THIRTIETH CONGRESS—FIRST SESSION.

Report No. 596.

[To accompany Joint Resolution H. R. No. 28.]

HOUSE OF REPRESENTATIVES.

STEAM COMMUNICATION WITH CHINA, AND THE SANDWICH ISLANDS.

MAY 4, 1848.

Mr. T. BUTLER KING, from the Committee on Naval Affairs, made the following

REPORT:

The Committee on Naval Affairs have had under consideration the expediency of establishing a communication by steamers from the territory of the United States, on the Pacific ocean, to Shanghae and Canton, and submit the following report:

The rapid settlement of the Oregon territory, and the acknowledged necessity of some certain and speedy means of communication with our fellow citizens on the shores of the Pacific ocean, indicated the propriety of establishing the line of mail steamers from Panama to some port in our own possessions, authorized by the act of the 3d March, 1847. That line will, before the close of the present year, commence transportation of the mail, passengers, and freight, from Panama to the Columbia river, touching at the intermediate ports on the coasts of Mexico and California. Thus, in connexion with the lines of mail steamers, established by the same act, from New York and New Orleans to Havana, and thence to Chagres, with a communication across the isthmus, and forming also a connexion with the line of British steamers running south from Panama to Valparaiso, affording frequent and regular means of intercourse with all places on the American shores of the Pacific. These steps in territorial dominion and steam navigation place us in a position to extend our view across the bosom of that broad ocean to the shores of Japan and China, and to consider what other and further measures may be adopted for the encouragement and protection of our commerce in that portion of the globe. But before proceeding to do this, it is proper to look to the extent

and condition of that commerce, and to ascertain, as far as practicable, which of the ports in Oregon or California is best suited and situated to become the great depot and future rendezvous of our military and commercial marine.

The whale fishery is, at present, the most important and extensive, the least protected and encouraged branch of our commerce on the Pacific. Scattered thousands of miles from the tropics to the arctic, from the shores of California and Oregon to those of Japan and northern China, among the Polynesian and Sandwich islands, it has been allowed to follow its perilous pursuit with very little fostering care or protection from the government. Our enterprising capitalists have sent forth their ships to the remotest parts of oceans and seas but little known, navigated by our intrepid and hardy mariners, with scarcely a hope of giving to owners or friends intelligence of their progress, or receiving orders or information from home during the long years of their arduous voyages. Under such discouraging circumstances, it is remarkable that this branch of commerce should have attained such magnitude and value. According to the best information, the number of ships engaged in the whale fishery, in January, 1846, was 736, of 233,149 tons, employing 19,560 officers and seamen, and amounting in value to $29,440,000. Most of these vessels cruise in the north Pacific, and are absent from three to four years, and, until the establishment of the line of steamers to Oregon, no means had been adopted by government to communicate with this important branch of our commerce. Officers have been known to return from a whaling voyage, and learn, for the first time, that their wives or owners had been dead for years. The annual product of the whale fishery is estimated at about ten millions of dollars. By reference to the chart which is attached to, and makes a part of this report, it will be seen that, in the summer of 1843, there were one hundred American whaling ships within the space of a small circle between the 51st and 56th degrees of north latitude. Many of these ships cruise along the Fox islands, and stretch across the Pacific to Japan and the Kurile islands, others run down towards the Ladrone islands in search of the sperm whale. In short, they seek the whale in all parts of the ocean. It is their custom to visit some port once or twice a year for the purpose of refreshment and repair, to overhaul, re-cooper, &c., &c. For these purposes, they resort to the ports of South America, the Sandwich and other islands. It is estimated that the money thus expended by each vessel amounts to from four to five thousand dollars a year, or an aggregate annual expenditure of about three millions of dollars in foreign ports, which cannot, in the event of war with a maritime power, afford them the slightest protection, but will serve merely as traps to lead them into the hands of hostile cruisers.

