the medical officer rarely inspects the vessel, but always the crew.

"The sanitary penal laws breathe nothing but death or perpetual banishment, and terms of imprisonment, for infractions of the quarantine laws; but in practice fines have been substituted, and these are very laxly inflicted."

The existing sanitary law of Greece appears to be of the date of 1845; but various new regulations have been introduced from time to time.

"Excepting in the case of the cholera in 1854, Athens has not been directly cut off from communication with other places; and when this was the case, it proved quite ineffectual by the fact of the cholera, nevertheless, breaking out afterwards. There is a perpetual cordon on the northern frontier of Greece; but it is worse than useless, as it is quite impossible to guard this extent of frontier."

"Registers are kept of vessels that are quarantined, but I have not been able to ascertain that any tabular results have been framed.

"In 1858 the number of vessels quarantined was 148, coming from Syria, Barbary, Alexandria, Malta, and Constantinople; the two latter places being in quarantine on account of their free intercourse with the former places, despite of their local quarantines. One nation in the Levant puts no faith in the quarantines of another. The quarantine on arrivals from Constantinople was for two days, from Malta for three days, and from Egypt, Syria, and Barbary for six days. The cause of detention in all cases was a suspected bill of health, or the suspicion of smallpox. No case of sickness occurred during the voyage or in quarantine.

"The

"The number of persons received into the lazaret in 1858 was 2,000; this has been the average for some years. Not a single case of sickness occurred among these persons. No deaths have taken place for several years either among the officials or the persons received, except in 1859, when of 30 seamen landed from the French frigate "Pomone" with smallpox, eight died in the lazaret.

"I can learn of no instance of the spreading of disease from the lazaret.

"On the 26th May 1854, 4,000 French troops, under General Forey, landed at the Piræus and encamped on the rising ground round the small peninsula on which the Piræus is built. The troops were exposed to the heat of the sun, having only small gipsy tents, without any kind of bedding, and it was the general opinion that they could not pass through the summer with impunity; and this opinion was based on the approaching hot northerly winds with clouds of dust, chilly nights, and also from the scarcity of water.

"On the 4th June, the British 97th Regiment landed 1,100 strong. They encamped for the time, but towards the end of June moved into quarters. During July the atmosphere was unusually lurid, and the air was charged with sickly odours; the season was unusually warm, hot northerly winds blew with violence, bringing clouds of dust, and the scarcity of water was such as had not been experienced in former years. The vine disease was at its height, and a general epizootic had prevailed among animals in Greece."

In the first week of July, the French troops had begun to suffer from fever and bowel complaints. On the 17th of the month, cholera was declared to exist among them and among the inhabitants. Thirty cases had occurred among the latter, and one case had also appeared in the barracks of the 97th Regiment. The cholera suddenly ceased on the 4th of August.

The mortality among the 4,000 French troops was stated to be 800, and among the British regiment there were 113 deaths. Out of the population of Piræus, estimated at 5,000, 600 perished. No English officer died; and the disease did not appear on board the French frigate "Gomer." The Greek authorities had recourse to quarantine restrictions with the view of protecting Athens. The city, which is not above a few miles from Piræus, remained exempt until the 28th of October following, when it broke out there, and more than 10,000 of the inhabitants left for all parts of Greece; but "I have not heard," says Consul Neale, "that a single case of cholera was thereby occasioned." The mortality at Athens amounted to 3,000 deaths out of a population of 30,000.

"A considerable mortality has existed in the towns of Greece, owing to the crowded state of the houses in the old Turkish quarters and the marsh lands in the vicinity. Thus, in Athens, in 1852, there were 500 births, 90 marriages, and 900 deaths.

"In 1834-35, a pernicious fever existed in the Piræus in consequence of no outlet for the waters of the Cephissus; and so late as 1855, I had to draw the attention of the authorities to the state of the town and harbour. But a very favourable change has taken place since; the port has been cleaned and is kept so, the roads have been reconstructed and are well kept, trees planted, and larger and more commodious houses constructed, so as to leave little to be desired, and the public health has, in consequence, much benefited. In Athens the same good measures are in progress, and a whole new quarter has been constructed, covering a large space, which has relieved the cramped Turkish quarters. Altogether it may be stated that the authorities are fully alive to the duty of adopting all measures calculated to promote the public health. In 1858, brick-making was prohibited near Athens as injurious to health.

"Slight intermittent fevers and pulmonary complaints are the general diseases that prevail among the inhabitants."

Respecting the state of the mercantile shipping, Consul Neale remarks, that "Although we have very few cases of sickness on board ships in this port, the vessels of all nations, other than steamers, still admit of much improvement as regards space and ventilation of the fore-cabin appropriated to seamen, and I think that sufficient attention has not yet been paid to the more frequent change of their clothing."

"As regards the imposition of quarantine, I find within the last two years that the authorities are more accessible in regard to their acts, and a timely remark has not been lost upon them. Thus, in 1859, a vessel arriving here in August, the authorities were disposed to put her in quarantine on the ground of suspicion of the plague at Bengazi; but I appealed to the popular belief that that disease was not known to exist after St. John's day, 24th June, and I got the quarantine removed.

"Were all cases of abuse, as respects quarantine, reported to some medical officer in England, I believe that his remarks thereupon, if necessary, being transmitted through Her Majesty's representative to the Government, would have the best effect."

The average annual number of arrivals is 7,578 of 267,753 tons. The average annual amount of dues on vessels in quarantine is 12,000 dollars, or 421 *l.* 8 *s.* 7 *d.*

Appended to Consul Neale's remarks is the following document:—

"Piræus, 21 April 1860.

"The undersigned residents of long standing in Piræus of Athens consider that the general health and sanitary condition is good, and that the Government is fully alive to sanitary improvements; and that any observations on any particular abuses that may happen would be represented through official channels and be duly considered; that much of the abuses that may have existed have resulted from the institution itself, and the example of quarantines being enforced through all the Mediterranean, the Ionian Islands not excepted; and they hope that time and better examples, and useful information on the

Piræus.

subject, and temperate remonstrances made in cases of unnecessary quarantines, will have the effect of gradually abating this source of durance to individuals and impediments to commerce.

"The quarantines now existing in the Levant originated in false principles, then countenanced by Europe, and are maintained as an institution of Government and by medical authorities, who here find a means for the exercise of authority without appeal, and are supported by the prejudices of the people; but, on the other hand, the hardships which have resulted are so great, and the objects have so much of a political colour, and looked upon as an engine of Government, that the intervention of other Governments, whose subjects are inconvenienced, might be justified either in the form of counsel, example, information, or remonstrance.

"It is, perhaps, by a well-directed attack on a striking or flagrant case that this and other evils are to be abated in the Levant.

"James Black,
"J. D. Dianatari,
"U. S. Consul."

NEW BRUNSWICK.

[The following particulars were communicated in a Despatch of the Governor to the Colonial Office, dated April 1861.]

ST. JOHN'S.

New Brunswick.

DURING the six years, 1855-1860, there were 31 vessels put in quarantine; but, in the majority of instances, the detention did not exceed a few hours, or at most one day, and this merely for the purpose of cleansing and fumigating the vessel. The longest periods were four and five days: in the one instance, on account of typhus fever, during the voyage from Liverpool and upon arrival; and in the other instance, on account of yellow fever during the voyage from Havanna. The crews were landed, and the vessels cleared out and purified. Six of the vessels were detained in consequence of one or more cases of smallpox having occurred among the crews or passengers; four in consequence of yellow fever, and all the remainder in consequence of typhus or typhoid fever. No detailed particulars are given respecting the cases, nor any other information afforded than the statement, that "in the month of April 1858, the ship 'David' arrived from Europe during the absence of the quarantine months(?), having smallpox on the voyage; and on arrival, the vessel came up to the wharf. The captain landed, and carried the diseased parties clandestinely to Quaco. One person, from going on board, was taken with the disease, and came near infecting the city in consequence. On discovery, the vessel was cleansed and fumigated, and the persons with the disease placed under surveillance, and the case reported to the Government."

MIRAMICHI.

"One vessel was placed in quarantine in 1856, viz. the 'Algiers,' for three days; she had 29 of a crew, but no passengers. One vessel, in 1858, viz. the 'Freemad,' was in quarantine 14 days; crew 16, passengers none. No vessels were placed in quarantine in the years 1855, 1857, 1859 or 1860."

In the other parts of the province, no vessels have been detained for several years past.

NAVIGATOR ISLANDS.

Navigator Islands.

MR. WILLIAMS, British Consul at Apia Upolu, states that "there are no quarantine regulations at this port. The chiefs of the port would apply to the consuls for advice and assistance in case a vessel should arrive here with any malignant disease on board, and all would trust to the consuls, for they are the only parties who can or do exercise any authority over vessels visiting this port; the chiefs not being willing to interfere, and afraid lest they should get into trouble with any foreign port.

"In 1853, an American vessel called here, on her way to Sydney, with smallpox on board; and Mr. J. Pritchard, then Her Majesty's Consul, was called upon by the chiefs and foreign residents of Apia to prevent any intercourse between the vessel and the shore; the smallpox being of a mild kind, no baneful effects resulted.

"The port of Apia is considered healthy, and so are the whole of these islands. Measles, smallpox, cholera, have not been known amongst them. Diarrhoea and dysentery, low and intermittent fevers, are the prevailing diseases. Influenza visits these islands in the spring and autumn. Elephantiasis is common, and affects the arms, legs, and breasts of females, and the scrotum in men; I have found quinine of great service in warding off its attacks. Scrofula, in all its forms, is very prevalent. Syphilis was first introduced into these islands in

in 1847. Ophthalmia is frequent, arising, I believe, from the constant exposure of infants to a vertical sun without any covering whatever on their heads. Phthisis is common among the natives, arising from exposure to damps and heavy dews, after sleeping in the open air. Hooping cough was introduced in 1848, and proved fatal in many instances; but since that period very few cases have been heard of.

Navigator Islands.

"The number of vessels from foreign ports which arrived in 1858, was 43, and 38 up to the present date (November 18) in 1859."

T A H I T I.

PORT OF PAPEETE.

MR. CONSUL MILLER states, that "vessels arriving at this port are not allowed to have any intercourse either with the shore or the shipping until they have first been visited or questioned by the port authorities, and free pratique has been granted to them."

Tahiti.

"If there should be any disease on board of a vessel arriving, or should she be suspected, she is liable to such quarantine and sanitary measures as may be deemed necessary by the health authorities; but no special law for regulating the performance of quarantine has hitherto been enacted; and it appears that, since the French occupation in 1843, no actual quarantine has been imposed at Tahiti."

"The average annual number of vessels arriving from abroad is about 150."

"The general sanitary state of the town and port of Papeete is good. Although enervating to the European constitution, and especially so during the high temperature and humid atmosphere of the rainy season, the climate is, for a tropical one, decidedly good; and in its favour it may be stated, that no cases either of Asiatic cholera or of yellow fever have hitherto been known in the country."

"Fevers of a bilious or typhoid character occasionally appear, but they are rarely marked by any unusual fatality. During the rainy season, simple intermittent fevers at times become epidemic; they are, however, unattended with any more serious consequence than a few days' confinement."

"Syphilis is very widely diffused throughout the native population; and phthisis, commonly resulting from syphilitic affections and excesses, is the most prevalent cause of death among the natives."

— II. —

REPORT on QUARANTINE by the Committee of the NATIONAL ASSOCIATION for the PROMOTION of SOCIAL SCIENCE, with APPENDIX.

NATIONAL ASSOCIATION FOR THE PROMOTION OF SOCIAL SCIENCE.

DEPARTMENT OF PUBLIC HEALTH.

President—The Right Hon. the Earl of Shaftesbury.

Sub-Committee on Quarantine.

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Sir William Pym, M.D., Superintendent General of Quarantine.

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T. Spencer Wells, F.R.C.S., late Surgeon Civil Hospital at Smyrna and Renkioi, &c.

John Wiblin, F.R.C.S., Medical Superintendent of Quarantine at Southampton.

To the PRESIDENT and COUNCIL of the NATIONAL ASSOCIATION for the PROMOTION of SOCIAL SCIENCE.

WE—the Sub-committee appointed in consequence of a Resolution which was voted by the Public Health Department in 1858, presided over by the Earl of Shaftesbury, and which was afterwards approved by the Council, and adopted by the Association at large on the last day of the Annual Meeting held that year at Liverpool, under the Presidency of Lord John Russell—beg now to present the detailed report of our inquiries.

A statement of the successive proceedings, and of the various steps taken to carry out the work entrusted to our charge, was made by the Honorary Secretary at the Annual Meetings of the Association at Bradford in 1859, and at Glasgow in 1860.

The present Report is based on the evidence contained in the two Parliamentary Papers, entitled, "Abstract of Regulations in force in Foreign Countries respecting Quarantine;" and "Abstracts of Returns of Information on the Laws of Quarantine." These papers contain a digest of the numerous replies received to the queries which were prepared by the Sub-committee at the commencement of their inquiries, and which were transmitted to Her Majesty's Consuls, the Governors of Colonies, and the principal Medical Officers of the Army and Navy on foreign stations, through their respective departments.

They were communicated to the Board of Trade, and subsequently ordered by the House of Commons to be printed on the motion of the Right Honourable W. Cowper, who was President of the Public Health Department at Bradford in 1859.*

Each of the queries is illustrated in the order in which they stand, and occasionally explanatory remarks are prefixed.

The

* Since the papers have been printed, replies have been received from Her Majesty's Consuls at Marseilles, Vigo (additional), Cadiz, Piræus, Tahiti, and the Navigator Islands.

The general conclusions which we consider to be clearly deducible from the evidence submitted to us are then stated; and, with the view of giving a direct practical character to the Report, a few simple recommendations on certain points of practice most easy of adoption, and whose general adoption would, in our opinion, insure immediate advantage, are added.

We have to lament the recent loss of one of our number, the late Sir William Pym.

In conclusion, we would record our grateful obligations to the Earl of Shaftesbury and to Mr. Cowper, for their efficient aid in bringing the subject at first under the favourable attention of the Foreign and Colonial Ministers of the Crown, and afterwards before the House of Commons.

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EXPLANATORY OBSERVATIONS ON QUERIES I., II., III.

QUERIES, &c., drawn up by the Sub-committee, for Transmission to Governors of Colonies, British Consuls in Foreign Countries, and others.

I. What, if any, are the countries or ports from which arrivals in the port of are at all times, or in certain seasons of the year, subject to quarantine, whether the bill of health from the place of departure be clean or foul?

II. What are the diseases which render all arrivals, without exception, whether sick or well, from a place or country where such diseases are existing, subject to quarantine in the port of?

And what are the quarantines imposed?

III. What are the other diseases which, from having occurred during the voyage or transit, render individual arrivals only subject to quarantine, irrespective of the bill of health from the last place of departure?

And what are the quarantines imposed?

THESE three questions are designed to ascertain the "why" and the "when" quarantine is imposed on arrivals in a port, and also the kind and the duration of the quarantine imposed.

Their wording may be thought to be somewhat obscure, and not very clearly to indicate the information that is sought for; but the obscurity arises rather from the complexity and intricacy of the subject than from the language employed.

Many persons imagine that quarantine is a very simple affair, and that all which is meant or occasioned by it is the detention for a limited time, and the purification of infected or suspected vessels, with their crews and cargoes, in consequence of the actual or the very recent existence of a dangerous contagious disease, either on board the vessel, or in the port from whence she sailed. But this, it will be seen, is far from the reality. In a large proportion of the cases where quarantine is still imposed in many countries, not only no sickness of any sort has existed in the vessel during the whole of the voyage, but no instance of the disease, on account of which she is subjected to quarantine on arrival, was known to have existed for a length of time in her port of departure.

Query I. seeks to elicit information respecting such cases.

In the majority, however, of cases in which quarantine is imposed, its alleged necessity rests upon not a merely gratuitous apprehension, but upon the ascertained or the rumoured existence of a dangerous transmissible disease in the port or country from which the vessel has last come.

All on board, indeed, may have been healthy during the voyage, and may be so on arrival, but the fact of the vessel having come from an infected or suspected locality, is held sufficient

Explanatory
Observations on
Queries I., II., III.

Explanatory
Observations on
Queries I., II., III.

cient to require that she and every person and thing on board should undergo a specified detention, for the protection of the public health. The quarantine is directed against the *lieu de provenance*, or port of departure; and this is the reason why it involves all arrival therefrom without exception, whether sick or well; although when sickness has also occurred on board, the quarantine is usually more stringent than when the vessel has remained quite healthy during the voyage.

These remarks refer to Query II., and the diseases on account of which such quarantine is generally imposed will be seen to be the plague, yellow fever, and the Asiatic cholera.

Query III. seeks for information respecting such diseases as having occurred in a vessel previous to arrival, subject her and all on board to detention and other precautionary measures, at the discretion of the local authorities; but without involving other arrivals from the same port, provided they have had no sickness during the voyage.

The quarantine in this case is directed not against the *lieu de provenance*, but against individual infected vessels.

ILLUSTRATIONS OF QUERY I.

Illustrations of
Query I.

ARRIVALS from any port in the Ottoman dominions, including Turkey in Europe and Asia, Egypt, and Barbary, are subject to quarantine throughout the year in almost every Christian port in the Black Sea and in the Mediterranean, and also in all the oceanic ports of Spain as well as in those of Portugal, irrespective of the actual existence of the plague or other disease in the *lieu de provenance* or place of departure, or of any sickness on board the vessel during the voyage.

This permanent quarantine was fixed by the International Conference of Paris in 1851-52, at from eight to ten days (inclusive of the length of the voyage), according as there is, or is not, a medical officer on board the vessel.

The governments of *France* and *Sardinia*, whose existing quarantine codes are based on the recommendations of the Conference, reserve to themselves the power of modifying or dispensing with any particular regulations when they see fit, and compatible with all due regard to the interests of the public health.

In all the oceanic ports of France, as *Bordeaux*, *Havre*, &c., the quarantines have for several years been very mild in all cases; and even at *Marseilles* the system appears to be carried on with as little rigour as possible. The mail steamers from Alexandria land their postage bags at once, however short the voyage may be, and the Minister of Commerce may at all times exercise his ample discretionary powers respecting passengers, cargoes, &c.

At *Genoa* and other Sardinian ports a like state of things prevails; "it rests entirely with the Minister of Marine to carry the regulations (of the existing quarantine code) into effect, upon the advice of the directors of public health at *Genoa* and at *Cagliari*, the one being superintendent of quarantine on the mainland, and the other on the island of Sardinia."

It is otherwise in the ports of *Spain* and *Portugal*, in which all the quarantine regulations are much more stringent and more regularly enforced, and in which the local quarantine Boards, or a central Board of Quarantine, exercise the control in such matters independently, in a great measure, of the general government of the country.

The same has hitherto been the case in all Neapolitan ports, the rigour of whose quarantine system has for many years exceeded that of every other nation; its enforcement rests entirely with the sanitary Board at Naples, which, like that of Lisbon, is independent of the government.

At *Malta* "there is no country now subject to a permanent quarantine, all arrivals carrying a clean bill of health being admitted to free pratique;" and at *Corfu* "all arrivals from places where perfect health is generally enjoyed, and when furnished with clean bills of health, are freely admitted to pratique."

At the *Piræus*, "*Syria*, *Alexandria*, and *Barbary* are ordinarily in quarantine, as well as other ports communicating with the above places, when perhaps the suspicion of sickness exists."

Besides the permanent quarantine throughout the year in the ports of *Spain* and of *Portugal*, and of the *Two Sicilies* upon all arrivals from the *Levant* and other portions of the *Ottoman Empire*, these countries impose a quarantine upon all arrivals without exception from *Brazil*, the Mexican Gulf, *West Indies*, and the southern portions of the United States during the hot weather, generally from the beginning of May to the end of September, on account of the apprehended risk from the actual or the suspected existence of yellow fever in the place of departure.

This quarantine is irrespective of the length of the voyage, however protracted, and of the continued health of the crew.

At *Gibraltar*, according to the regulations in force, "vessels from the West Coast of Africa between lat. 30° N., lat. 20° S., and from the adjacent islands (the Canary Islands only excepted), are not allowed to enter the port, or admitted to free pratique throughout the year, without performing quarantine."

Also vessels from the West Indies, the Brazils, or continent of America between the Equator and lat. 34° N., and arriving between the 1st July and 30th November, shall be ordered

ordered to quit the harbour and roadstead, whether their bills be foul or clean, so that the communication between Gibraltar and these countries is cut off during the summer months." Illustrations of Query I.

It is to be observed that the "quarantines at Gibraltar are necessarily regulated by those of Spain, as, if we did not impose nearly similar restrictions, the consequence would be their closing the communication with us, as happened in 1853.

"Were Spain to modify her sanitary restrictions, it would confer a great benefit on Gibraltar."

In most of the large commercial ports of the *United States*, a nominal quarantine is imposed on all arrivals from the West Indies and other yellow fever regions, between the beginning of May and the end of October,—the quarantine in question consisting apparently in the liability of all such arrivals during this interval to be examined by the health officer of the port before they can receive pratique, and be allowed to proceed up to the wharves of the city. During the rest of the year, such arrivals are not of necessity subjected to this visit, unless actual sickness has been or is on board.

In addition to the above two cases of permanent or periodic quarantine being imposed in the ports of Spain, "arrivals from ports adjacent to those already mentioned, or from intermediate ports where strict quarantine measures, as in Spain, are not duly enforced at all times, have to undergo a quarantine of observation all the year round.

"Great Britain and the Northern United States are in this category."

Consul Barrie states that "of 622 arrivals from abroad in the port of *Alicante* during 1858, and paying health dues, about one-third are from England; and the three days' observation imposed on them would seem to be more for the purpose of obtaining the quarantine fees than as a sanitary precaution."

The British consuls at *Malaga*, *Vigo*, &c., have repeatedly remonstrated against this procedure. Mr. Consul Mark, at the former port, says, "Arrivals from Egypt with raw cotton are admitted to pratique after eight or ten days' voyage, while arrivals from England with a cargo of coals, and after a passage of from 25 to 40 or 50 days, are all quarantined for three days."

At the beginning of the present year (1860), the whole coast of Brazil was declared, by the Board of Health at Lisbon, to be infected with yellow fever in consequence of its ascertained existence at *Para*, and the result was that all arrivals from every port in that country would be subjected to a foul-bill quarantine.

The declaration in question was at once contradicted by the Brazilian Minister in London.

ILLUSTRATIONS OF QUERY II.

THE diseases, against the importation of which from countries where they exist, or are alleged to exist, quarantine is chiefly directed in European ports are, the plague, yellow fever, and Asiatic cholera; and wherever the quarantine system is vigorously maintained, as in Spain, Portugal, Naples, Greece, &c., all arrivals, without exception, and whether any sickness has occurred during the voyage or not, are then liable to detention before pratique is granted. Illustrations of Query II.

The periods of detention recommended by the International Conference of Paris, and generally adopted by the above nations, are these:—

From 10 to 15 days in the case of the plague.	
„ 5 to 15 „ „ yellow fever.	
„ 3 to 5 „ „ cholera.	

In Neapolitan ports, the quarantine on account of the plague is from 15 to 20 days, and that on account of yellow fever, and the cholera, from 10 to 15 days. These lengthened periods have, of recent years, been enforced in other Mediterranean and also in some oceanic ports, as in those of Portugal and her colonies, &c.

(a) PLAGUE.

In the summer of 1858, on the first public announcement of the existence of the plague in the district of Bengazi on the Barbary coast, (the disease had been existing for months before its real nature was recognised,) restrictive measures of extraordinary rigour were at once put in force throughout the whole of the Mediterranean and Black Seas, and in all the ports of Spain and Portugal, not only upon arrivals from the infected locality and other parts of the African coast, but upon contiguous countries and other places which might be supposed to have direct communication with the seat of the fever, however healthy these places might continue to be.

Malta, from its position and its trade with Tunis, &c., was exposed to especial suspicion; and accordingly the most stringent quarantine was enforced, even in various Ottoman ports, upon vessels arriving from or communicating with it; although, at the time, a quarantine of from 5 to 15 days was kept up by Malta upon all arrivals from the infected district in Barbary.

Illustrations of
Query II.

Gibraltar also was similarly treated. "A quarantine of 21 days' duration was imposed in the ports of Naples, Greece, Portugal, &c., upon all vessels coming from or which had touched at Gibraltar. Not that any disease existed there, or that the health of the 'Rock' was bad; but merely because it continued to hold communication with Morocco, which was also at the time in a healthy state, and quite free from any pestilential malady."

However unwillingly obliged to act in accordance with the rules and practice of other Mediterranean ports from the fear of retaliatory measures, Malta and Gibraltar had actually to put each other into quarantine;—Malta, because Gibraltar had intercourse with Tangiers, &c., and Gibraltar, because Malta had intercourse with Tunis and Bengazi, both British Colonies being all the while in perfect health.

On the rumoured occurrence of a death from plague at Alexandria, and subsequently of a like occurrence at Beyrout during the autumn of that year (1858), a foul bill quarantine was established in all the ports of the Mediterranean States against arrivals from these two places, and was rigorously maintained for many weeks, when at length it was ascertained that there was no just ground for the rumours in question.

No case of the disease was observed beyond the district around Bengazi, where it first appeared.

(b) YELLOW FEVER.

For no disease have more stringent and lengthened quarantines been adopted, of recent years, in some European ports than for this tropical fever. More than two-thirds of the vessels detained at Lisbon in 1858 were quarantined on this account; and the quarantines varied from 4 to 25 days, even after protracted voyages of 30, 40, 50 days and upwards, without any case of the disease having occurred on board.

"A vessel with a clean bill, 38 days out from Bahia, a suspected port, was quarantined for 20 days; and another vessel with a clean bill from Pernambuco, and after a voyage of two months, was detained 10 days before receiving pratique."

In four only out of 136 vessels quarantined this year at Lisbon, had deaths from the fever occurred during the voyage. No case of the disease occurred in any of the 136 vessels while they performed their quarantine, nor among any of the passengers sent to the lazaret.

At *Madeira* also, and at the Azores, the apprehension of the importation of yellow fever by arrivals from infected or from suspected ports is the most frequent cause of quarantine.

In the autumn of 1857, the health authorities refused to allow the landing of any passengers from the Royal mail steamers, if any person had been taken on board at Lisbon where the yellow fever then existed, although the vessel had remained quite free from sickness. The result was, that all the passengers bound for the island (chiefly invalids who intended wintering there) were obliged to go on to Brazil, and thus return to England as best they could.

"No regard at *Madeira* is paid to the bills of health of vessels; the quarantines are ordered not on account of the bill of health, but according to the classification given to the port of departure by the General Board of Health at Lisbon."

In the ports of *Spain* also, the most frequent cause of quarantine is the apprehension of yellow fever being imported. At the large quarantine station in *Vigo* harbour, the detention imposed on this account has usually varied from 7 to 15 days. The most frequent period has been 10 days, irrespective of the length of the voyage, which often extended to between one and two months, and occasionally to 80 or 90 days and upwards.

In the majority of instances, no case of sickness had occurred on board.

In the ports of France and of Sardinia, the quarantines on account of yellow fever are much less rigorous than in those of Portugal and Spain.

At *Marseilles* the detention appears to be usually from 3 to 7 days, even on vessels with foul bills of health, or coming from places actually infected with the disease.

At *Bordeaux* the system is equally or still more mild; recently "in the case of two vessels which had had yellow fever during the voyage, pratique was granted after measures of purification had been adopted.

"One vessel which had a foul bill from Lisbon, where yellow fever was prevailing, was quarantined for three days."

At the great naval port of Brest, out of 15 vessels put in quarantine during the eight years from 1851 to 1859, 11 or 12 were on account of the yellow fever, which in several instances had prevailed with more or less severity during the voyage from the West Indies, and continued to exist on board upon arrival.

The quarantines imposed on the vessels before they were admitted to free pratique, varied from 3 to 35 days, apparently after the landing of their crews and passengers.

At *Genoa* the quarantine on foul-bill arrivals has generally, of late years, been for three or five days; in a few instances, it has been from 8 to 15 days.

In Neapolitan ports the quarantine on all arrivals from infected or suspected places has been, of recent years, for 10 days, irrespective of the length of the voyage and the healthiness of the vessel. At *Malta*, the detention on arrivals from infected places is for five days.

From the diversity and the discrepancy of the quarantine measures nominally or actually adopted in different ports of the American continent, and in different West India Islands, on account

account of yellow fever, whether the disease merely exists in the port of departure, or has appeared on board the vessel during the voyage, it is not possible to give an intelligible account of the practice. Illustration of Query II.

In some places, as at *Carthagera* on the Spanish Main, and at the Island of *St. Thomas*, &c., it has been formally abolished of recent years.

At *Rio Janeiro* and other ports in Brazil, it seems to be merely nominal. Among the vessels quarantined during the last three or four years, the longest detention was for 96 hours in the case of a vessel from Lisbon, in December 1857, with a foul bill, in consequence of yellow fever in that city. Generally, it did not exceed 48 hours, and sometimes it was shorter still. One-half of the vessels had foul bills, and they were all from Lisbon, the voyage therefrom varying from 30 to 40 days.

(c) CHOLERA.

Lisbon.—Arrivals from places infected with or suspected of the cholera have, of recent years, been quarantined for from 5 to 10 days, although no case of the disease had occurred during a lengthened voyage.

Vigo.—Healthy arrivals from infected or suspected places are usually quarantined for five days before being admitted to pratique.

Teneriffe.—Healthy arrivals from such places are quarantined for 3, 6, or 10 days.

Naples.—In 1859 it was notified that "arrivals from Spain, Holland, Belgium, and Prussia, which had had any case of cholera during the voyage, should be refused admission, and that all other arrivals from these countries were liable to a rigorous quarantine of 10 days."

In September 1853, the traffic of vessels from Newcastle, which was then the seat of a severe outbreak of the disease, was directed to be provisionally suspended.

Turkey.—At *Rhodes* a quarantine of 5 days is imposed on account of the cholera, if no case of the disease has occurred during the voyage; otherwise, the detention is for 10 days; and all the passengers must be landed, and the sick be separated from the well.

At the Greek Island of *Syra*, a quarantine of 10 days is imposed on arrivals if there has been any sickness during the voyage.

At *Alexandria*, the same as at *Rhodes*.

Malta.—A quarantine of 5 days is imposed on all arrivals from an infected port, whether the arrivals be sick or not.

The quarantines imposed on account of the cholera in some of the British and Foreign West India islands, and in other distant colonies, have much exceeded in length and stringency the detentive measures resorted to in almost any European port.

At *Demerara*, in 1851, and again in 1854, arrivals from ports infected with the disease were ordered to be subjected to a quarantine of 40 days; and the existing regulations in the *Mauritius* require that 20 days shall have elapsed since leaving an infected port, or from the date of the last case of cholera or of small-pox on board a vessel, before she is admitted to pratique.

In 1850, the municipal authorities of *Corfu* wished the Governor to impose a 25 days' quarantine upon all arrivals from Trieste or Malta, and to order that all vessels from *Cephalonia* be rigorously prevented from approaching the shore, and that some uninhabited rock be assigned to any of the inhabitants of *Cephalonia* who sought to leave the island during the prevalence of the cholera.

In the Dutch settlements of *Surinam* and *Curaçoa*, a quarantine of 40 days may be imposed on account of that disease; in the Danish island of *St. Thomas*, a quarantine of five days is imposed on account of the cholera, while all quarantine on account of yellow fever has, within the last few years, been entirely abolished. At the great Spanish port of the *Havanna*, a quarantine of from 7 to 20 days may be required to be undergone by arrivals from a place infected with the cholera; and this stringent measure has been enforced even when the disease was actually present in the port at the very time.

In the other Spanish island of *Porto Rico*, a quarantine of from 15 to 20 days is imposed on account of the disease, even when there has been no sickness during the voyage.

The utmost diversity of regulations exists in other ports in the West Indies, and on the Spanish Main.

In 1854, the Brazilian Government issued various restrictive regulations upon arrivals from ports infected with cholera; but it was soon found that they could not be carried into force, and, "after subjecting several vessels to considerable detention and inconvenience, they were gradually relaxed, and on the appearance of the cholera were abandoned."

ILLUSTRATIONS OF QUERY III.

Illustrations of
Query III.

THE other diseases besides the plague, yellow fever, and the cholera, which are apt to become the motive for the imposal of quarantine on arrivals in certain ports or countries, are chiefly the smallpox and typhus fever, more especially when cases of these diseases have occurred during the voyage, or exist on board at the time of arrival. But besides these fevers, the other exanthemata, viz., scarlatina, measles, and also "other infectious or contagious" diseases are often added thereto.

The recommendation of the International Conference of Paris was to this effect:—"That the occurrence of other transmissible diseases, as typhus, smallpox, &c., on board a vessel, shall warrant the imposal of such quarantine as the local authorities (in the port of arrival) may determine upon the infected vessel herself, but not upon the country whence she came, nor upon other vessels arriving therefrom; in other words, the quarantine shall be individual, not general, on the sick ship, but not on the port of departure."

Occasionally, and in some places, the quarantine on account of these diseases is quite as rigorous as against the others already mentioned.

This is apt to be the case in various Spanish ports.

At *Teneriffe*, a steamer from Sierra Leone was recently refused pratique, merely because the smallpox was in that colony at her time of departure, and although the disease was actually known to be in the island at the time.

At *Madeira*, all vessels from places infected with yellow fever, cholera, smallpox, and measles, are subject to quarantine until orders have been received from Lisbon to grant pratique.

New York.—When cases of cholera, smallpox, or typhus, exist on board a vessel on arrival, the vessel is detained at the quarantine station, and the following measures taken:—

CHOLERA. Immediate discharge of passengers, &c., and detention of the same on the quarantine ground until five days after the last case of the disease among them; the ship being thoroughly cleansed, fumigated, and ventilated before she is permitted to proceed to the city.

SMALLPOX. Vaccination of the passengers and crew, and detention of the same for five days after the occurrence of the last case on board.

TYPHUS. Discharge of the passengers; fumigation and ventilation of the vessel.

West India Islands.—In most of these colonies, whether British or foreign, the occurrence, or the suspicion of the occurrence, of smallpox during the voyage has been one of the most frequent causes of lengthened and rigorous quarantine measures on arrival. The vaccination of unprotected persons seems rarely to have been one of the measures ever resorted to.

Mauritius.—The same stringent precautions are enforced on account of smallpox as on account of cholera, whether in the port of departure, or on board the vessel during the voyage.

Persons landed at the lazaret are detained there for 21 days from the death or perfect desquamation of the last case of smallpox; and for 15 days from the death or perfect recovery of the last case of typhus or yellow fever, and "other contagious or infectious diseases."

Sydney.—The diseases which render vessels liable to quarantine are smallpox, and other infectious or contagious diseases; the duration of the quarantine depends on the date at which the disease had ceased to exist on board at the time of arrival.

PRACTICE OF QUARANTINE in the NORTHERN PORTS of EUROPE.

QUERIES I., II., III.

Practice of Quarantine in the Northern ports of Europe.

Queries I., II., III.

In almost all the great ports in the north of Europe, the quarantine regulations have, of recent years, undergone a marked change in the way of relaxation and of diminished rigour.

In *Sweden* up to 1854, the first year of the Russian war, a most stringent and vexatious quarantine was imposed on account of the presence or the suspicion of cholera, not only in arrivals themselves, but also in their ports of departure.

In 1855 it was formally abolished on the latter account; and this too in the case of yellow fever as well as of cholera.

No vessel has been quarantined at Stockholm for several years past. Cargoes are landed only on account of the plague.

Denmark.

Denmark.—In 1852, quarantine, on account of yellow fever or cholera existing in the port of departure, was no longer enforced in Danish harbours. Our consul at Elsinore remarks, that "the desire exists to make the intercourse with other ports as free as possible, and that in any reform which the Danish Government may make in the existing quarantine regulations, it will be much influenced by the measures taken in other countries, and especially in England."

Practice of Quarantine in the Northern Ports of Europe.

Queries I., II., III.

In the great Prussian ports of *Dantzic* and *Stettin*, where the average annual number of arrivals is not less than 2,000, not a single vessel has been quarantined during the last five years.

At *Hamburg*, in 1856, all the former stringent regulations, which had been long held unnecessary by the leading medical authorities of the State, were repealed, and in lieu of them, all vessels arriving from infected or suspected ports, or on board of which sickness had occurred, were directed to be examined at Cuxhaven (the outport of Hamburg) by an appointed medical officer, who should possess large discretionary power as to the measures to be enforced for the preservation of the public health.

Amsterdam and Rotterdam.—In no country have quarantine restrictions been so slight since the beginning of the present century as in Holland, and Dutch vessels long continued to enjoy the benefits of greater freedom in this respect, when the commerce of other countries was hampered by self-imposed restraints. "The quarantine regulations," says our consul, at Amsterdam, "may be considered almost a dead letter." In the Dutch West India Colonies, however, of *Curaçoa* and *Surinam*, the existing regulations appear to be of extreme rigour.

Antwerp.—Since 1851 "all vessels, from whatever country they have come, shall be immediately admitted to pratique, provided they are furnished with a bill, certifying the health of the crew and passengers at the time of departure, and that no contagious disease has occurred during the voyage."

In doubtful or suspicious cases, reference is made by the quarantine physician to the Board of Health: practically, a quarantine of more than from three to five days appears to be seldom, if ever, imposed under any circumstances. For several years past, no vessels have been detained.

Great Britain.—The existing Act of Parliament and Orders in Council have long been, for all practical purposes, obsolete.

For the last 12 years or so, no quarantine has been imposed on arrivals from the Levant or elsewhere on account of the plague; nor has a single vessel been detained for a day on this account, except in a very few instances, where the irregularity or the want of a bill of health may have caused a delay of 24 hours, or so, before free pratique was obtained.

Long prior to the period mentioned, a great reduction would have been made in the quarantines usually imposed for the plague, had it not been for the vigilant jealousy of the consuls of different nations resident in this country, who immediately reported any alteration in our quarantine practice to their respective Governments, which eagerly seized every opportunity as an excuse for putting all arrivals from this country in quarantine.

Of recent years it has been almost exclusively on account of yellow fever, when the disease has actually existed in vessels during the voyage, that quarantine has been exercised; and this has been chiefly at Southampton, in the case of the West India mail steamers.

The established period of detention for yellow fever is six days from the date of the latest attack on board.

In no instance, however, has the detention exceeded two days after arrival, nor has any special purification of the cargo been deemed necessary.

The quarantine measures now adopted on account of cholera are limited to the removal of the sick, when this can be done with safety, from on board an infected vessel, and the thorough cleansing and purification of the ship, together with the general hygienic supervision of the crew, so as to arrest or prevent all premonitory or suspicious sickness.

Infected vessels are, as far as possible, kept apart from other vessels, and all unnecessary intercommunication forbidden; but no compulsory measures are resorted to.

There is no lazaret on shore at any port in Great Britain.

The only lazarets are three men-of-war hulks: one in *Stangate Creek* at the mouth of the *Medway* another at the *Motherbank* off *Ryde, Isle of Wight*, and the third in the *Mersey*, at *Liverpool*.

During the last five years, no person has been received into any of these lazarets.

Nothing like uniformity exists in the quarantine regulations and practice of the numerous colonies of Great Britain, in different parts of the world.

Gibraltar, Malta, and Corfu are compelled, by the dread of retaliatory measures of increased rigour on the part of adjoining countries, to adopt the general system pursued in most of the Mediterranean States.

In *Canada* and in *Australia*, the practice of quarantine is confined to the detention of vessels with actual disease or sickness on board upon arrival, quite irrespective of the place or country from which they come, for the purpose of landing the sick, the recovery of the convalescent, and the purification of the ship before she is permitted to proceed up to her destination.

No specific periods are assigned on account of particular diseases; but, as remarked by

Practice of Quarantine in the Northern Ports of Europe.

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the health officer at *Sydney*, "every case of quarantine is dealt with on its own merits, without reference to any classification of disease, or of ports from whence the vessel may have sailed."

By this course of procedure much vexatious delay and unnecessary expenses are avoided, and every vessel is admitted to pratique at the earliest possible period compatible with due regard to the public health.

Among our West Indian Colonies the greatest diversity of practice prevails, and sometimes, too, in Colonies close to each other. Thus at *Barbadoes* quarantine has of late years "been all but discontinued," while measures of extreme rigour have been adopted at *Trinidad*, and still more so at *Guiana*, on account of the same diseases.

Within the last few years, the practice pursued in *Jamaica* appears to be much relaxed.

Illustrations of Query IV.

ILLUSTRATIONS OF QUERY IV.

IV. Can you procure a tabulated list of all the vessels put in quarantine in the port of _____ during the last three or five years, (or, if not for so long a period, during the last 12 months), specifying—

- (a) Whence the vessel came, the length of voyage, and date of arrival.
- (b) The bill of health, whether clean, suspected, or foul.
- (c) The cause of detention in quarantine.
- (d) The length of quarantine imposed.
- (e) The number of crew and passengers on board.
- (f) Cargo, the nature of.
- (g) Whether any, and how many cases of disease, and of what nature, had occurred during the voyage?
- (h) Whether any, and what, disease occurred on board during the detention in quarantine.

THE object and scope of this query are obvious, as it is only by exact statistical information upon the points noted therein, and over a sufficient period, that the real working of the system in different countries can be ascertained. Unfortunately, the replies received from some of the most important places are meagre or null.

It would have been highly useful to have had as full information from Constantinople, Port Mahon, Marseilles, Trieste, and Leghorn, as has been obtained from Alexandria, Lisbon, and Vigo, so as to compare the results of the practice in these great quarantine harbours under similar circumstances.

Bordeaux.—During the 5½ years from the beginning of 1854 to the middle of 1859, 132 vessels in all were put in quarantine. This is an average of 24 or 25 a year, while the annual average number of arrivals from foreign parts is about 1,700. The quarantine usually imposed was from three to five days; but even this short period was in several instances reduced by order of the Government, which exercises a discretionary power in all cases.

In the case of two vessels which had had cases of yellow fever on board during the voyage, pratique was granted after measures of purification had been adopted.

One vessel having a foul bill from Lisbon, when yellow fever was raging there, was quarantined for three days.

Brest.—Before December 1850 quarantine measures were frequent and vigorous here. Ships from all quarters then underwent long and expensive quarantines on slight grounds. Since the reorganization of the service on its present footing, only 15 ships of sundry nations and from divers places have been put in quarantine.

Marseilles.—In 1855, 55 vessels were quarantined.

„ 1856,	72	„
„ 1857,	108	„
„ 1858,	60	„
„ 1859,	50	„

Of these 345 vessels quarantined during five years at this great quarantine station of France, 334 were from having foul bills on account of yellow fever, three for suspicion of the plague, five for suspicion of the cholera, one for suspicion of smallpox, one for the want of a bill of health, and one for not having the French consul's *visa* on a Spanish bill of health. Further particulars have not been communicated.

"Yellow fever and typhus often make their appearance in ships during the passage from the countries where they prevail."

Lisbon.—In 1858, the only year of which a record has been received, the number of vessels which performed quarantine was 179, a large number of other detained vessels having left the Tagus during their period of quarantine. The length of the quarantine imposed on the above 179 vessels varied from 4 to 25 days.

More than two-thirds of these vessels had clean bills; in a few the bills were informal, or were wanting. The motive or cause of the quarantine in 161 out of the 179 cases was the

the ascertained, or the suspected, existence either of yellow fever or of cholera in the ports of departure.

In most of the remaining instances, a death from some casual disease, or from an accident during the voyage, was the assigned cause. In one case the quarantine imposed was because the vessel from Gibraltar, with a cargo of leeches, had communicated with a steamer arrived from Alexandria then (erroneously) suspected of the plague.

In four only of the 136 vessels quarantined on account of yellow fever, had any deaths from the disease occurred on board.

Two of these were the Royal mail steamers, the "Tyne" and the "Medway," both from Rio Janeiro. They both left the Tagus in quarantine, and proceeded on to Southampton. The other two vessels were arrivals, after voyages of 30 or of 50 days, from Para and from Rio Janeiro, each having lost one of her crew since leaving her port of departure: the one was kept in quarantine for 21 days, and the other for 16 days.

But a still longer detention was imposed on many of the vessels in which there had been no sickness whatever during the voyage, but which had merely come from infected or suspected ports.

A vessel 30 days out from New Orleans was, under such circumstances, quarantined for 24 days.

Arrivals from ports declared by the Lisbon Board of Health to be infected with the cholera were quarantined for a period of 10 days, even when no case of sickness had occurred on board during a lengthened voyage.

When a death from a casual sickness had occurred on board, a shorter quarantine was imposed. Thus a vessel from Sunderland, and one from Hamburg, both with clean bills, were detained for four and six days respectively in consequence of a death from apoplexy during the voyage.

The only instance where sickness occurred in any of the 179 vessels, while undergoing quarantine, was in one 57 days out from Rio Janeiro, during which time she had lost one man from chronic diarrhoea; she was detained for 19 days before pratique was granted. The case was one of dysentery, and it proved fatal.

Vigo.—In 1857 the number of vessels put in quarantine was 216, having 3,145 mariners, and 1,951 passengers on board. The average quarantine was about 10 days; the motive or cause was very generally the existence, or suspicion, of yellow fever in the ports of departure in the West Indies or South America. The voyages varied from 30 to 100 days and more. The number of deaths on board the above 226 vessels while at sea was 61, of which 13 were from yellow fever in seven different vessels, all the rest being from chronic diseases, principally consumption.

Eight vessels were quarantined for five days on account of the presence, or suspicion, of cholera in the port of departure, and after voyages of from 30 to 40 days without any sickness.

The numbers of vessels detained in quarantine in the years 1858 and 1859 were respectively 271 and 162, and nearly under the same or similar conditions and circumstances as in 1857.

The want of a duly formal bill of health, certified by the Spanish consul in the port of departure, was on several occasions the motive for rigorous treatment. In June 1859 Her Majesty's ship "Firebrand" out 12 days direct from Plymouth, all well on board, had a quarantine of 10 days imposed on this account.

She sailed from Vigo in quarantine, leaving a mail from England, which had been previously opened on board, and the letters pierced and dipped in vinegar before the authorities would receive them into their boat for landing.

On the 23d September 1859 the English schooner "Azorian" arrived at Vigo from Tenerife, having left London for that island with a general cargo on board, and from which she was ordered to proceed to Vigo to perform quarantine there, in consequence of a report that the cholera prevailed in London at the date of her sailing.

In October 1859 two English vessels from Glasgow, both having clean bills of health, the one bound for Oporto, and the other for Seville, put into Vigo from stress of weather. The first, having the Portuguese consul's certificate, was at once admitted to pratique; but the second was quarantined for three days, in consequence of the Spanish consul at Glasgow having annexed to his certificate this note: "The cholera has disappeared from this port, and from others comprised in an area of 90 miles, and all vessels are admitted to pratique, although coming from infected ports, provided there be no sickness on board."

At the same time several of the Peninsular and Oriental mail steamers from Southampton were refused pratique, although having clean bills of health, in consequence of the alleged laxity of the quarantine measures adopted in that port towards arrivals from the West Indies and the Brazils.

Genoa.—In 1858, 147 vessels performed quarantine out of an annual average of between 3,000 and 4,000 foreign arrivals. All had foul bills, and with the exception of a very few from Alexandria, Tunis, Algiers, and Malta, had come from some port in the New World between Buenos Ayres and Charleston, with cargoes of sugar, coffee, and tobacco.

The quarantine imposed was generally from three to five days; in 12 instances only it was from 8 to 15 days. In one instance a vessel from St. Domingo, with a cargo of wood and hides, had lost four of her crew from fever during the voyage. As free pratique had been granted her at Marseilles, she was quarantined for five days only.

In another instance, a vessel from Buenos Ayres, with hides and wood, was kept in

Illustrations of
Query IV.

quarantine for four days, having been previously detained two days at Marseilles, while the goods underwent purification in the quarantine ground for 15 days.

Naples.—Of 52 vessels quarantined from 1856 to 1858, and all of which were provided with clean bills, except one which had no bill whatever, nine were arrivals from ports infected, or suspected to be infected, with yellow fever; nine from a port (Malta) infected with typhus; 27 from ports infected with cholera, and four from ports suspected of the plague (?), viz., Marseilles, Nantes, Almeida, and Leghorn. The quarantine varied from 5 to 10 days. No sickness had occurred in any of the vessels during their voyages.

Malta.—In the eight months from the end of April to the end of December 1858, there were 194 vessels put in quarantine. The number of arrivals during that period was about 2,600.

With the exception of two vessels from Brazil, then suspected of yellow fever, after long voyages, and which were admitted the day after arrival, every instance of quarantine was due to the alarm occasioned by the malignant fever which had appeared in Bengazi, on the Barbary coast. At first the fever was considered and called typhus, and the quarantine imposed on arrivals from the place was for five days. About the end of July, when it was declared to be the plague, the quarantine was raised to 21 days on vessels direct from Bengazi, and to 15 days on arrivals from other places on the coast which were suspected, although clean bills of health were still issued by them. The longer detention was also imposed for the infraction of the quarantine regulations at any suspected port, as at Alexandria, where it was rumoured that a suspicious case or two of bad fever had occurred there.

After a month's continuance of this rigorous system, the penalty for the offence was reduced, first to a detention for 10 days, and then to one of seven days. It does not seem that the presence or not of pilgrims on board, sometimes between 100 and 200 in number, nor the nature or quality of the cargo, nor the length of the voyage, affected the quarantine imposed.

Arrivals also from Gibraltar were suspected, although it was perfectly well known that the Rock was quite healthy all the time, but only from "the suspicion of plague existing in Morocco." The quarantine was at first for 10 days, afterwards for seven days, and then for five days.

Of the 192 vessels quarantined on account of the plague at Bengazi, six only arrived with foul bills; all these came direct from Bengazi; but there had been no sickness either during the voyage, which varied from 9 to 15 days, nor was there any during their detention.

The same holds true of all the other vessels which were quarantined during the eight months. No sickness whatever occurred during their detention; and all that we learn respecting the state of their health during their voyages is, that three deaths in all had occurred. One man had died two days after leaving Rio Janeiro; another on board a vessel also from Brazil, from scurvy; and the third fatal case was in a ship from Alexandria, and was occasioned by diarrhoea.

The entire number of the crews of the above 194 vessels amounted to 5,459, and that of the passengers on board to 2,524.

From the preceding statement it will be seen that, had it not been for the pestilential fever among the squalid inhabitants of a filthy Moorish town in the early part of the year, there would have been no quarantine imposed, and no impediments to perfect freedom of intercommunication with every part of the world.

From the Parliamentary Return of the 22d February 1858, it appears that during the 10 years from 1845 to 1854 the number of vessels quarantined at Malta was 9,415. The aggregate number of days spent by these vessels in quarantine was 47,430; and the longest period of detention of any vessel during each year varied from 10 days in 1854 to 29 days in 1845. No particulars are given as to the cause of quarantine being imposed in the different arrivals.

During the three years ending 30th April 1859, there were 1,513 persons received into the lazaret.

Piræus.—In 1858 the number of vessels quarantined was 148, arriving from Syria, Barbary, Alexandria, Malta, and Constantinople, the two latter places being in quarantine, on account of their free intercourse with the former places. "One nation in the Levant puts no faith in the quarantines of another. The cause of detention in all cases was a suspected bill of health, or the suspicion of smallpox. No case of sickness occurred in the vessels during their voyage, or while in quarantine."

Constantinople.—During 1858 only 23 vessels were put in quarantine; two-thirds of them were arrivals from the Danube, or from Russian ports in the Black Sea, with cargoes of grain. The quarantine varied from 5 to 17 days; the cause of the difference is not stated. Two vessels from England were quarantined for 10 days each.

Galatz.—No vessels have been quarantined for the last five or six years, either here or at the other ports on the Danube. Previous to the war in the East, the number of vessels detained in quarantine by the Russian authorities was very large.

Rhodes.—In 1858 no fewer than 280 sailing vessels, and 19 steamers, were put in quarantine. The cause of this great and sudden increase over the preceding two years was the plague at Bengazi, and the rumoured occurrence of a case of the disease at Alexandria. In 1855 the number of vessels quarantined had been also very large, on account of the existence of cholera in the Mediterranean.

Alexandria.

Alexandria.—The number of vessels put in quarantine from 14th June 1858 to 5th June 1859 was 149. The great majority of these were Ottoman vessels from Barbary and other parts of the African coast. There were also a good many English and French steamers, and a few Austrian.

The cause of the quarantine in every instance was the plague at Benghazi, first announced in the summer of 1858.

For the first two months or so the quarantine imposed, more especially on arrivals directly from the Barbary coast, was strict, and for a period of 10, 20, 30 days and upwards. Towards the end of August its rigour was materially relaxed, a quarantine of observation of from five to three days being then substituted on all arrivals except from the Barbary coast and from Malta. Malta was declared a suspected port about the beginning of August, in consequence of the death of one of the crew of the "Pactolus," in the hospital at Alexandria, from what was alleged to be the true plague. This case had such important bearings on the restrictions imposed on Malta by almost all the Mediterranean States, that it requires to be noted as far as the particulars have been made known. The steamer had arrived on the 2d of August from Tangier, Gibraltar, and Malta, with a crew of 36, and 215 passengers, and a general cargo. No other case of sickness appears to have occurred on board. She left Alexandria while in detention (a quarantine of 30 days had been imposed), and having landed her passengers, proceeded to Beyrout, from whence she returned in ballast, and with the same number of crew, on the 30th of August. Her bill of health being foul, a quarantine of nine days was imposed; but she left in quarantine not only without paying the dues levied for the health guardians, but forcibly getting rid of them.

Previous to this date, English vessels from Malta had been admitted to *pratique par disposition supérieure*, or, in other words, by orders from Constantinople.

The Alexandrian case was afterwards admitted by the professional men on the spot to have been one not of plague.

No other case of sickness is mentioned as having occurred on board any of the 149 vessels that were quarantined during the twelvemonth, with the exception of the death (cause not stated) of the captain of an Ottoman vessel just before entering the port, but without exciting any suspicion of infection.

The last four cases enumerated in the list will show the character of the quarantine restrictions at Alexandria in the months of May and June of the present year (1859):

"Arcadia," English steamer from Malta, with clean bill	-	-	9 days.
"Simois," French steamer from Malta, with clean bill	-	-	2 "
"Nassand," Ottoman brig from Benghazi, with foul bill	-	-	15 "
"Meandre," French steamer, from Malta, with clean bill	-	-	2 "
At Alexandria, in 1856, 1,818 persons were received into the lazaret.			
"			in 1857, none.
"			in 1858, 574 persons were received into the lazaret.

ILLUSTRATIONS OF QUERY V.

Illustrations of
Query V.

V. Is any difference, as to the quarantines imposed, made in favour of vessels having a medical officer on board?

Is any difference made between men-of-war or private yachts, and merchant vessels?

And is any exception in the performance of quarantine made on the arrival of Royal personages, ambassadors, or high military and naval authorities, couriers, &c.?

THAT the first clause of this query was not uncalled for will appear from the fact, that the presence of a medical officer on board a vessel may act in its favour, or to its prejudice, in regard to the imposition of quarantine, according as the health authorities of the place of arrival may please to decide. It is obvious that, when there is no medical officer on board, the nature of any case of sickness during the voyage can often not be determined, or may be wilfully falsified for the purpose of escaping the dreaded detention; and this is known to be frequently done.

In consequence of the recommendation of the Paris International Conference, there has been, of recent years, a slight abatement made in the periods of quarantine in favour of vessels having a medical man on board.

The following replies to the other clauses will explain themselves.

At *Malaga*, "on two very recent occasions, certain authorities and persons of rank arriving here from places infected with the cholera were admitted immediately. A Royal Ordinance has been issued, commanding that troops and military stores coming from infected places shall not be subject to quarantine."

At *Vigo*, "during the whole of the winter 1859-60, while the cholera was raging in Africa, and it was well known that the Spanish army suffered severely from the distemper, having lost, according to public report, as many as 10,214 of its members, yet all vessels arriving from Ceuta or Tetuan with sick and wounded on board have been freely admitted to *pratique* in the ports of Spain."

At *Genoa*, "in ordinary seasons, ships of war of all nations are not subject to the same questioning

Illustrations of
Query V.

questioning and to the same discipline as merchantmen. It suffices that the surgeon on board, or the captain, certify, on his word of honour, the condition of the crew and passengers, as well as all circumstances of the voyage."

At *Naples*, "ships of war, unprovided with bills of health, are not treated as having foul bills, the parole of the officer in command being, since February 1857, accepted instead. Even when they arrive from an infected or suspected port, the usual restrictions may not be imposed if the sanitary authorities are satisfied."

At *Malta*, "in the case of a man-of-war, &c., the voyage is sometimes reckoned as part of the quarantine; at other times it is not."

At *Gibraltar*, "a medical certificate generally facilitates pratique. In the case of ships of war, the voyage from the date of leaving the last port is generally reckoned as part of the quarantine."

At the *Piræus* "no difference is made between men-of-war and merchantmen; but the former, as well as yachts, have this advantage, that they have no merchandise on board, and the quarantine can only date from the time of landing the cargo. No exception is ever made in favour of any personages, and even his Majesty the King of Greece has had to conform to the laws. But during the late Russian war, there being a military occupation here, the French authorities forced the health office to give pratique to Prince Napoleon. There is no doubt also that the health office can do what they like. Thus, when in 1850 Admiral Parker's squadron hove in sight, the Board suddenly came to a decision to put the *Piræus* into quarantine. It is a general opinion in the Levant that political motives are often at the bottom of the measures taken in respect of quarantine."

Turkey.—"in most Turkish ports, the quarantine on men-of-war, yachts, &c., is shorter and less stringent than on merchant vessels. A quarantine officer," remarks Consul Sandison, "would be very cautious of interfering with the pleasure or convenience of any Royal personages, or high Turkish functionaries; and much or all might depend on the respect voluntarily paid to the regulations by any person of conspicuous rank, and coming in a yacht."

At *Rhodes*, "no difference is made in favour of high personages, unless special instructions from Constantinople have been received, as recently, on the expected visit of Prince Alfred."

Illustrations of
Query VI.

ILLUSTRATIONS OF QUERY VI.

VI. When a disease, which renders all arrivals from an infected or suspected place liable to quarantine, has been officially certified to have ceased, and when clean bills of health are issued by the local authorities, what period, if any, must elapse before free pratique is granted to arrivals from the place in the port of ?

It may not be generally known that, after the existence of a disease in a place has been officially declared by the local authorities to have ceased, and when clean bills of health are issued by them, arrivals therefrom are often not admitted to free pratique in several countries for some time afterwards, in order to provide, as is believed, still more effectually against the risk of importation.

In the countries which have adopted the recommendations of the International Conference as the basis of their quarantine code, the following periods must elapse after the official declaration by the local authorities of the cessation of a disease in the infected place, before free pratique is granted to arrivals therefrom:—

30	days	in the case of the	plague.
20	"	"	yellow fever.
10	"	"	cholera.

In some Spanish ports, as at *Vigo*, the length of the period required to have elapsed appears to be still greater. "In the instance of the cholera in Galicia, four years ago, 40 days was fixed on after the official date of its having ceased."

The same period of 40 days is stated to be the interval required at *Genoa*.

At *Lisbon*, the recommendations of the International Conference are acted upon.

At *Naples* "it is enacted by the quarantine code that, when the plague has been declared to have ceased in a place, a period of from 30 to 45 days is required to have elapsed after the latest ascertained case, whether of death or of recovery, before clean bills can be received from it. In the case of yellow fever, a clear interval of from 20 to 30 days, and in that of cholera an interval of 20 days, must have elapsed. Even after these precautionary intervals have elapsed, a quarantine of observation of from seven to ten days for the plague, and of from five to seven days for the yellow fever and the cholera, is imposed upon arrivals from the suspected countries before free pratique is granted."

At the *Piræus*, "it must be eight days after the date of the declaration of the ceasing of a malady before clean bills are given, and the same number of days after a disease is declared

declared to have ceased in a foreign port that arrivals from such port are admitted to pratique. Illustrations of Query VI.

"The Greek authorities are much regulated on this subject by the reports of their consuls."

At *Corfu*, "when the cessation of a disease in the port of departure has been officially certified, the arrivals from such place are admitted to free pratique after a medical visit, a few days after the total disappearance of any sickness of a contagious nature."

At *Malta*, "a bill of health is considered as suspected after the expiration of 40 days after the last case of plague, and as clean after the expiration of one year from the last case."

At *Gibraltar*, "when the cessation of a disease in an infected or suspected place is notified by the British consul, or on receipt of clean bills of health therefrom, immediate pratique is given."

ILLUSTRATIONS OF QUERY VII.

Illustrations of Query VII.

VII. Is there a lazaret at or near to the town or port of ?

Is it floating or on shore? Please to describe its position—distance from the nearest inhabited dwellings—construction and accommodation—its sanitary condition, and that of its environs—means of exercise for the inmates—means of supply of food and other necessary requirements.

Is there a tariff of charges for accommodation, food, &c.?

As lazaret establishments are designed and profess to afford safe quarters for the healthy, and suitable accommodation for the sick and convalescent detained against their will, the public have a right to expect that they should be model dwellings in respect of their sanitary arrangements.

There is no regular or permanent lazaret establishment at many of the principal mercantile ports of northern Europe. At *Hamburg* there is none.

The lazarets in the *Zuyder See* and at *Flushing*, for the great ports of *Amsterdam* and *Rotterdam*, have not been in use for many years. There is no lazaret at or near *Antwerp*; vessels are, when it is deemed necessary, detained in the *Scheldt*, about 12 miles below the city.

At *Havre* there is no lazaret on shore, but only a quarantine station, to which vessels liable to quarantine there, and at *Calais* also and other northern ports of France are sent.

The lazaret establishment at the busy port of *Bordeaux* appears to be very incomplete. "There is talk of a new one being constructed."

It is otherwise at the great naval port of *Brest*, where there is an excellent stone-built lazaret, capable of accommodating easily more than 200 inmates, on the island of *Treberon*, about five miles distant from the town.

The extensive lazaret establishment at *Marseilles* is situated on an island about 2½ miles from the shore, and from which the public is entirely excluded.

"Merchandise is landed at the lazaret for purification by various means, such as exposing it to the dew, ventilation, immersion, chloruretted fumigations, according to the nature of each case.

"The opening out of the goods, the washing of the effects, the cleansing of the ship, the immersion or the immersion of infected substances are likewise practised. The goods subjected to these processes are clothes, hides, feathers, wool, silk, horse-hair, and remains of animals.

"Quarantine is discretionary for articles made of cotton, flax, or hemp."

Lisbon.—The condition of the lazaret for the reception of passengers is thus described by Dr. Donnet, of the Royal Naval Hospital:

"It consists of two buildings, separated from each other by a court-yard. The one is fitted up as a dormitory, and is badly furnished, badly ventilated, with the beds too close to each other, without either chimney or stove, and able to accommodate about 50 persons, although frequently it receives many more. * * * The grounds around the lazaret are insufficient for exercise. There is no infirmary, no resident medical man or clergyman; no water-closets, but in their stead small night-stools placed in the dormitory, a curtain alone shutting out the occupant. The dormitory is frequently tenanted by both males and females." Complaints have frequently been made by passengers of the extremely bad accommodation in this lazaret. "The floating lazaret is an old hulk at the quarantine ground, and is able to receive about 70 persons closely packed."

The lazaret at *Madeira* (it was abolished in 1858, and no substitute has been provided) was very unsuitable, as often "eight or ten persons were obliged to sleep together in one room, and others in a loft over a cow-house, or wherever they could find an unoccupied spot, while the thermometer stood at 80°. The charges made for the accommodation were as high as in a first-rate hotel."

Illustrations of
Query VII.

In *Spain*, the only regular lazaret establishments for the admission of *foul* arrivals are at *Vigo* and at *Port Mahon*, such arrivals not being admissible into *Cadiz*, *Barcelona*, &c. That at *Vigo* has been in use since 1842, and is on a large scale, with all the required arrangements for the reception of sick and suspected passengers, and also for the landing and purification of cargoes.

At *Santa Cruz, Teneriffe*, the lazaret on shore "is quite unfurnished, and without any accommodation." At *Havannah*, "the only lazaret is a floating hulk, anchored off the quarantine ground."

In the *Neapolitan States*, although there is an extensive lazaret establishment on the island of *Nisida*, in the Bay of *Naples*, it has not been regarded by the quarantine authorities as being sufficiently complete in its arrangements for the purification of all foul-bill arrivals; and hence, under certain circumstances of apprehended danger, arrivals are still liable at times, under the decree of 1819, to be refused admission into *Neapolitan* ports, and obliged to leave at once." In the autumn of 1859, arrivals from *Spain*, *Holland*, &c., having had any case of cholera on board during the voyage, were not permitted entrance until they had performed the necessary quarantine in a foreign accredited lazaret.

Most of the *Turkish* lazarets appear to be utterly unsuitable for the safety, not to speak of the comfort, of *détenus*. Persons are more likely to catch disease than to recover from it in such places as have been described.

The lazaret at *Galatz* has become quite dilapidated since the war in 1854, and that at *Ibraila* is also in the same condition. The great Russian establishment in the Black Sea at *Kertch* was likewise dismantled during the war in the Crimea.

At *Alexandria* the lazaret is stated to be able to accommodate 1,000 persons.

That at *Tripoli*, in *Barbary*, is described as being "in a very damp situation; the apartments are quite unfurnished, and the inmates must procure and cook their own food."

At the *Piræus* the former lazaret has been abolished since 1854, when it was occupied as a barrack by the French troops. "In that year eight wooden huts were erected on the side of the port opposite the town, and about a mile distant. Tents would be a luxury to such habitations; the situation is most desolate, and the place altogether so unfit for a civilised being, that I have known several instances of English families who, rather than subject themselves to this uncomfortable durance, have abandoned their visit to *Athens*, and proceeded on their voyage. A large lazaret is in course of construction."

The lazaret establishments in most of the seaports of the *United States* have the character rather of detached and partially isolated marine hospitals for the reception of all sick persons on arrival, with occasionally superadded stores for the airing of foul cargoes, than of the secluded and strictly guarded establishments in the old world. No accommodation is provided for persons in health on arrival, nor are such persons almost ever detained. The extensive lazaret buildings on *Staten Island* in the harbour of *New York* were, in open day, set fire to and destroyed by the inhabitants of the neighbourhood in 1858, after the sick (there were many yellow fever patients in the hospital at the time) had been removed, in order to compel the transference of the establishment to a station further down the harbour.

The use of the warehouses for the reception of goods had been discontinued for some time previously, and barges moored about 1,000 yards from the hospital had been substituted for the buildings on shore. But the removal of cargoes for purification appears to be rarely carried out at any of the lazarets of the Union. Cargoes are never landed at the well-conducted quarantine establishment at *Grosse Isle*, in the River *St. Lawrence*, where the sick on board are detained before vessels can proceed up to *Quebec*.

Bermuda is provided with two lazarets, one for merchantmen and the other for the use of the Navy. There is no regular lazaret at *Nova Scotia*, nor apparently in any of our West India Colonies, except at *Nassau*, in the *Bahamas*, where "there is a small lazaret erected within the last 12 months on an island about three miles distant; there is a resident quarantine officer."

In the Spanish and other foreign West India islands, the only lazarets are floating hulks, to which cargoes are, it is said, sent when necessary.

Consul Westwood states, that at *Rio Janeiro* "there is no regular lazaret or quarantine establishment." At *Monte Video* "there is a small lazaret, the accommodation is small and bad, and there is no resident medical officer."

The permanent quarantine establishments on shore in the *Mauritius*, and in the principal ports of *Australia*, are among the most complete of any in the colonies, and appear to be similar in most respects to the Canadian lazaret at *Grosse Isle*. They are intended only for the reception of persons, no cargoes being ever landed.

ILLUSTRATIONS OF QUERIES VIII., IX., X.

Illustrations of
Queries
VIII., IX., X.

VIII. State the number of persons received into the lazaret during the last three or five years at least.

IX. Have any diseases occurred among the persons received? If so, what diseases? How many cases, and when?

X. What number of deaths, if any, have occurred in the lazaret among the persons received into it, or among the officials of the quarantine establishment, during the last three or five years; or, if possible, for a much longer period, say 20 or 30 years? And from what diseases, and when?

It is only by the possession of such details as those sought for, that the utility of lazarets, as a defence against the introduction of spreading diseases by persons or goods, can be ascertained.

Lisbon.—The number of persons sent into the different lazarets, from the beginning of 1856 to the end of April 1859, was 4,420, independently of many hundreds who were kept in quarantine on board their respective vessels.

In 1857-58-59 the number sent into the lazaret was considerably more than double the number in 1856; in 1857 it was nearly three times as great. The average detention appears to have been about 10 days.

Dr. Lyons states that "the inspector of the lazaret, who has resided there for 42 years, affirmed in the most positive manner that there has never been a single person of those undergoing quarantine who was attacked with an epidemic disease;" a statement confirmed by the inquiries of Dr. Donnet, R. N.

Madeira.—During the five years before 1858, when the lazaret was closed, the number of persons sent to it was 1,899. The only instances of disease occurring in the lazaret during this period were four cases of cholera, which appear to have all recovered, as but one death is stated to have occurred among all the persons detained, and that was from consumption.

Vigo.—The number of persons who underwent quarantine at the lazaret establishment, reckoning the crews of vessels as well as their passengers, during the last three years, was 20,157—viz.: 11,134 of the former, and 9,023 of the latter. The average detention seems to have been about 10 days.

In 1857 the number of deaths among the crews and passengers detained in quarantine was 21, of which seven were from yellow fever (there were 31 cases), and all the rest from chronic diseases, chiefly dysentery and phthisis.

In 1858 there were three deaths from yellow fever, and 39 deaths from chronic diseases, in the lazaret; and in 1859 all the deaths, 12 in number, were from chronic diseases.

Genoa.—In 1858 the total number of persons sent to the lazaret was under 40. Ordinarily, all who have to perform quarantine remain on board their vessels. No deaths have occurred in the lazaret during the last six years.

Piræus.—The number of persons received into the lazaret in 1858 was 2,000; this has been the average for some years. Not a single case of sickness occurred among these persons.

With the exception of eight deaths from smallpox, out of 30 cases landed from the French frigate "Pomone," in 1859, no death has been known for several years in this establishment.

Constantinople.—In 1858 no persons were received into the lazaret. No register is kept.

Rhodes.—During the five years from 1854 to 1858, the number of persons received into the lazaret was 1,755; the detention varied from 5 to 15 days. Not a single instance of sickness occurred, and the only deaths were four from dysentery and consumption in poor pilgrims from Mecca.

Alexandria.—In 1856 the number of persons sent to the lazaret was 1,818; in 1857 there were none; and in 1858 the number was 574.

Among the 1,818 admissions in 1856, there were 56 cases of illness, of which 24 were *fatigues de voyage*, 26 from abdominal complaints, two from Asiatic cholera, and three or four from common fevers. Of 24 deaths among these invalids, seven were from exhaustion, 14 from marasmus, &c., two from cholera, and one from peritonitis. In 1858, of two deaths which occurred in the lazaret, one was from typhus, and the other was at first said to be from *souppon de peste*, but it was afterwards stated to be from delirium tremens with fever.

No instance of the spreading of any disease was observed during these three years.

Corfu.—During the last five years, 1,883 passengers have performed quarantine in the lazaret. The only cases of sickness mentioned are two of yellow (?) fever in 1845, in passengers from Malta, and three of cholera in September 1850, in persons arrived from Céphalonie where the disease then prevailed. During the 16 years, from 1844 to 1860, 15 deaths have occurred in the lazaret, viz., 11 from fever, one from yellow (?) fever, one from smallpox, and one from cholera. No instance of the spreading of diseases from persons or goods undergoing quarantine has been known of late years.

Illustrations of
Queries
VIII., IX., X.

Malta.—During the three years ending April 1859, there were 1,513 persons received into the lazaret. No case of fresh sickness originated among them. Five deaths occurred among the persons received, viz., four from fever, and one from cholera.

The particulars are not stated; nor is any instance of disease spreading alluded to.

Marseilles.—During the last five years 1,372 persons were sent to the lazaret; viz :

4	in 1855
711	„ 1856
5	„ 1857
468	„ 1858
184	„ 1859

Of the number sent in 1856, no fewer than 413 were cases of typhus fever, of which 90 proved fatal. There were 12 other deaths in the lazaret that year from divers diseases.

In 1858, 15 cases of small-pox were received; eight of these proved fatal.

No specific mention is made of any cases of cholera having occurred of late years within the lazaret, or of any case of yellow fever since 1821.

ILLUSTRATIONS OF QUERY XI.

Illustrations of
Query XI.

XI. Have any instances occurred in recent years of the spreading of a disease from persons, or from goods, undergoing quarantine, to other inmates of the lazaret, or to the officials of the establishment, or to the inhabitants of the nearest dwellings?

If so, please to give the dates and other particulars briefly.

The answers received to this question are almost uniformly in the negative. The few exceptions, real or apparent, in the mass of evidence obtained are the following:—

Lisbon.—In July 1856 three deaths occurred among persons employed in the lazaret from cholera, which was then raging in the city, and where the disease seems to have been caught.

The presumption that the first cases of yellow fever in 1857 were caused by the manipulation of infected luggage, which had been landed in the lazaret, is admitted to be simply conjectural. The fever was in the city in the previous year.

Malta.—“During the 21 years from 1819 to 1841, 12 vessels having, or having had, during the voyage cases of plague on board, were put in quarantine. In all, 46 cases of the disease were treated in the lazaret, and of these cases 22 were fatal. The only instance in which the disease seems to have occurred among the employés of the quarantine establishment were in four health guards, two of whom had been put on board infected vessels, and the other two had been shut up in the lazaret to attend upon the sick. One of the latter died; the other three recovered.”

No instance has been known of ill-effects from manipulating any description of goods received into the lazaret.

Southampton.—“Several suspicious cases have occurred.

“One man, an engineer, who landed from a West India steamer, was attacked with yellow fever some days afterwards, and died. A female in the same house was attacked with fever of apparently the same nature, but in a very mild form.

“Several other suspicious cases which put on the appearance of a modified typhus, it is supposed on account of the climate, occurred, but did not spread.

“In the case of Her Majesty’s ship ‘Eclair,’ which was ordered to move from the Mother-bank to the quarantine station at Stangate Creek, a pilot embarked to take her in charge was taken ill with yellow fever three or four days after, and died.

“Two medical men were placed on board of her after she anchored at Stangate Creek; they were both attacked, but recovered.”

Marseilles.—In 1856 the persons, in attendance on the sick in the lazaret, who were attacked with typhus fever were, five health-officers, two sisters of charity, one clerk, 39 male nurses, and one soldier of the garrison; 12 of these persons died.

Grosse Isle, Canada.—“Almost every year, a certain number of the attendants, whose duties bring them into contact with the sick, fall ill, and several have died in those years when fever (typhus) has prevailed. This was signally the case in the disastrous year of 1847, when many nurses, clergymen, and others fell victims in the discharge of their duties.”

Baltimore.—“In 1852 an assistant physician and two nurses died from typhus fever, caught from sick emigrants. In 1857 one of the boatmen belonging to the hospital died of yellow fever, caught from contact with cotton landed from an infected ship.”

New York.—In 1856, “many of the stevedores, and others employed in unloading the sick vessels, were attacked with the (yellow) fever, and died. The disease spread to the shore, attacking first some dwellings on the beach near the hospital, and subsequently extending in different directions. Large quantities of refuse matter, decaying fruits, old bedding,

bedding, &c., and all such materials as floated were carried in directions, and to localities which were subsequently the lurking places of the pestilence. Illustrations of Query XI.

"There can be no doubt," says the physician of the Marine Hospital, "that the most active cause of the pestilence in this locality was from the accumulation of infected materials floated from the vessels in quarantine."

Mauritius.—"None of the officials or police force at the lazarets ever caught either cholera or smallpox from the emigrants; but the wife of the lighthouse keeper at Flat Island died of the cholera during its prevalence there, and one of the crew of a steamer, employed in carrying supplies to the lazaret on Flat Island in 1856, took the disease, and died on board."

ILLUSTRATIONS OF QUERY XII.

XII. Are cargoes sent to the lazaret? If so, what cargoes or articles of merchandise are considered to be "susceptible"? And what means are used for their purification? Illustrations of Query XII.

THE replies to this question are, in the great majority of instances, meagre; and it may therefore be inferred that the practice of discharging cargoes into lazarets, for the alleged purpose of purification, is very much less frequently resorted to than it was formerly.

In none of the great commercial ports in the north of Europe, or on the Atlantic coast of France, does the practice seem to have been adopted of recent years when the cargoes were sound and free from all decomposition and decay. That it is otherwise, however, in some ports, will appear from the following examples:—

At *Vigo*, "all cargoes of ships subjected to (strict) quarantine are sent to the lazaret, except mails and letters in cases or boxes, which are received at the port and distributed, after being cut and fumigated. The articles considered as 'susceptible,' are hides, skins, raw cotton, flax and silk, yarn and wool, which undergo a scrupulous purification and ventilation in the sheds and warehouses of the lazaret.

"The purification lasts as long as the period assigned to the vessel."

At *Lisbon*, "susceptible articles are cotton and hemp, raw or manufactured; hair, manufactured or otherwise; letter parcels and other correspondence; hides, fresh, dried, or manufactured; remains or portions of animals in a fresh state; wool, linen, and silk, raw or manufactured, &c. Fumigation with chlorine is employed in the disinfection of goods. Whitewash, chloride of lime, and peroxide of manganese with sulphuric acid, are used in the purification of infected ships."

At *Marseilles*, "merchandise is landed at the lazaret for purification by various means, such as exposing it to the dew, ventilation, immersion and chloruted fumigations, according to the nature of each case. The opening out of the goods, the washing of the effects, the cleansing of the ship, the incineration or the immersion of infected substances, are likewise practised.

"The goods subjected to these processes are clothes, drills, hides, feathers, wool, silk, horsehair and remains of animals. Quarantine is discretionary for articles made of cotton, flax or hemp."

At the *Piræus*, "cargoes are landed at the lazaret; they are opened and aired. Copper and lead are immersed in water, and coins in vinegar; letters are fumigated. Non-susceptible goods are grain, iron, coal, oil, paint, wood, barrels and staves, wines and spirits, bottles without labels, &c."

ILLUSTRATIONS OF QUERIES XIII. and XIV.

XIII. When sickness occurs in a vessel while undergoing quarantine, and there is no medical officer on board, how is medical assistance provided, or to be obtained? Is medical assistance provided at the public cost? Illustrations of Queries XIII. and XIV.

XIV. When a vessel arrives from a suspected port, or in a sickly condition, rendering her subject to quarantine, is any inspection then made of her state as regards cleanliness and ventilation? And, if found filthy or badly ventilated, what means are taken to remedy such defects? Is any record kept of the sanitary condition of vessels put in quarantine?

THE first of these queries was deemed necessary, as it was well known to many of the members of the sub-committee, from personal observation, that the sick in merchant vessels which have no medical officer on board are often much neglected; and the liability to such neglect would be of course increased by any interruption of free intercourse with the shore, and with other vessels in the port.

With respect to Query XIV. it may be fairly gathered from the evidence that such inspection as that referred to is very rarely made.

Illustrations of
Queries XIII. and
XIV.

Elsinore.—"When there is sickness on board a vessel in quarantine, the quarantine physician would visit the sick but without going on board, and he would provide the necessary medicines at the expense of the ship."

St. Thomas.—As at Elsinore.

Hamburg.—"When sickness occurs on board a vessel in quarantine, the regularly appointed medical officer will visit her. About 9s. are paid by the ship for each visit."

"The medical officer orders such means as he may consider necessary to remedy any defects in the ventilation or cleanliness of the ship, and he sends in a report to the Government." It seems, therefore, that he goes on board, and not merely alongside, the vessel.

Bordeaux.—"The sanitary physician is obliged to visit the sick in quarantine, whether on board ship or in the lazaret, and he is liable to be put in quarantine himself if the case requires it. When disease has rendered quarantine necessary, the attendance is gratuitous; under other circumstances a charge is made."

No inspection is required to ascertain the sanitary state of a vessel before giving her pratique.

Marseilles.—"Invalids in quarantine are landed and attended by the lazaret doctor. A medical visit is made on the arrival of every suspected vessel."

"The 45th article of the International Regulations defines the means to be used for the purification thereof. The state of every ship is registered."

Malaga, Alicante, &c.—"When sickness occurs in a vessel under quarantine, the visiting medical officer has the man brought on deck if possible, and prescribes from the health boat, and the medicines are sent. If the man cannot be brought on deck, the doctor prescribes according to the report of the master and crew."

But, although the instructions require a practitioner to be put on board, "I have not seen this," says Mr. Consul Barrie, "carried into effect." All expenses are paid by the masters of vessels.

The health guard, who is placed on board every vessel in quarantine is charged with the inspection of her sanitary condition. It is also his duty to fumigate the ship; "but these matters," Mr. Consul Mark observes, "are very badly attended to."

Havannah.—"Foul vessels are required to be inspected and fumigated; but the authorities are very remiss on this point."

Lisbon.—"The sick on board a vessel in quarantine, when there is no medical officer on board, are sent to the lazaret."

"The ship defrays all expenses. The health officer inspects all vessels from suspected ports; if found filthy, they are required to be cleansed and purified. A record of the sanitary condition of vessels put in quarantine is kept at the health office."

Genoa.—"When sickness occurs in a vessel in quarantine, a medical man is sent from the shore at the expense of the ship. The authorities may require him to shut himself up with the patient in the lazaret."

Corfu.—"When sickness occurs in a vessel in quarantine, the proto-medico and his assistant are bound to render medical assistance in their capacity of public medical officers, for which they receive a yearly salary from the Government."

Malta.—The patient is landed at the lazaret, and treated at the public expense.

Gibraltar.—The inspector of health visits the vessel, and a civilian medical officer repairs alongside and renders the required assistance, but not at the public expense. When vessels arrive in a foul or sickly condition, no inspection is made, as, arriving under those circumstances, they are ordered to quit the port.

United States.—The practice in all the principal ports appears to be that the health physician at once boards and personally inspects every such vessel on arrival, and removes the sick to the hospital on shore, or treats them on the spot. Sailors and emigrants are gratuitously attended.

Foul and unwholesome vessels must be thoroughly cleansed and purified before they proceed on to the wharves.

At *Philadelphia*, every vessel is required to have her bilge-water pumped out, and fresh water pumped in until the bilge is made sweet, before she is permitted to go up to her mooring. The hold, cabin and fore-castle are directed to be ventilated, and all articles of an offensive nature on board to be taken out.

At *Charleston*, "sick persons are attended by the lazaret physician at the public cost. All vessels are inspected on arrival, the bilge-water is pumped out, and all needful means used for cleansing and ventilation."

Canada and Australia.—At Grosse Isle in the St. Lawrence, and in the different ports of the Australian continent, all vessels on arrival are boarded by the health officer and carefully inspected; the sick and convalescent are at once sent to the hospital on shore; the rest of the crew and passengers are also landed, if necessary, at the quarantine station, and the vessels are thoroughly cleansed, purified and ventilated.

Jamaica.—

Jamaica.—"No investigation of the filthy condition of a vessel can be ascertained, unless the health officer enters the ship and examines her; and such a condition can scarcely be surmised, unless the crew are first ascertained to be unhealthy. Effectual ventilation and purification of a vessel," adds the health officer, "would not be possible in loaded vessels, unless some means were available to discharge at least a portion of the cargo."

Illustrations of
Queries XIII. and
XIV.

Medical assistance is procurable for the sick, but not at the public expense.

Mauritius.—Special instructions are given as to the side of the vessel, whether to leeward or to windward, by which the medical officer is to approach an emigrant vessel on arrival; and very severe penalties, including the authority to fire upon persons attempting to escape from a vessel in quarantine, are affixed to breaches of the law.

When sickness occurs on board other than emigrant ships in quarantine, medical advice is given alongside by the health officer, who cannot, however, go on board.

ILLUSTRATIONS OF QUERY XV.

XV. When a clean bill of health is given to a vessel on leaving the port of _____, is she previously inspected by any officer to ascertain her sanitary condition, and that of the crew and passengers? And is any certificate of such inspection given to the captain?

Illustrations of
Query XV.

THE replies to this query are almost uniformly in the negative. The bill of health given to a ship,—whether the bill be called clean, suspected, or foul,—does not profess to take any notice of the condition of the ship herself, or of the persons or things on board, but merely of the ascertained or rumoured health of the port from which she sailed.

Bordeaux.—"There is no special officer for visiting ships before granting clean bills of health. The Controller of the Customs, charged with the delivery of them, generally contents himself with the assertions of the captain."

Brest.—"Although required by the instructions, no previous inspection ever takes place, although the sanitary condition of the ship, crew and passengers, quality of provisions, water, &c., are specified in the bill of health."

Naples.—"No inspection is made of a vessel before granting a bill of health."

Piræus.—"Before a vessel receives a clean bill of health, the medical officer rarely inspects the vessel, but always the crew."

Malaga.—"No inspection is made of a vessel previous to granting bills of health."

Gibraltar.—"Before a clean bill of health is granted to a vessel, no medical inspection of her state is made, and no certificate given, the bill of health being only applicable to the state of health of the fortress."

The only apparent alleged exceptions to this omission of the inspection of vessels, before the granting of clean bills of health on leaving a port, are the following:—

Genoa.—"No vessel going beyond the Straits of Gibraltar can clear from a Sardinian port, without having been previously inspected by a sanitary officer. The result of the inspection, which is especially strict when the vessel carries passengers, is stated in the bill of health."

Malta.—"Before a vessel receives a clean bill of health, she is inspected."

ILLUSTRATIONS OF QUERY XVI.

XVI. Have any of the diseases for which quarantine is liable to be imposed in the port or town of _____ occurred among the inhabitants of the place or of the neighbourhood during the last 10, 15, or 20 years? If so, under what circumstances?

Illustrations of
Query XVI.

It is very desirable that the exact dates of the earliest cases, and other authentic particulars respecting the origin or development of the disease, should be stated in a narrative of the circumstances.

THE following illustrations, out of many others which might have been given, appear to show that the existing practice of quarantine, in the countries where it is most strictly enforced, has not succeeded in preventing the occurrence of those diseases against which the system is specially directed.

It is to be regretted that the replies to this query from many of the principal ports in the Mediterranean have been so incomplete; in some, no information whatever has been given. Whereas the Board of Health at Alexandria transmitted a full and instructive report on the subject, the reply from Constantinople was nil.

Portugal.—Within the last five or six years, *Lisbon* has suffered twice, in 1855 and 1856, from cholera; and twice, in 1856 and 1857, from yellow fever. In 1851, there was a limited appearance of yellow fever at *Oporto*.

Madeira was visited by the cholera in 1856; and some of the Cape de Verde Islands in 1855 and 1856.

Spain.—Since 1853, most of the principal ports have suffered more than once from visitations of cholera. In 1854, *Ferrol*, *Corunna*, *Cadiz*, *Malaga*, *Alicante*, &c. were affected; and the disease has reappeared repeatedly in some of these towns since. In 1857, the yellow fever existed at *Corunna*, *Ferrol* and other places in Galicia.

Gibraltar had a slight visitation of cholera in 1854, and again in 1855; on both occasions, it was prevailing in the adjacent districts of Spain. The earliest visitation occurred in 1834.

Malta suffered from the cholera in 1837, and again the summer of 1850. During the whole period of the Russian war, from 1854 to 1856, the disease never prevailed epidemically, notwithstanding the incessant arrival of infected vessels from the seat of war, &c. Smallpox has, on more than one occasion of recent years, proved very destructive.

The Two Sicilies.—At *Naples* the cholera appeared first in 1836, and again in 1837, when it was very severe. In 1854 it broke out with great violence, and again slightly in 1855. In 1837 cholera appeared in *Palermo*, while vessels from *Naples* were performing quarantine on account of the disease. In 1856, *Messina* suffered dreadfully from the pestilence.

Athens.—During the prevalence of the cholera among the French and British troops at the Piræus in July 1854, the Greek government established a strict quarantine with a view of protecting the capital. The city, which is not above six miles from Piræus, remained exempt until the end of October, when the disease broke out. More than 10,000 of the inhabitants left for all parts of Greece; "but I have not heard," says Mr. Consul Niell, "that a single case of cholera was thereby occasioned." The mortality at Athens amounted to 3,000 out of a population of 30,000.

Corfu.—In October 1855, the cholera appeared; the disease continued till the end of the year, and caused 500 deaths. In 1852, there was a fatal epidemic of smallpox; ten years before, it had prevailed extensively.

Cephalonia suffered severely from cholera in 1850; and in 1852 the smallpox existed in this island as well as in *Paxo*.

Alexandria.—Since 1843, no case of the plague has been seen throughout Egypt. The cholera prevailed more or less severely in 1844, 1848, 1850 and 1855. Partial outbreaks had occurred in 1835 and again in 1837.

Bermudas.—These islands have been repeatedly the seat of yellow fever epidemics. The most recent visitations were in 1843, 1853 and 1856. No information has been received respecting other epidemic diseases. Isolated cases of spasmodic cholera have occurred, but the disease has not spread.

Jamaica was visited for the first time by epidemic cholera in 1850-51; there have been several partial returns of the disease since. Smallpox prevailed epidemically in 1832 and again in 1851. Few of the coloured population were protected by previous vaccination. In 1856, the yellow fever prevailed for the first time in the mountain cantonment of Newcastle.

"*Havannah* is never entirely free," says Consul General Crawford, "from smallpox and typhoid fevers." The cholera was very prevalent in 1852, and committed great ravages, chiefly among the natives.

The most prevalent diseases here are smallpox, yellow fever, dysentery and typhoid fevers. The most destructive among the shipping is yellow fever.

Guiana.—Yellow fever has prevailed on several occasions, with epidemic force, during the last 10 years. The cholera appeared towards the end of 1856, and committed great ravages both in Demerara and in the surrounding country.

The smallpox prevailed in 1859; "the lower classes, being totally unprotected by vaccination, soon became a prey to the disease."

Rio Janeiro.—Yellow fever appeared for the first time in 1849, and has continued to recur very frequently ever since.

Great mortality has taken place among the merchant shipping in several seasons. The first visitation of the cholera in Rio was in 1855. Other parts of Brazil have suffered subsequently.

Mauritius was first visited by the cholera in 1819; the second attack was in 1854, and this was followed by another visitation in 1856. A fresh outbreak took place in the latter part of 1859. In 1831-2, in 1840, and in 1855-6, smallpox prevailed among the coloured population.

ILLUSTRATIONS OF QUERY XVII.

XVII. Have instances of the evasion or infraction of quarantine in the town or port of _____ come to your knowledge? Have they been of frequent occurrence? And what penalties have been inflicted for the offence? Illustrations of Query XVII.

It was not, of course, expected that many affirmative replies to this query would be given; still it was deemed proper to make the inquiry, as it is notorious to all who have been much abroad, that such irregularities are of common occurrence. The introduction of certain epidemic diseases into seaports has often been ascribed to the evasion or breach of quarantine regulations; but the imperfection of the evidence and want of accurate details, recorded at the time, have very generally left the matter in doubt, and thus occasioned much difference of opinion.

The following instance, which excited much interest at the time, deserves to be quoted:—

Oporto.—In the autumn of 1851, two vessels from Pernambuco, where yellow fever then existed, were, in consequence of the false representations of their captains, admitted to pratique on arrival. It was afterwards discovered that some casualties had occurred during the voyage; but no details were given. The health guards and custom-house officers who went on board were attacked with a bad form of fever, the nature of which was not at first recognised, but which was afterwards declared to be genuine yellow fever. Between 20 and 30 cases of the disease occurred subsequently to the arrival, all being among persons who had gone on board the vessel. After the first week of October, all traces of the disease ceased.

ILLUSTRATIONS OF QUERY XVIII.

XVIII. What, if any, quarantine measures by land, such as sanitary cordons, &c., have been adopted, or are considered advisable, in the town or port of _____ against the introduction of pestilential diseases, or for arresting their progress? Illustrations of Query XVIII.

If such measures have been of recent years employed, what have been the results?

On the first visitation of Asiatic cholera in Europe in 1830-31, almost all the continental states had recourse to sanitary cordons, and other like measures by land, to prevent the extension of the disease. From their inefficacy on that occasion, they were not subsequently resorted to in most of those countries. That the practice, however, in reference to this as well as to other diseases, is still adopted in some of the southern countries of Europe, will appear from the following examples:—

France.—The principle of quarantine measures by land is recognised in the International Sanitary Convention; but, for many years past, it does not seem to have been adopted in any part of the country.

Malaga.—“On the outbreak of the cholera in this province in 1854 and 1855, sanitary cordons were established in the outskirts, to intercept communication with infected places. They were discontinued by the Government, and do not appear to have had the slightest effect in preventing the extension of the disease.”

Carthagen.—In 1854 and 1855, the plan (a sanitary cordon) was adopted against the cholera; and whether it was from the cordon, or from any other cause, only one case of the disease was publicly declared to have occurred in the city. During the continuance of the cordon, the municipal authorities were known to leave, and to return to, the town without being placed under observation.

Teneriffe.—Sanitary cordons by land have been adopted on several occasions here, and are considered to be decidedly advisable.

Lisbon.—“While the cholera in 1855 was advancing along the course of the Tagus towards the city, a sanitary cordon was established to prevent all persons with any ailment whatever, and coming from any infected place, from entering the town. The disease made its appearance notwithstanding.”

Alexandria.—Several cordons have been established since 1831, to prevent the spreading of the plague and the cholera, but they were unsuccessful. Last year (1858) when the plague appeared at Bengazi, the sanitary board here attempted to establish a military cordon, from Aboukir to the Lybian desert, and around the city. Numerous infractions took place. The pestilence did not reach the city. The caravans from the desert preferred to return from whence they came, rather than submit to the quarantine which would have been imposed on them.

Illustrations of
Query XVIII.

Piræus.—"Excepting in the case of the cholera in 1854, Athens has not been directly cut off from communication with other places; and when this was the case, it proved quite ineffectual, by the fact of the cholera nevertheless breaking out afterwards. There is a perpetual cordon in the northern frontier of Greece; but it is worse than useless, as it is quite impossible to guard this extent of frontier."

ILLUSTRATIONS OF THE "OBSERVATIONS."

Observations.

Observations.

PLEASE to append a copy of the Quarantine Act and Regulations at present in force in the town or port of

Also of any annual or other reports illustrative of the working and results of quarantine there, or containing evidence elucidatory of the importation or non-importation of the diseases for which quarantine is imposed.

And to add any remarks thereon from yourself, and from any resident medical officer or other gentleman acquainted with the subject, with suggestions for the amendment of quarantine regulations and practice in general.

Information is likewise very desirable on the following points:—

- (a.) The general sanitary state of the town, and of the port or harbour, docks, &c., of and of the diseases mostly prevalent on shore, and among the shipping.
- (b.) The general sanitary state of the vessels frequenting the port of and the hygienic condition of the crews, as to their accommodation on board, their food and drink, &c.
- (c.) The average annual number of vessels arriving from abroad in the port of
- (d.) The average amount of dues or fines levied on vessels and individuals while in quarantine, and the estimated annual amount of charges imposed.

COPIES of the Quarantine Acts and Regulations of many Countries, including France and Algeria, Portugal, Sardinia, the Two Sicilies, Greece, Turkey, the States of New York, Pennsylvania, &c., &c., have been received.

General want of
annual, &c.
reports.

IN no European country or port, is an annual report of the working and results of quarantine practice published, nor does it appear that any periodic statement of the sort is prepared for the information of the local or Governmental authorities.

In some of the States of the American Union, and also in Canada, annual reports, more or less complete, are made by the quarantine physicians and officers of health; but no series of these reports has been received by the sub-committee.

The most complete and systematic are those transmitted from Sydney and Melbourne (printed), and from the Mauritius (in manuscript).

A few occasional official reports on severe visitations of epidemic disease, in certain years, have been obtained,—as of the cholera epidemics in Norway in 1850 and 1853, of the cholera epidemic at Vigo in 1848, of the cholera epidemics in the Mauritius in 1854 and 1856, of the yellow fever epidemics at Bermuda in 1853 and 1856, of several outbreaks of the same fever in some of the seaport towns of the United States, of successive visitations of smallpox in Ceylon, &c.

Suggestions of
consuls.

Many of the consular replies contain strongly expressed opinions of the inconvenience and injury inflicted by the operation of the quarantine regulations in force, while no real security is afforded to the public health of the port or country. There appears to be a general distrust and disbelief in the utility of the system as at present pursued.

A wish is expressed that the inquiries now being made by the National Association may be circulated in foreign countries; and several of Her Majesty's consuls state their belief that the temperate and well-considered opinions of experienced physicians in this country would have much weight in influencing the practice of other nations.

In Constantinople, an association has been recently formed among the British and foreign merchants, shipowners, &c. for local inquiry into the operation of the quarantine practice in Turkish ports. The correspondence between this association and the British Ambassador to the Porte, and subsequently between Sir Henry Bulwer and Lord John Russell, is contained in the "Paper respecting Quarantine in the Mediterranean," presented to the House of Commons by command of Her Majesty last year, and which gives the unabridged replies of the British consuls throughout the Turkish dominions to the queries of the sub-committee.

Some

Some highly instructive details are given in a few of the replies on the sanitary state of the towns and ports, from which the replies have been received. They very generally indicate the prevalence, more especially in the neighbourhood of the shipping in harbour, of nuisances which often engender and always aggravate disease. Nowhere, is this bad state of things seemingly more marked than in some of the British Colonies.

Observations.
—
Sanitary state of
seaport towns, &c.

SANITARY STATE OF MERCHANT SHIPPING.

WITH respect to the other kindred point on which information was sought for; viz., "the general sanitary state of the vessels frequenting the port, the hygienic condition of their crews, their accommodation on board, their food and drink, &c.," the statements received are generally meagre and only hearsay, and are then usually favourable. In some of the replies, the statements are more detailed, and the report is then unfavourable. A few examples may be given.

Sanitary state of
merchant shipping.

Carthage.—Dr. Dalgairns says that the most common diseases among the crews are venereal and rheumatic, chronic bronchitis, and phthisis in the first and second stage. Scorbatic affections are rare.

The accommodation on board in sickness is generally bad, and the medicine chests badly supplied. They usually contain the prescribed number of bottles, but the contents are often sadly deficient, and the master and mates ignorant of their use.

Piræus.—Consul Neill says, that "although we have few cases of sickness on board ships in this port, the vessels of all nations other than steamers still admit of much improvement, as regards space and ventilation of the fore-castle appropriated to seamen; and I think that sufficient attention has not been paid to the more frequent change of their clothing."

Marseilles.—The statement that "yellow fever as well as typhus often makes its appearance on board ships, arriving at this port, during the passage from the countries where the diseases prevail" is very significant in reference to the present subject.

The Board of Health of *Canada* remark, that "vessels arrive from sea often in a filthy condition, having had cargoes of a putrefactive tendency, whereby the ship and bilge water have been contaminated. Numbers of these vessels are congregated side by side at wharves and mooring places, and their crews, generally indulging in every conceivable excess soon become the subjects of any prevalent disease." The Board lay much stress on the importance of a systematic inspection of vessels in the port of *Quebec*, more especially in epidemic seasons.

Surgeon-Major Odell observes, in reference to the shipping at *Quebec*, "German and Norwegian ships are said to be the cleanest. Of those I visited, a Norwegian vessel just arrived with emigrants was clean and well ventilated; the sailors' berths, bedding and blankets were cleaner and in better condition than British ones, with one exception."

Trinidad.—Dr. Anderson, health inspector of Port of Spain, says: "The accommodations are not so good as they ought to be on board most British ships, and are inferior in general to foreign vessels in this respect, especially the Americans."

Dr. Johnson, health officer at *Demerara*, says:—"The general sanitary state of vessels frequenting this port is very bad indeed. The fore-castles (except in American ships) are generally dark, dirty and badly ventilated, so much so that, as a rule, sailors sleep on deck, to their great detriment. They are kept too much on salt provisions; and, whenever they have a chance of getting to a grog-shop, they are poisoned with new and inferior rum."

During the prevalence of yellow fever at *Demerara* in 1851-2, a systematic inspection of the shipping in the port was established, on the recommendation of the late Dr. Gavin, then one of the Medical Commissioners in the West Indies; and the practice was continued for a length of time, to the marked improvement in the condition of the men's berths, and of the ships generally.

Dr. Smith of *Port-au-Prince*, *St. Domingo*, states, that in his long experience he has generally found the French and German vessels more cleanly and of a better class than those under British or American flags. The French and German sailors also are, on the whole, more cleanly in their persons, and less intemperate than the latter. British vessels frequenting the port, are, with rare exceptions, very filthy and hygienically bad in respect of their internal sanitary arrangements. The fore-castles, where the men are berthed, are generally unwholesome, and the bed, bedding, &c. dirty and unaired. Reckless and intemperate in their habits, the men are often exposed to the sun and rain while landing or shipping the cargo; and then they resort to the immoderate use of the cheap ardent spirit of the country to keep up strength and to ward off, as they imagine, attacks of the indigenous fever. Dr. Smith has seen instances of vessels losing half their crew from sickness, and the other half by desertion, while in harbour.

He points to the mischievous effects of the masters of vessels taking upon themselves to drug their men when sick, instead of at once applying for proper professional advice. "In many instances, a medical man is resorted to only when it is feared that death

Observations.

may occur on board, in which event, according to the law, the ship would be liable to a penalty of 500 dollars, if no professional assistance had been obtained."

Respecting the sanitary condition of the merchant shipping at *Rio Janeiro*, Dr. Macleod, of Her Majesty's ship "*Madagascar*," mentions, as the result of his inquiries, that the ships in general are dirty, and that little attention is paid to the comforts of the men, the chief object seemingly being to provide room for the cargo, and for passengers if carried.

Mr. Bowman, Her Majesty's consul at *San Francisco*, says: "The accommodation on board ships, especially British, might be greatly improved. In this particular the Americans are far before us; for while their seamen are generally provided with roomy, dry and airy berths in houses on deck, our sailors are placed in the fore-castle below, in which there is little light or fresh air, and often more or less damp. I attribute to this cause, as well as to the insufficiency of warm clothing, the number of English seamen arriving here suffering from rheumatism and diseases of the chest."

Consul Foote, of *Salvador*, attributes to the intemperate habits of our merchant seamen, coupled with the want of comfort in their accommodation on board their vessels, their low and sickly state as compared with the merchant seamen of some other countries, especially the French.

EXPENSES OF QUARANTINE.

Expenses of quarantine.

As to the money bearings of the subject of quarantine, in reference to the probable expenses incurred by shipping, direct and indirect, in consequence of the detention, loss of time, &c. therefrom resulting, the sub-committee have obtained but little information. In December 1859, a letter was addressed to the Chairmen of the Chambers of Commerce of Liverpool, Bristol, Southampton, Hull, Belfast, Dublin and Glasgow, directing their attention to this part of the inquiry, and requesting their co-operation; but, with the exception of the Liverpool Chamber, which promised through its secretary its assistance, but from which no information has yet been received, these commercial bodies did not acknowledge the communication.

As an instance of the charges now made in Spanish ports, in cases of mere quarantine of observation on a vessel with a *clean* bill of health, Consul Brackenbury mentions that the expenses which the ship "*Wavre*" from Glasgow had to pay in April of last year, in consequence of an unnecessary detention—for the quarantine imposed was at once cancelled by order of the Government, when the particulars were made known at Madrid by telegraph—amounted to 390 reals vella, or about 4*l.*; viz., health guard, 30 reals; fumigation, 48 reals; expenses of ship for three days, 312 reals.

[It would appear, from a statement made in Dr. W. H. Burrell's Report on the Plague of Malta in 1813, that the extraordinary expenses incurred at that time in enforcing quarantine measures, &c., connected with the attempts to confine the disease (as he considered of local origin), amounted to the enormous sum of 232,531 *l.* 13 *s.*—*J. Davy.*]

GENERAL CONCLUSIONS.

General conclusions.

FROM the preceding evidence, the following general conclusions appear to be fairly deducible, viz., that—

1. *Great diversity and discrepancy exist in the system of quarantine pursued in different countries; sometimes even in countries which are adjoining to each other, and under precisely similar conditions.*

Within the last eight or ten years, a great relaxation of the system has been made in some European countries, and likewise in certain colonies, while in other countries and colonies the system appears to be more rigorous than it was before. Much of the practice still in force is certainly uncalled for as regards the public health, and seems to be retained on fiscal rather than on sanitary grounds.

Quarantine restrictions appear to have been sometimes resorted to from merely political motives, and to have been used as a pretext for the annoyance and detriment of other countries.

All unnecessary interruptions to international intercourse cause not only great personal inconvenience, but serious commercial loss.

[It appears to be admitted that the preventive measures adopted by the governments of different states to exclude a contraband trade have been more elaborate, and organized with greater care, with a view to efficiency, than any system of quarantine hitherto in use, and yet with only partial success; and this universally.—*J. Davy.*]

[Instead of No. 1, I submit the following:—

It is much to be regretted that any relaxation of quarantine should have been made,

made, but more especially in regard of yellow fever and cholera morbus, because, in consequence of the want of proper precautions, these diseases within the last 30 years have been introduced into countries where they were unknown before. General conclusions.

The commercial loss occasioned by the detention of a few vessels off a healthy port is unimportant, compared with the loss occasioned by the imposition of quarantine on vessels arriving from infected ports in other ports where quarantine is exacted.—*A. Bryson.*]

2. The general want of accurately detailed records of the practice and results of quarantine from year to year, in different ports, prevents that full examination of the subject in its various bearings, which it is obviously the interest of all countries to possess.

The want also of faithful official reports of the rise and progress of destructive epidemics in different countries, and more especially in British and other Colonies, is for many reasons much to be regretted.

3. The different forms of bills of health which are obligatory on vessels before leaving a port, and which profess to certify the state of public health in the port of departure and the surrounding country, are, as now given, obviously fallacious and often erroneous; and they can afford little or no reliable guarantee for the defence of the public health in the port of arrival.

They are in reality rather passports to facilitate the admission of vessels on arrival, than trustworthy vouchers of an ascertained medical truth.

4. Even in those countries where quarantine is most rigorously observed, it is made to yield not only to the exigencies of war, but often also to the commands of superior governmental authorities in favour of particular arrivals, while other arrivals in a more healthy condition are subjected to detention.

5. The state of many existing lazarets is extremely faulty, and must inflict not only discomfort, but injury, on persons in health confined therein, while often no suitable accommodation is provided for the sick. To make use of a vessel placed in quarantine as a lazaret for the detention of her own crew and passengers, whether well or sick, is at variance with the teaching of modern medical science.

The arrangements in most ports for providing medical assistance to the sick on board such vessels appear to be generally unsatisfactory.

[And the same remark, in the majority of instances, applies to the providing medical aid to those who are undergoing quarantine in lazarets.—*J. Davy.*]

[Vessels or hulks are uncomfortable places to live in; but as they are readily moved into isolated positions, they are, and necessarily must be used occasionally for the detention of persons infected with communicable diseases, where there are no better means of accommodating them. They are well adapted for maintaining a strict segregation of the sick from the healthy.—*A. Bryson.*]

6. The experience of recent years appears to show that the spreading of a pestilential disease from persons or cargoes undergoing quarantine in lazarets is scarcely known. Persons, however, going on board a foul and infected vessel on arrival, such as pilots, health guards, custom house officers, and others, have repeatedly been attacked with some dangerous disease soon afterwards.

On several occasions, the disease for which quarantine was imposed has broken out on board, after the vessel has undergone the prescribed detention and been admitted to pratique.

[It appears to me that, from the experience of past years, we may assume that pestilential or spreading diseases seldom or never break out in ships in consequence of the foul condition of their holds or cargoes; consequently, the necessity of placing a vessel in quarantine merely because she is unclean may be questioned; but if a communicable disease has made its appearance amongst her crew, it will then be proper, whether she be in a clean or foul state, to quarantine both the crew and the vessel until the infecting poison has been removed or become effete.

It is clearly evident that a disease may break out in a vessel after she has been relieved of quarantine, provided the term of detention does not exceed the incubative period of the disease for which she was quarantined.—*A. Bryson.*]

7. The classification of cargoes into susceptible or non-susceptible, retained in many of the Mediterranean and other southern European ports, rests on a mere hypothesis unwarranted by experience; and the measures often adopted for the alleged purification and disinfection of ordinary cargoes in a sound and undecayed condition are quite illusory.

[And the same remark applies to the quarantine classification of substances generally.—*J. Davy.*]

To fumigate, cut, or immerse letters, book-parcels, &c., is simply absurd.

[The whole doctrine of fomites requires careful re-consideration, especially now that so much importance is attached to fomites by sanitary reformers in the United States.—*J. Davy.*]

General conclusions.

[I agree in thinking that infectious diseases are seldom communicated by the cargoes of vessels, but *parcels* should never be allowed to be landed from any vessel in quarantine until they have been opened and exposed to the external air and beat for several days.—*A. Bryson.*]

8. It does not appear that those countries, in which quarantine restrictions are most rigorous and most strictly enforced, have hitherto been more exempt from the visitations of the diseases against which quarantine is chiefly imposed, than other countries where the regulations are more simple and less burdensome.

[And some countries, certain islands in the Archipelago under Ottoman rule, most exposed, have entirely escaped these visitations.—*J. Davy.*]

It is highly important that sound views respecting quarantine be held and acted on, as all unnecessary or erroneous measures of sanitary police not only cause annoyance or positive mischief, but serve to withdraw public attention from the surest measures for protection and prevention. Thus, in respect of smallpox, the attempt to exclude it by quarantine (*a*) appears generally to have had the effect of causing the neglect of the only sure preservative, viz., the vaccination of the community. Such has been the case in many of the West India and other Colonies of this country.

[*(a)* And yet the strictest quarantine has not excluded the smallpox and other exanthemata, as witness Malta.—*J. Davy.*]

It should also be borne in mind that oppressive quarantine is very apt to defeat its own purpose by its very stringency, and by making it the interest of shipmasters and others to conceal the truth, with the view of evading the annoyance and expense of a lengthened detention.

[I submit that we have no means of forming a just opinion with respect to the advantages of a strict or loosely enforced quarantine; but as there is no evidence on record that cholera morbus or yellow fever have ever, either in this country or on the continent of America, developed themselves and spread epidemically, and as we have abundant proof that both these diseases have invariably broken out after communication with infected places or persons, or after the one or the other of these diseases has been brought into the neighbourhood, we are bound strongly to recommend that all vessels arriving in a healthy port with either malady on board should be kept strictly in quarantine, and that as the crime is great the penalty against infraction be severe, equal at least to that for manslaughter. This might deter shipmasters and others from attempting, by false means, to evade quarantine.—*A. Bryson.*]

9. The *sanitary and hygienic state of merchant shipping* is often very faulty; and there is good reason to believe that there is at all times a large amount of sickness, damaged health, and premature disablement among the merchant seamen, which might be easily prevented by simple precautionary measures.

The *sanitary condition*, too, of most *seaport towns*, and more especially of those parts near which the shipping is lying, is generally reported to be extremely unwholesome, and calculated, if not to engender, inevitably to aggravate many of the diseases against which quarantine is directed.

[This applies, I think, more particularly to the smaller seaports.—*T. B. Horsfall.*]

RECOMMENDATIONS.

Recommendations.

WITH the view of rendering the practice of quarantine, in different countries, a means of better defence against the introduction of dangerous diseases from abroad, and at the same time of improving the condition of merchant ships and the health of their crews, without any unnecessary interruption of international intercourse, We, fully recognizing the great importance of an efficient sanitary supervision in all great seaports, would submit the following *recommendations*:—Our object is to amend and utilise, not to discontinue or to abolish the existing machinery of action.

[I concur with the conclusions, &c. of the Report, except that I am unable to assume that "the introduction of dangerous diseases can be prevented by any quarantine regulations."—*W. Farr.*]

1. As a general rule, vessels from abroad which have remained free from sickness during their voyage, and on board of which no malignant zymotic disease (chronic maladies not included) exists on arrival, and which are found on examination to be clean, and to have no putrescent or offensive cargo on board, may be at once admitted to pratique without respect to the country from whence they come.

[1st. I would recommend that all vessels coming from a port which has been free from infectious diseases for 21 days, be at once admitted to pratique, provided no infectious disease has made its appearance in the vessel during the voyage. And, 2d. That vessels coming from a port infected with cholera morbus or yellow fever be

be admitted to pratique 21 days after their departure, provided they have held no communication with any other vessel or port on the passage; and that the crew has been entirely free from infectious diseases during the voyage. Vessels infected with yellow fever may be admitted to pratique on their arrival in all ports and places where the heat does not exceed 60°.—*A. Bryson.* Recommendations.

2. When quarantine detention is deemed necessary, whether from the actual or recent existence of a malignant disease on board, or from the foul and unwholesome state of the vessel, a careful examination should be made of her, and of all persons on board, by the quarantine medical officer, who should have the power and be charged with the responsibility of adopting such measures as each case demands.

The healthy on board need not generally be detained, and the sooner the sick are removed out of the infected vessel to a suitable locality (*a*), the better. In cases where smallpox is, or has been, on board (*b*), all unprotected persons, whether among the crew or passengers, should be vaccinated (*c*) before they are permitted to disperse.

[*(a)* Where separation from the healthy on shore could be efficiently maintained.—*B. G. Babington.*]

[*(b)* All persons without exception should be examined by the general medical officer, and those, whether among the crew or passengers, who had, in his judgment, either not been vaccinated at all, or not been efficiently vaccinated so as to afford them protection, should be vaccinated before obtaining permission to disperse.—*B. G. Babington.*]

[*(c)* Wherever this is practicable.—*W. Farr.*]

[I am of the same opinion. There is often a want of lymph, and the hot season is unfavourable.—*J. Davy.*]

[Ought there not to be some one on the quarantine staff who especially is connected with the Marine, and understands the construction of ships, their holds, bilges, &c. to act in conjunction with the general medical officer, who, though a competent judge of the state of the human frame, may not be equally so of the state of a ship, and might therefore be easily deceived by an artful master of a ship interested in making out a good case in order to avoid detention?—*B. G. Babington.*]

[Ought not every quarantine station, and indeed ought not every great commercial port to have an hospital for the reception of sick sailors, and be under medical inspection?—*J. Davy.*]

[Would it not be more consonant with the teaching of sound sanitary science, and the laws of causation and propagation of infectious diseases, to transfer the sick to a well-aired and properly fitted-up hulk, moored off our several ports or harbours in England, than to remove persons labouring under infectious disorders to an hospital on shore, and thus endanger the public health, a signal and fatal instance of which has been so recently recorded, after the arrival of an Egyptian vessel in the port of Liverpool?—*J. Wiltin.*]

[When quarantine is deemed necessary, whether from actual or the recent existence of an infectious disease on board, a careful examination of the ship and of all persons on board should be made by the Government medical officer, who should have the power of placing her in quarantine in accordance with the regulations adopted by his Government. The healthy part of the crew and passengers should then be landed or transferred to another ship or hulk, and kept in strict quarantine until a period equal to the incubative period of the disease for which the ship is quarantined has expired, or if cases subsequently occur amongst them, until at least 14 days after the termination of the last case. The sick should also be kept in strict quarantine, either in the vessel or on shore, until the disease has become entirely extinct. The vessel herself should be quarantined, and all the stores, clothing, and bedding which had been exposed to the emanations from the sick should be thoroughly purified and ventilated.—*A. Bryson.*]

3. Vessels arriving from abroad should be required to pump out their bilge-water, and to have their bilges thoroughly washed out before they are admitted into any crowded harbour or into docks, &c.

The hatches also should have been occasionally kept open, and the hold aired as far as possible before arrival and admission.

[Weather and the nature of the cargo permitting.—*B. G. Babington.*]

[Is the pumping out of the bilge-water of so much importance? Are there not many instances of ships remaining unhealthy after all common precautions have been taken to cleanse them? The "Eclair" for instance. Dampness, or mouldy state of the timber, seems an element of insalubrity.—*J. Davy.*]

[Instead of No. 3, I would submit that the crews of vessels with putrescent or offensive cargoes on board be admitted to pratique on their arrival, and unless some infectious disease has made its appearance on board, that the vessel be dealt with as a nuisance.—*A. Bryson.*]

4. Before bills of health are given to a vessel on leaving a port, an examination should be made by a competent person to ascertain her sanitary state, and the health of her crew and all on board (*a*); and the particulars should be mentioned in the bill.

[*(a)* And also the quality and quantity of water and provisions, and the clothes of the seamen, medicines and medical comforts.—*J. Davy.*]

[No person should be deemed competent to grant a bill of health unless duly qualified

Recommendations.

qualified to practise medicine. He should make himself well acquainted with the health, condition of the population in the town and neighbourhood in which he resides, and should ascertain by personal inspection, whether the crew and passengers are healthy, and whether any of them have recently come from a distance, or received clothes or luggage from a distance.—*A. Bryson.*]

5. Medical quarantine officers should be required to keep accurate records of all matters relating to quarantine, and to the condition and circumstances of the shipping (particularly of emigrant and immigrant vessels) arriving in and leaving their ports; and to prepare an *annual report* from the data so procured, for the information of the local authorities; and in this report, mention should be made of any epidemic visitation which may have occurred in the place during the year.

[A similar report might be required from medical officers in charge of troops on long voyages, given with some minuteness of detail in case of unusual sickness, to be addressed to the Director General, and by him to the General Board of Health.—*J. Davy.*]

[Medical officers of merchant ships should be obliged to keep a record of the sickness on board their ships, and they should be called upon to state their opinions as to the origin and spread of such sickness.—*J. Wiblin.*]

This plan might at once be adopted in all our own colonies with advantage, and foreign Governments might be invited to follow the example.

From the very complete statistics which appear to be kept at the great quarantine ports of Lisbon, Vigo, and Alexandria, and which were readily communicated to the British consuls for the use of the Committee, it may be inferred that the Governments of Portugal, Spain, and Egypt, would at once agree to give effect to such a proposal.

Such *annual reports* would be extremely useful not only to each country and to each colony, but to all other countries, and also to the mother country of the Colonies.

It behoves Great Britain,—which is so deeply interested in all that concerns the freedom of commercial and general intercourse, as well as in maintaining in the utmost possible health a robust and efficient mercantile marine in all parts of the world, no less than in affording useful guidance to her numerous Colonies in matters relating to public health,—to take the initiative in a work of this nature. Her example would be speedily followed by other countries.

6. It would materially conduce to a thorough knowledge of the subject, and probably to the speedy adoption of a more rational and uniform practice generally, if the Government of this country instituted an investigation into the results of quarantine, and the working of quarantine establishments, in the chief ports of the south of Europe and of the Mediterranean where the system is still in greatest force, in order to ascertain the actual truth by personal observation on the spot.

[And also in the principal ports of the United States, and of the Danish, French, and Spanish colonies in the West Indies, in all of which the existing quarantine system is so irregularly conducted.—*J. Davy.*]

[Instead of 6, I propose,—

It would materially advance a thorough knowledge of the subject, and conduce to the adoption of a more rational and uniform practice, if the Government of this country would institute an investigation into the nature of infectious and epidemic diseases.

1st. With the view of determining, on evidence, what diseases are and what are not infectious or communicable.

2d. On the best mode of arresting the spread of infectious diseases.

3d. On the retention of the infecting poison by clothing, bedding, or other articles exposed to morbid emanations from the sick.

4th. On the length of time the poison may remain latent in the human system.

5th. On the probable distance it may be borne by the ordinary atmospheric currents.—*A. Bryson.*]

<i>B. G. Babington.</i>	<i>Thomas B. Horsfall.</i>
<i>Thos. Bazley.</i>	<i>John Liddell.</i>
<i>Walter Buchanan.</i>	<i>J. R. Martin.</i>
<i>A. Bryson.</i>	<i>Gavin Milroy.</i>
<i>James Clark.</i>	<i>Richard Owen.</i>
<i>John Davy.</i>	<i>Southwood Smith.</i>
<i>W. Farr.</i>	<i>T. Spencer Wells.</i>
<i>J. B. Gibson.</i>	<i>John Wiblin.</i>

G. W. Hastings, Hon. Gen. Sec.

Having been recently employed by the Government, in a confidential inquiry into some questions connected with quarantine, I feel precluded from expressing any opinion upon the report of the Committee, as I could not enter upon a discussion of the various points it embraces with sufficient freedom to render my remarks of any value.

July 1861.

J. O. McWilliam.

APPENDIX.

HISTORICAL SKETCH OF QUARANTINE LEGISLATION AND PRACTICE in Great Britain.
By Gavin Milroy, M. D., F. R. Coll. Phys. &c.

Appendix.

THE earliest legislative enactment on the subject of extrinsic quarantine, with the view of preventing the importation of the plague by arrivals from abroad, was in the early part of last century. Before that time, whenever it was thought by the Government necessary to impose quarantine restrictions on vessels coming from infected countries, the requisite orders had been issued by the King in Council, or by municipal authorities acting under a Royal proclamation.

These orders were of course only temporary, and ceased with the occasion. They were moreover, rarely had recourse to;—for, not to go further back than the 17th century, it appears that the successive visitations of the plague in 1603, 1625, 1636, and 1665, in this country were not generally, and certainly not by the best informed persons, attributed to a direct or traceable introduction of the disease from abroad;* nor does it seem that any special restrictions upon foreign arrivals had been adopted by the Government prior to the occurrence of any of these epidemics. The orders issued were directed rather against the spreading of the disease in a locality where it should appear, or had already appeared, than against its apprehended importation from without; and they related therefore not so much to *extrinsic* as to *intrinsic* quarantine. Such, for example, was the case with the Act passed in 1604 to give legislative force to the orders which had been issued by the Privy Council in the preceding year against the infection of the plague, and the chief provision of which was empowering the justices of the peace to shut up infected houses [the doors having been marked with a red cross] with all their inmates, the well and the sick together, and to prohibit, under severe penalties, the egress or entrance of any person for a prescribed period, which was usually of 40 days or *une quarantaine*. Penalties were also inflicted upon all persons going abroad with any suspicious symptom or mark of the disease upon them; in mild cases the offenders were to be treated as vagabonds, and whipped; but if an infectious swelling or sore was found on their bodies, they were to be punished as felons, and might be put to death. To the credit of the then House of Lords, this arbitrary and irrational enactment did not pass without strong opposition from many of the peers. Notwithstanding the repugnance of an enlightened few in the community, similar measures continued to be resorted to for long afterwards, in seasons of public alarm.†

But ere long, a remarkable change took place in the natural history of the pestilence, as regards this country at least.

After the great visitation of 1665, the plague ceased to re-appear in its epidemic form among us. Only scattered cases, or groupes of cases, continued to occur both in the metropolis and elsewhere for a good many years after, as had always been the case after previous epidemics. The London bills of mortality show that, from 1603 down to 1679, deaths from plague took place in every year, with the exception of four or five years at the most. After 1679, no deaths from this disease were recorded.

The subsidence and ultimate cessation of the plague in England took place, notwithstanding the continuance of epidemic outbreaks of the pestilence in various countries on the Continent, and the non-existence, at the same time, of any system of regular quarantine against arrivals from abroad.

The Levant Company, established in the reign of Charles the First, and in whose hands was all the British trade with the eastern shores of the Mediterranean, always affirmed, in their printed orders to their factories abroad, that not a single instance could be adduced of the plague having ever been brought to England through the medium of their commerce; and they boldly challenged a contradiction of the statement. Moreover, Sir James Porter, long British Ambassador at the Porte in the early part of last century, and whose opinion may be thought to be more thoroughly disinterested than that of the Company, went still further, for he asserted that the plague had never been shown to have been introduced, either into our country, or into Holland (where it had repeatedly prevailed with great fatality during the 17th century) directly from any part of Turkey.‡

It was not until 1710 that the first quarantine legislative enactment, entitled, "An Act to oblige Ships coming from Places infected, more effectually to perform their Quarantine," was passed in the ninth year of the reign of Queen Anne. The Bill had been hastily prepared,

* Sydenham, and other eminent physicians of his day, although of opinion that the plague was not bred, or strictly speaking indigenous in England, but that it had found its way into our country either directly by the atmosphere, or through the intervention of fomites; i.e. substances believed to be charged with the poisonous germs of the disease, did not attempt to trace any immediate connexion as of cause and effect between individual arrivals and the outbreak of epidemic invasions. Neither was the belief in personal contagion, or the communication of the disease from the sick to the healthy, at all generally recognised.

† The above statute of 1 James 1, c. 31, was only repealed by the 7 Will. 4, and 1 Vict.

‡ Observations on the Laws, Religion, &c., of the Turks. London. 1772.

Appendix.

pared, and was hurried through the Legislature in consequence of the alarm occasioned by the prevalence of the plague in various parts of Poland, at Dantzic, and other parts of the Baltic. The Act was soon found to be very imperfect, and remained in force for only a few years.

But before long, public attention was again drawn to the subject. The great outbreak in 1720-21, of the pestilence in the South of France, and more especially in Marseilles, excited consternation in many countries of Europe. Throughout Provence its ravages were frightful. The four towns of Marseilles, Arles, Aix and Toulon, alone lost 79,500 of their inhabitants.

Dr. Mead, then the leading physician in London, was consulted by the Government, and at their desire drew up his well known Treatise on Pestilential Contagion, dedicated to Mr. Secretary Craggs. Upon the views and recommendations therein set forth, a Bill "For the better preventing the Plague being brought from Foreign Ports into Great Britain and Ireland, or the Isles of Guernsey, &c., and to hinder the Spreading of Infection," was brought into Parliament, and speedily became law; it was introduced into the House of Commons, 17th December 1720, and received the Royal assent on the 25th January 1721. Several supplements were afterwards added, one of which was "to enable his Majesty effectually to prohibit commerce for the space of one year, with any country that is or shall be infected with the plague."

Dr. Mead does not appear to have ever seen any cases of the genuine plague himself, or even to have visited the countries where it usually prevailed; nor had he, moreover, any practical acquaintance with the existing lazarets and quarantine establishments on the Continent. His opinions were formed from what he was told by others, or what he had read of the disease, taken in connexion with his actual knowledge of the bad malignant fevers then common in the metropolis and other places in this country. The nearest approach to the true plague he considered to be the "jail fever" of his day. Their mode of development, symptoms, usual *habitat* as to the nature of local conditions, and their destructive malignancy among the poor and neglected were much alike, if not identical;—their main difference consisted, he thought, in the one being essentially and eminently contagious, and the other being but feebly so, and therefore far less formidable. Thus it has always been with dreaded but unexperienced evils; *omne ignotum pro terribili*.

This opinion did not prevent him from arriving at the conclusion that the same measures, which he knew from experience were best fitted for arresting the progress and mitigating the ravages of the home pestilence, should be equally suitable against the pestilence of the East in any place where it existed. He strongly reprobated the common usage, established by Parliament, of shutting up infected houses and forcibly confining the inmates in these "seminaries of contagion," as he calls them. The healthy, he maintained, should at once be separated from the sick, the latter removed (by compulsion, if necessary) from their dwellings to lazarets or pest-houses, and the former sent off to a distance and dispersed, while the houses thus emptied were cleansed and purified. The experience of our own, as well as of foreign countries, was decidedly in favour of this practice.

In the epidemic of 1636, for example, we find that "not one in 20 of the well persons sent away from infected dwellings was subsequently attacked, and not one in ten of the sick themselves who were removed died." The cleansing of streets and thoroughfares, the free aeration of close confined districts, and other like measures of local purification should also, he said, be enforced.

Attendance upon the sick in clean and airy chambers, Dr. Mead did not consider to be accompanied with much risk. Nevertheless, he strangely thought that, in some instances, a military cordon should be drawn around a district to prevent the diffusion of the poison. As to the quarantine or extrinsic restrictive measures for preventing the introduction of the disease by arrivals from infected or suspected countries abroad, Dr. Mead was guided altogether by the statements and reports of others, and chiefly of foreign, French and Italian, writers, without referring to the opinions and experience of our own physicians during the preceding century, when the disease was endemic in the country.

The poison of the plague, as of the smallpox, might spread, he thought, in three different ways; viz. directly from the bodies of the sick, through the medium of fomites or substances impregnated with the venomous particles, or by atmospheric currents charged with these particles and wafted to a distance. He attached most importance to the second of these modes, namely, to the transmission of infected goods; and thereby he was led to lay chief stress on their purification and (supposed) disinfection by prolonged detention and aeration as the object to be especially aimed at in quarantine. The crew and passengers of a ship might be landed, he thought, at once upon arrival, if there had been no sickness during the voyage from the Levant, with the simple precautions of a thorough washing of their persons and airing of their clothes in the lazaret. But if any case had occurred on board, or if the cargo should prove to be infected by giving the disease to any one who handled it, no precautionary measures could be too summary or severe, even to the burning or sinking of the ship and its cargo, while the crew were strictly detained for a length of time in a lazaret.

The Bill, founded on Dr. Mead's views, did not pass the Legislature without considerable opposition in Parliament and elsewhere, as well as sharp criticism by the profession. Medical writers argued that, as it was admitted that "the plague may be brought and propagated by the air, what defence can leper and pest-houses prove in keeping the disease out of the country? We may as well build a wall to keep out larks as barracks to keep out plague."

The City of London denounced the employment of force and compulsion in removing the sick from their dwellings, and in driving out and dispersing the unattacked inmates; and the Levant Company protested against the excessive rigour of the threatened interruptions to commerce and intercourse upon most insufficient evidence.

But the most important remonstrance was that from the House of Peers; and, as this document is noteworthy in a social as well as in a public health point of view, I give it in full.

Twenty peers recorded their protest against the powers given in this Act (1721), "to remove from their dwellings to a lazaret, sick or healthy persons of an infected family," and, also, "for the drawing of lines or trenches around any city, town, or place infected."

"1. Because the powers seem to us such as can never wisely or usefully be put in execution, and because the very apprehension of a sanitary cordon round a city upon the least rumour of a plague would disperse the rich, and by that means (as well as by hindering the free access of provisions) starve the poor, ruin trade, and destroy all the remains of private and public credit."

"2. Because such powers as these are utterly unknown to our constitution, and repugnant to the lenity of our mild and free Government, &c."

"3. Because we take it, these methods were copied from France, a kingdom whose pattern in such cases Great Britain should not follow; the Government there being conducted by arbitrary power and supported by standing armies; and yet, even in that kingdom, the powers thus exercised of late have been as unsuccessful as they have been unprecedented, so that no neighbouring state has any encouragement from them to follow so fatal an example. In the last plague with which we were visited, A.D. 1665, though none of these methods were made use of, much less authorised by Parliament, yet the infection however great was kept from spreading itself into the remote parts of the kingdom; nor did the City of London, where it first appeared and chiefly raged, suffer so long, or so much, in proportion to the number of its inhabitants as other cities and towns in France have suffered where these cruel experiments have been tried."

"4. Because the great argument urged for continuing these powers specified in the question, that they would probably never be put in execution in the cases objected to, seems to us a clear reason why they should not be continued; for we cannot imagine why they should stand enacted unless they are intended to be executed, or of what use it will be to the public to keep the minds of the people perpetually alarmed with those apprehensions under which they now labour, as appears by the petition from the City of London, lately rejected."

Within six months of the passing of this Act, two vessels from Cyprus (then infected), "having cotton and other goods on board which are dangerous to spread the infection," but without having had any disease during the voyage or after arrival, were ordered by the Privy Council to be burned and destroyed with their cargoes, at an expense of 23,935 *l.* as satisfaction to the owners.

The same summary mode of getting rid of all imaginable risk seems to have been resorted to from time to time.

From the silence of Dr. Mead, it may be presumed that it was only against the Oriental plague that quarantine was in his opinion necessary. He makes no mention of any other disease, not even the small-pox, as requiring this mode of prophylaxis against its introduction. The Act of 1720-21, like that of 1710, being limited to a few years, had to be renewed with slight modifications from time to time, as in 1733,—in consequence of the prevalence of plague on the Continent, and again in 1743, when the pestilence was raging at Messina. In the latter year, Stangate Creek was appointed to be the only station in the kingdom where vessels from the Mediterranean could perform their quarantine.

In 1752, a Bill having been introduced into Parliament for enlarging and regulating our trade with the Levant, the subject of quarantine was again brought under the attention of the Legislature, and a new Act was passed in the following Session. One clause of this new Act denotes the tendency to the adoption of a more rigorous system. "No goods or merchandize liable to retain the infection of the plague, and coming from the Levant, without a clean bill of health, shall be landed in any port of Great Britain or Ireland, unless it shall appear to the satisfaction of his Majesty or of his Privy Council, that the said goods or merchandize have been sufficiently opened and aired in the lazaretto of Malta, Venice, Messina, Leghorn, Genoa and Marseilles, or in one of them." By this enactment, no vessel leaving any port in the Levant for this country with a foul bill, or, in other words, when the plague existed, was alleged to exist in the port of departure, could proceed directly to England; she was obliged to go to a foreign lazaret, and there undergo a more or less lengthened detention, whether there were any traces of sickness on board or not. It immediately became the policy, of course, of the foreign Consuls in the Levantine ports to allege a persistent presence of the disease, for the profit and gain of the quarantine establishments of their respective countries, or other mercenary motive. The Dutch, especially, are said to have benefited so largely by the arrangement, in consequence of the all but total absence of quarantine all the while in Holland, that British bound vessels found it convenient to clear out at Smyrna or other port in the Levant for Amsterdam or Rotterdam, and there obtain clean bills on their way to this country.

Appendix.

In 1754, a vessel from Algiers was sunk, by order of the Privy Council, off the Mother Bank.

It was about the year 1755, that separate hulks were first used as floating lazarets in this country. Previous to that time, when quarantine had been enforced in consequence either of sickness during the voyage, or of any suspicion of the goods on board a vessel being in any measure infected, all the means for purification and disinfection had to be performed on the decks of the vessel itself. The necessity of having a proper lazaret establishment on shore had often been canvassed in and out of Parliament, and pressed on the Government of the day. Chetney Hill at Stangate Creek was the situation generally recommended; this it will be presently seen, was eventually chosen, and afterwards abandoned.

In 1757, when the plague had broken out with great severity in Portugal, Dr. Alexander Russell, who had long resided at Aleppo as physician to the Levant Company's factory there, on being consulted by Lord Chatham as to the existing quarantine practice of the country, gave it as his opinion that "it afforded no security against infection;"—in consequence, he said, mainly of the ignorance of those in whose hands its execution was left, they being custom-house officers utterly unacquainted with the laws affecting the development and spread of pestilential diseases, and also of the want of any fixed or uniform mode of procedure in the different ports of the kingdom. There was no Board of Health, or medical superintendant of quarantine, to advise the Government on such matters. Altogether, the practice was of the rudest and most mechanical nature; and, upon any sudden alarm of danger to the public health from abroad, all was irregularity and confusion.

Thus in 1770, when in consequence of the plague then raging in Wallachia, Podolia and other parts of Poland, special regulations were issued affecting all arrivals from the Baltic, and the custom-house authorities were directed to provide suitable stations for vessels to perform their quarantine, no provision was made for any visitation of them except by the ordinary officer of customs, even when sickness was on board a vessel on arrival.

Ten years later, when the pestilence had again broken out as a destructive epidemic in different parts of Poland, and when special restrictions were again imposed by the Privy Council on the Baltic commerce, the custom-house officers were left to themselves, and without any medical guidance, to carry out the orders that had been issued as best they might.

All vessels from Dantzic and other ports in Prussia or Pomerania had to perform a quarantine of 40 days, before they could land their cargoes. No exception was now made in favour even of grain, although this article had not been considered on the previous occasion, in 1770, as susceptible of conveying the infection. Much public discontent ensued. A sharp remonstrance was addressed to the Prime Minister, Lord North, by the Provost and Magistrates of Edinburgh praying for an immediate relaxation of the order as far as vessels with grain were concerned, as there was a very insufficient supply in the granaries at Leith; and the remonstrance was backed by the opinion of two of the leading physicians in the Scottish metropolis that corn was not a susceptible article. Thereupon, not only was the order revoked, but free and full permission was granted that all grain vessels might discharge their cargoes at once, and without the delay of unpacking on board, opening and airing the bags or sacks, which had always been considered as among the most susceptible of goods, or any other quarantine precaution whatever.

Notwithstanding the acknowledged worthlessness of the system as hitherto pursued, as a means of defence against foreign invasion, the enemy had not found its way into the land for a century at least, nor does the public health seem to have been ever imperilled. And yet, curious to note, there was a disposition about this period to aggravate rather than to relax the rigour of the quarantine regulations, both in this and in most continental countries. This was owing to the strange dogma, which now took full possession of the medical profession, as to the mode in which the infection of the plague was supposed to be propagated and to be conveyed from place to place. More and more importance had, for some time, come to be attached to its transmission by fomites or substances fancied to be impregnated with the poison, and correspondingly less importance was attached to the influence of effluvial exhalations immediately from the bodies of the sick, or arising from atmospheric contamination. The direct and absolute contact with a person, well or sick, or with a substance presumed to be infected, was at length regarded as the principal, if not the only, way in which the disease was conveyed from one individual or place to another.

And thus it came to pass that the mode of spreading of the plague was assimilated, not so much to that of typhus or of smallpox, as Dr. Mead had done, as to that of gonorrhœa or of the itch; the poisonous matter of the fever being supposed to be generally absorbed by the skin, and scarcely, if at all, imbibed by the lungs.

The new opinions—which, it will be observed, indirectly recognised the absence of any risk of healthy crews introducing the disease, and consequently showed the needlessness of their lengthened detention after arrival—soon bore their legitimate fruit; for we find that the Quarantine Act of 1788 was in several respects more stringent and oppressive than its predecessors, especially in reference to cargoes.

Still more summary powers were granted to the Privy Council for the issuing of such Orders as they saw fit, and a provision was now made that "every ship liable to quarantine was required, in case of meeting any vessel at sea or within four leagues of the coast of Great Britain or Ireland, to hoist a yellow flag in the day time, and a light at the maintopmast head at night, under a penalty of 200*l.* for neglect;" so that due warning might be given against any communication with her.

Not only the mercantile community, but also medical men who had had any practical knowledge of the plague in the Levant, loudly complained of such extravagant regulations. Dr. Patrick Russell, who, like his brother, had long resided at Aleppo, writes in 1791,—“It is not to be denied that, as matters stand at present, quarantines without being so secure a defence as is commonly imagined, are a certainly heavy tax upon commerce. The benefit they procure to the State is very precarious; the detriment to the merchant is real.”

In 1800, the quarantine laws underwent a revision by a Parliamentary Committee, and a new Act, founded upon their Report, was passed. This Act put an end to the system which had hitherto prevailed, that all arrivals from Turkey with a foul or suspected bill must purge their quarantine in one of the lazarets in the Mediterranean (Malta, Leghorn, or Marseilles), before proceeding to England; a practice most onerous and expensive to our commerce, and only for the profit of foreigners. This absurdity at length ceased, and our ships could now come directly to England, and perform all the required quarantine on our own shores, usually at Stangate Creek.

This year, two vessels from Mogadore having suspected cargoes (hides) on board, but which had had no sickness during the voyage, were ordered by the Privy Council to be sunk, with their cargoes, at the Nore, at an expense to the public of 15,000 *l*.

The long-entertained project of building an extensive lazaret on Chetney Hill, near Chat-ham, was now adopted; and a sum first of 65,000*l*., and then other sums amounting to 106,000*l*., making in all 170,000 *l* were expended on the works. Before they were completed, the site was ascertained to be a bad one, the ground being so marshy that the foundation of the buildings was discovered to be insecure, and the whole scheme was abandoned, and all the materials of the buildings were sold off for 15,000 *l*. The use of floating lazarets has been continued ever since.

In 1805, a new Act regulated more definitively than hitherto the duration of quarantines to be performed, more especially as related to articles of merchandise on board, according to the nature of the bills of health of the vessels on arrival from abroad. Of the character of the restrictions then in force, one instance will suffice:—“Should susceptible goods arrive in a vessel with a foul—or what is the same thing, without a clean—bill, they must undergo first a probationary airing, on board the vessel, of six days for each portion consisting of as much as can at one time be brought on deck (21 days being employed or more if necessary, to air the whole cargo), and are then transported to the lazaret, where the goods are opened and aired 40 days more;—and the ship itself, after performing a long voyage without any circumstance of sickness on board, is subject to a detention, including the time of discharging and receiving back the cargo, of from 60 to 65 days, added to the expense of maintaining the crew, a pilot, and two officers of the establishment, as well as the heavy charge of 16 *s*. per ton.”

Hitherto, the efforts of quarantine in European ports had been directed mainly, if not exclusively, against the plague. A vessel arriving with typhus fever, smallpox, or other like contagious disease on board, was liable to be detained apart from others, and obliged to hoist a yellow flag to prevent communication with other vessels or with the shore, and her crew and cargo might be subjected to some process of purification; but these precautionary measures were limited to the infected vessel alone, and their adoption did not carry with it the simultaneous suspicion of all other arrivals from the same port of departure, and their consequent liability to quarantine detention, irrespective of their freedom from all disease throughout their voyage.

But about this period, another foreign pestilence began to excite more apprehension than it had done before, lest it might be introduced into Europe by shipping from some tropical countries. This was the yellow fever of the African coast, and of the West Indies and Mexican Gulf. Towards the close of last century, it prevailed with great malignancy in these regions. It broke out, for the first time it was alleged, in some of the southern ports of Spain, and in our own colony of Gibraltar, in 1803 or 1804; and, notwithstanding every effort at exclusion, it recurred in these places on several successive occasions within the next nine or ten years, causing not only great alarm but serious loss of life among the population, civil and military.

Ever since then, yellow fever has been regarded by most quarantine authorities as demanding, for the protection of the public health, almost as vigilant a restrictive surveillance over infected and suspected vessels as the plague itself.

Besides the successive invasions of this disease at Gibraltar, the outbreak of the plague at Malta in 1813 in spite of the quarantine police there, and its terrible consequences, both immediate and eventual, to that important colony, served to awaken from time to time the public mind in this country to these disastrous visitations of pestilence, and to the apparent powerlessness of all tried means for their prevention or restraint. But amid the universal stir and din of mighty war throughout Europe at that period, the lesser judgments were known but to the few, and were soon forgotten.

Two years after the visitation of the plague at Malta, Corfu, the principal island of the Ionian group, was also attacked with the disease, notwithstanding the utmost vigilance of the authorities, the coast of Albania being suspected at the time.

In 1819, a Select Committee was appointed by the House of Commons “to consider the validity of the doctrine of contagion in the plague, and to report their observations thereon, together with the Minutes of Evidence taken before them.”

This was chiefly in consequence of the views put forth by Dr. Maclean in his recent work, “Results of an investigation respecting epidemic and pestilential diseases, including

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researches in the Levant concerning the plague." From a very imperfect acquaintance with the disease—for his only opportunities of observation were during two or three weeks in the Greek Pest Hospital at Constantinople in 1815—Dr. Maclean had proclaimed that it was not contagious.

More than 20 medical men were examined by the Committee, but of that number not above three or four had ever seen a single case of plague, and one only had witnessed it in the epidemic form, and that was at Malta in 1813.

"The opinions of all the medical men examined," states the Committee, "with the exception of two (Dr. Maclean and Dr. Mitchell, who had never seen the disease), are in favour of the received doctrine that the plague is communicable by contact only, and differs in this respect from epidemic fever."*

The Committee acquiesced in this opinion, and added, that they "abstained from giving any opinion on the nature and application of the quarantine regulations as not falling within the scope of their inquiry, but they see no reason to question the validity of the principles on which such regulations appear to have been adopted."

From the returns from the different quarantine stations in England—Rochester, Portsmouth, Falmouth, Milford, Bristol, Liverpool, and Hull—ordered by the Committee, it appears that, in none of them, had ever a single case of plague been heard of among all the arrivals.

The usual detention in quarantine of pilots on board the convalescent ship at Stangate Creek was, at that time, for 15 days. No instance, however, of a pilot having been ill in consequence seems to have been known.

From a communication in the Appendix of the Committee's Report from Sir James Gambier, Her Majesty's consul at the Hague, it appears that there was seldom or ever any quarantine imposed in the Netherlands upon arrivals from the Levant. Holland was the only country which had acted independently of others, and which had extricated itself from what was felt to be an unnecessary restriction; nor does it appear that she had suffered in any way from her contumacy.

In 1824, the Select Committee, appointed by the House of Commons to consider the means of improving the foreign trade of the country, presented their Second Report, which was devoted to the subject of quarantine. The Right Honourable Charles Grant was the Chairman. Strong evidence was adduced, by several gentlemen engaged in or connected with the commerce of the Mediterranean, of the serious detriment to trade from the heavy expenses and unnecessary delays inflicted upon arrivals.

An example or two will better show the working of the system than any general statements.

In May 1823, the ship "William Parker" was dispatched from Egypt for London at the same time as the Danish ships "Nicolino" and "Vigilantia," for Amsterdam; all were laden with linseed, and all had foul bills of health. The quarantine charges at Amsterdam have not exceeded 5*l*. for each ship and cargo, while for the "William Parker" we have paid 188*l*. 16*s*., being at the rate of 5½ per cent. on the whole cargo.

In December 1820 the "Asia," 763 tons, with linseed, arrived from Alexandria with a foul bill. The quarantine dues amounted to 610*l*., the freight to 1,475*l*.

In the same month, the "Pilato," 495 tons, arrived from the same port with the same cargo, but with a clean bill. The quarantine dues were 200*l*., the freight amounted to 1,060*l*.

During the prevalence of the yellow fever at Gibraltar in 1813, a vessel, 226 tons, was taken up by one of the merchants there who wished to escape the fever, and who brought a few goods, such as he could get on board himself. The quarantine duty that had to be paid before she was released from quarantine at Stangate Creek, where she had been detained for a length of time, amounted to 124*l*.; and her freight was only 75*l*.

In none of the above cases had there been any sickness on board, either during the voyage or on arrival.

So oppressive were the charges, imposed upon the arrival of goods by shipping from some of the Mediterranean ports, that it was found cheaper to have silk and such like goods sent over by land from Italy than to incur the delay and expense of carriage by sea.

In those days, a traveller with his portmanteau, from Naples or Leghorn, might reach England in 10 or 12 days; but his heavy luggage, sent round by sea, would not reach him for a month or six weeks later.

The medical witnesses examined by the Committee were all of opinion that "the regulations of quarantine, as applicable to this country, are more than sufficient for its protection from the danger contemplated."

By far the most important evidence was that of Sir William Pym, who spoke from extensive

* The Privy Council had, the year before, taken the opinion of the Royal College of Physicians respecting the views put forth in Dr. Maclean's work. In the reply of the college, it is stated:—

"We are of opinion, although some epidemic diseases are not propagated by contagion, that it is by no means proved that the plague is not contagious, or that the regulations of plague police are useless or pernicious. We are persuaded on the contrary, from the consideration of the experience of all ages, and some of us from personal observation, that the disease is communicable from one individual to another. . . . The doctrine of contagion appears to us to be wholly unshaken by any argument which Dr. Maclean has adduced; at the same time we think it probable that some of the personal restrictions enforced in the establishments for quarantine might be modified without risk to the public health."

extensive experience, having been many years quarantine officer at Gibraltar and Malta, and subsequently the superintendent general of quarantine in this country, and who was thoroughly acquainted with the practice of foreign lazarets. The general tenor of his testimony was strongly in favour of a great relaxation in the existing regulations, as carried out in this country. He would dispense with all quarantine detention of vessels with clean bills of health from any port in the Mediterranean, Turkey and the African coast alone excepted. And in respect of clean bill arrivals from these last-named countries, he considered that passengers might safely be landed at once, and the vessel itself be admitted to pratique, if the cargo consisted of other articles than hides, and one or two other (then generally deemed) highly susceptible substances. Even in the case of foul bill arrivals from Turkey or the African coast, but where no sickness had occurred during the voyage, a very short detention, he thought, was all that was needful, more especially if the bedding and clothing on board had been frequently and freely aired on the passage. He would much reduce the number of enumerated susceptible articles, and greatly abridge the period assigned for their purification. He had never known, during his large experience, a single instance of a case of plague occurring in a vessel from the Levant to England, and did not hesitate to express his belief that, with due attention to ventilation, all risk of the spreading of the disease might be prevented; "it was found that the medical men and nurses in hospitals escaped it with proper precautions." This was a great step in advance of the doctrine of the age.

With respect to quarantine against yellow fever, Sir William Pym considered that arrivals from even foul-bill ports need never be subjected to quarantine detention in this country, except during the hot months of the year, and then only when the disease had existed on board during the voyage.

Acting upon these views and suggestions of Sir William Pym, the Parliamentary Committee in their Report recommended various important changes, all in the way of relaxation, in the regulations and practice hitherto pursued, to the great relief and benefit of trade and international intercourse, and without the slightest compromise of the public health. Nor was this endangered by the proposed mitigation of the penalties, including even capital punishment, for any evasion or breach of the quarantine laws.

The Committee were of opinion that large discretionary powers should continue to be vested in the Privy Council, in applying quarantine regulations to ships or goods arriving from any port or place whatever, whenever it shall appear expedient for the public safety.

They recommended the repeal of the existing laws, and "the incorporation into a single Act of all the legislative provisions by which it may be thought expedient that the British quarantine should be hereafter regulated."

The Appendix to the Report contains a tabulated list of all vessels which performed quarantine in England, Scotland, and Ireland during the years 1821, 1822, and 1823, specifying the places whence they came, and whether they had clean or foul bills. At the different stations on the English coast, 1,728 vessels had been detained for longer or shorter periods, not stated. Of that number, 49 only arrived with foul bills.

In Scotch ports (the firths of Clyde and Forth) 55 had been put in quarantine, all with clean bills.

In Irish ports (Dublin, Baltimore, Crookhaven, Beerhaven, Belfast, Cove of Cork, Drogheda, Kilrush, Kinsale, Londonderry, Carlingford, Sligo, Waterford) 380 had been put in quarantine, all with clean bills.

The gross receipt of quarantine dues in Great Britain in 1823, amounted to a trifle over 22,000 *l.*; in the previous year it was 14,419 *l.* Not above 900 *l.* of these sums each year was paid on account of foul bill arrivals, principally on vessels coming from Egypt; the whole of the rest was on clean bill arrivals.

The expenses of the quarantine service during these two years were respectively 26,090 *l.* and 23,704 *l.*

The recommendation of the Committee was given effect to by the 6 Geo. 4, c. 78, wherein power is granted to the Crown, on the advice of the Privy Council, to adopt and enforce such measures as they may deem necessary in respect of vessels coming from infected places, or having any infectious disease on board, or arriving under any suspicious circumstances as to infection. A similar power is likewise committed to them (the Lords of the Privy Council or any two of them) in the case of any infectious disease breaking out in the United Kingdom, and for cutting off communication between persons affected therewith, and the rest of the subjects of the realm.

This Act also authorises the Privy Council, as often as they see reason to apprehend that the yellow fever, or other highly infectious disorder, prevails on the continent of America or in the West Indies, to require that every vessel coming from, or having touched at, these parts shall come to an anchor at certain places to be appointed from time to time by the Commissioners of Customs, for the purpose of having the state of health of the crew examined, before such vessel can enter any port of the United Kingdom. But such vessel shall not be liable to quarantine, unless it be so specially ordered.

In 1825, when Mr. Huskisson was at the Board of Trade, some vessels having foul bills were admitted to pratique by order of the minister. Thereupon, the whole United Kingdom was put in quarantine by the Mediterranean powers, and every arrival from Great Britain was subjected to a lengthened detention.

The re-appearance of yellow fever at Gibraltar in 1828, after an absence of 14 years, was the occasion of a Government Commission being appointed, under the Presidency of

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Sir W. Pym, to inquire on the spot into the circumstances attending the outbreak, and whether it was connected with any breach of quarantine. In the opinion of the president and of the majority of the members, no such connexion could be traced.

In 1831, the steady approach of the Asiatic cholera for the first time from the Eastern confines of Europe, and its onward course by the shores of the Baltic and the German Ocean towards our coast, caused strict quarantine measures, both extrinsic and intrinsic, to be resorted to in this country as in most other countries of Europe. By 2 Will. 4, c. 10, the Privy Council were empowered to issue orders such as might appear expedient, with the view of preventing the spread of this disease, &c.; and by the 3 & 4 Will. 4, c. 75, this Act was continued until the end of the next Session of Parliament.

The accession of this new pestilence to the list of quarantine diseases has added immensely, during the last 30 years, to the extension of the system as a whole, notwithstanding the mitigation of its restrictions as respects the one pestilence against which it was originally established; viz. the plague.

The southern countries of Europe, which had entirely escaped the cholera while the Baltic Provinces, Germany, and our own country were suffering in 1831-32, naturally enough at first ascribed their immunity to the more rigorous quarantine they had adopted. Their escape, however, proved but temporary. From 1834 to 1837, Spain, Italy, &c. were successively invaded in spite of every effort to exclude the disease.

Nowhere was rigorous quarantine, both by sea and land, kept up so pertinaciously to the last moment as in the Neapolitan dominions, and few countries were eventually more severely visited. Lord Palmerston, in a Despatch to our ambassador at Naples in December 1836, uses these words:—"It might have been expected that the experience of the last few years would have satisfied all Governments that quarantine regulations have everywhere proved ineffectual to arrest the progress of the cholera, and that consequently such regulations impose useless and unnecessary, and therefore unjustifiable, restrictions upon the commercial intercourse of nations."

The signal failure of quarantine as respects the cholera had served still further to shake public confidence in its general efficiency, and had awakened the attention of our own Government and that of France to the necessity of considering the existing practice of it in reference to the plague more especially as complaints were being made continually both by ships of war and merchant shipping, of the intolerable obstructions they encountered in most of the ports in the Mediterranean, to the detriment of the public service as well as of commerce and international communication. Moreover the careful researches on the spot by various European physicians resident in Egypt, during the terrible epidemic of plague there in 1835-36, had convinced them of the fallacy of the doctrines then in vogue respecting the usual mode of the origin and propagation of the disease, as well as of the uselessness of the complex and oppressive regulations generally directed against its apprehended importation by shipping into other countries.

In 1838, a proposal was made by France to the British Government to promote the formation of a Congress of Delegates from the different European States having ports in the Mediterranean, for the purpose of adopting some uniform and more simple system of quarantine in lieu of the intricate and discordant practice then in force, for in scarcely any two countries did the regulations agree. Lord Palmerston, then our Foreign Secretary, at once acceded to the proposal; but, in consequence of difficulties interposed by Prince Metternich on the part of the Austrian Government, the scheme dropped for the time.

In 1839, the British Government instituted some independent inquiries in consequence mainly of a statement, in the able report of the Crown Commissioners who had been appointed to inquire into the affairs of Malta, that "it is notorious that the mode or modes in which plague is communicated are very imperfectly known, and that some of the maxims upon which the most important quarantine regulations rest are little better than gratuitous hypotheses." It was suggested that two or more medical men should be sent out by our Government to visit all those ports in the Levant where the plague most frequently exists, with the view of collecting ample and authentic information upon the manner in which it is propagated or liable to be communicated.

Sir William Pym, to whom the subject was referred by the Government, wisely recommended that a series of queries, which he drew out, respecting the alleged contagious or communicable properties of the plague, the usual period of its incubation, &c., should be forwarded to the consuls of different nations in the East, more especially to those at Alexandria, for the purpose of obtaining from the resident medical men there, and from other competent persons, the most reliable information on the subject.

It was to this judicious advice, happily acted upon by the Government, that we owe the large amount of important evidence of the many able French and Italian physicians, and also of our own countrymen, Drs. Laidlaw and Abbott, published in the voluminous "Correspondence relative to the contagion of Plague, and the Quarantine Regulations of Foreign Countries, 1836-1843," presented to the House of Commons by command of Her Majesty. This bulky Blue Book contains also the interesting reports of Dr. John Davy, who had been sent by Lord Palmerston to Constantinople to examine "the question whether it (the plague) is contagious or not," and to "give the Turkish Government your opinion as to the expediency of the quarantine arrangements which they intend to establish in Turkey."

In a Despatch addressed to Lord Ponsonby the British Ambassador, in February 1839, Lord Palmerston says with great truth,—"I have to instruct your Excellency to endeavour strongly to impress upon the Turkish Government that they would more effectually prevent the

the breaking out and spreading of the plague, by introducing cleanliness and ventilation in the city and suburbs of Constantinople, than by any such violent interference as is proposed with the domestic arrangement of families.

"It is quite certain that the plague is much aggravated, if it is not absolutely generated, by the want of cleanliness in streets, by the want of sufficient ventilation in houses, and by the want of proper drainage in places contiguous to habitations; and if the Turkish Government would, in the first instance, apply vigorous measures to correct these evils, they would strike at once at the causes of the disease; whereas the schemes which they have now in contemplation will only be productive of inconvenience and suffering to numerous individuals."

In 1843, the Earl of Aberdeen, who was then Foreign Secretary, renewed the attempt in concurrence with France to bring about a meeting of delegates; but again the effort was marred by the dilatory policy of Austria.

Foiled in direct action, France, through her Royal Academy of Medicine, now appointed a commission to examine minutely into all the various questions in dispute respecting the plague, and the quarantines usually exercised against its introduction.

The results of that inquiry, which extended over more than 12 months, are embodied in an elaborate and able report published in 1846.

It is a work of the highest authority, and taken in connexion with the evidence in our Parliamentary correspondence of 1836-43, it exploded, it is to be hoped for ever, the absurd doctrines respecting the properties of the plague which had so long been held, alike to the discredit of common sense and of science, and to the serious interruption of international intercourse. Plague was shown to be similar, in almost every respect, to the typhus and typhoid fevers of our own country, favoured by the like circumstances, and controllable by the same means.

In the meantime, this country had not been altogether inactive. In the Session of 1844, the House of Commons resolved that, "This House approves of the various relaxations of the laws and regulations which have from time to time been introduced, and desires that such further relaxations may be urged upon the attention of foreign Governments and adopted at home, as may be found compatible with a due regard to the public health and the commercial interests of the community." And in October of the same year, Sir William Pym, the superintendent of quarantine, was directed to visit and report on all the stations in the Mediterranean where lazarets and quarantine establishments existed. His inquiries resulted in the recommendation of several very useful changes, all tending to the mitigation or the abolition of existing quarantine regulations and practice. He established beyond all dispute or contradiction this most important position among others, viz. that there was no evidence whatever to show that a single case of plague, or of sickness at all like it, had ever been known to occur, in any country, from the manipulation of suspected or (declared to be) infected merchandise landed in a lazaret. If such were really the fact, where then, it was naturally asked, the necessity for the cumbrous and expensive procedures that were taken for preventing an evil which had in truth no existence? The records of lazarets also proved that diseases had seldom or never spread from even the sick to any other of the inmates or to the officials of these establishments.*

In 1845, public attention was strongly excited by the case of Her Majesty's Ship "Eclair." On arriving at the Motherbank from the coast of Africa, after a dreadful loss of life during the voyage from yellow fever, she was detained in strict quarantine for several days before any of the crew were permitted to be landed, and with the unfortunate result of some fresh attacks and deaths occurring on board subsequent to her reaching this country. The circumstances gave rise to an official controversial correspondence between the Director of the Medical Department of the Navy and the medical officer of the Privy Council, as to the expediency or necessity of the practice that had been pursued on the occasion.

In 1847, by successive Orders in Council, the quarantine restrictions upon all clean bill arrivals, first from the Black Sea and from ports of Turkey in Europe, and subsequently from those of Syria and Egypt, were abolished, and they were admitted at once to free pratique with their cargoes, provided no case of sickness had occurred during the voyage. The distinction hitherto observed between what were termed susceptible and non-susceptible articles of merchandise was, at the same time, done away with. Previous to these Orders, the quarantines imposed upon all arrivals from the Levant varied from 5 to 15 days, according to the nature of the cargoes, &c.

Towards the close of that year, the alarm caused by the apprehended return of the Asiatic cholera to Europe had given rise to very stringent measures in most of the Mediterranean ports, British as well as foreign. At Malta it was resolved, "that vessels arriving from ports where the disease then prevailed, and having on board cases of sickness or death, or having had either the one or the other within 12 days previous to arrival at Malta, should not be permitted to enter even the quarantine harbour, but were to remain cruising in and off the harbour's mouth for such a number of days as the Board of Health decided." In December the French steamer "Pericles," having had a fatal case of cholera on board during her passage from Smyrna, was ordered, in consequence, to leave Malta forthwith.

In

* Correspondence respecting the Quarantine Laws, since the Correspondence last presented to Parliament. May, 1846.

Appendix.

In the summer of 1848, in consequence of the continued advance of the pestilence towards the shores of Great Britain from the Continent, some precautionary regulations of a mild nature were issued by the Privy Council on arrivals in this country from infected ports. The General Board of Health instituted soon afterwards, having declared their opinion that the disease was not contagious, recommended the abolition of all quarantine restrictions in respect of the cholera, and the substitution of sanitary measures in the ports of arrival and departure. The first Report on Quarantine by the Board was issued in 1849. This was followed by a second Report on Quarantine in reference to yellow fever in 1852.

In 1851, the British Government sent two delegates, one consular and the other medical, to the International Sanitary Conference then held in Paris in concert with all the other Mediterranean Powers, with the view of adopting, if possible, some uniform system of quarantine. A summary of the proceedings of the Conference will be found in the Appendix to the Parliamentary Paper—"Copy of Abstract of Regulations in Foreign Countries respecting Quarantine"—prepared for the Quarantine Committee of the National Association for the promotion of Social Science; it was also printed in the Transactions of the Association for the year 1859.