It is estimated that we have about 200 vessels, of 75,000 tons, and 5,000 seamen employed in the carrying trade on that ocean, exclusive of our commerce with China; making 936 sail of 308,149 tons, and 24,560 officers and seamen, engaged in these various branches of commerce, on what may be regarded as the

American portion of the Pacific. Add to these our ships of war employed in the protection of this commerce, which require some place of resort for re-equipment, refreshment, and repairs, and also of shelter in the event of being pursued by a superior force, it seems quite evident that efficient measures ought to be immediately adopted for the establishment of a naval depot and the construction of suitable fortifications at some one of our harbors on that side of the continent. This rendezvous will become the resort of our whaling and other vessels, and the greater portion, if not all, the money now expended in foreign ports, for the purposes indicated, will be disbursed among our own citizens, and contribute to the building up an emporium which will afford the means of extending and protecting our own commerce. This should also be the place of departure of the line of steamers to China, which it is the object of this report to propose, and the terminus of the contemplated railway to the Pacific. A combination of these great objects at one point will afford such facilities to intercourse as will increase our trade on that ocean to an indefinite extent.

Previous to the close of the war between Great Britain and China, commerce with that country was trammelled by vexatious monopolies allowed to the mandarins, whose extortions and caprice imposed the most serious obstacles to the regular progress of trade, and seemed to preclude the hope of any very extended intercourse with that country; but, by the tariff and treaty of Nankin—1843—these impediments were swept away, and a moderate, regular import and export duty established, which has been extended to the trade of all nations; the former about $5\frac{1}{3}$, and the latter 9 per centum ad valorem. Under the liberal provisions of this treaty the imports from foreign countries into China increased, from $10,205,370, in 1842, to $17,843,249, in 1844, and the exports, from $13,339,750, in 1842, to $25,513,370, in 1844, exclusive, in both cases, of the opium trade, and of bullion and specie exported and imported. The treaty between China and the United States, concluded on the 3d of July, 1844, contains some very important provisions which were not secured by the treaty of Nankin. They are:

"1st. Vessels coming into port and departing again within twenty-four hours, without having broken bulk, are not liable to tonnage dues.

"2d. Vessels under 150 tons burthen are to pay only one mace per ton in tonnage dues, in lieu of five mace, to which all merchant ships are liable according to the regulations.

"3d. Vessels may proceed with the residue of their cargoes from one port of China to another, without being subject to tonnage dues, if they have been paid at the port of their first arrival.

"4th. Merchandize which has been imported into, and paid duty in one port of China, may be sent to another port without becoming subject to duty a second time.

"5th. The duty on lead and spelter, which in the tariff is rated at 5 mace per pecul, is reduced to 2 mace and 5 candareens." These provisions have been extended, by special agreement, to the Brit-

ish trade. These treaties have already had a most favorable influence on the trade between China and the United States, which was formerly limited almost entirely to a mere exchange of bullion, specie, and bills on London, for the various sorts of tea, a small amount of silks, and other articles of luxury.

Under these new commercial regulations, a more healthful and equitable intercourse is rapidly springing up, sustained by an exchange of commodities mutually beneficial, and containing the elements of rapid and great expansion. If we assume as an axiom in political economy, that the commerce between nations, to be lasting, prosperous, and mutually beneficial, must consist of an interchange of commodities other than the precious metals, and that, if these metals are required in large amounts, and for long periods to settle the balance of trade in favor of one nation against another, their intercourse must ultimately cease, we shall find, on examination, that the trade between the United States and China rests on a firm foundation, and has the elements of very great expansion, while that between China and Great Britain not only rests in part on materials furnished by our own soil, but that, as at present conducted, it carries with it the principles of decay. The *recognized* imports into China in 1844, on British account, amounted to $15,929,132

The principal items of which were:

Woolen goods	$2,898,866	
Cotton fabrics, including yarns	4,722,836	
Cotton, raw, from India	6,816,382	
In this year there were smuggled in 40,000 chests of opium, valued at		20,000,000
Total of British imports		35,929,132

A small quantity of the opium was probably on American account, but how much is not known.

The exports from China on British account for the year, exclusive of treasure, amounted to	17,925,360
Leaving the enormous balance against China of..	18,003,772

The imports of merchandise into China from the United States in 1844, amounted to		$1,320,170
Amount of treasure		1,125,700
		2,445,870

The principal articles were:

Cotton fabrics	$660,257
Raw cotton	166,965
Lead	108,495
Ginseng	137,560

The exports from China, on American account, amounted to		6,686,171
Deduct the amount of our imports into China, as above		1,320,170
Balance of trade against the United States		5,366,001

$1,125,700 of which was paid in specie, and $4,240,301 in bills on London, which goes so far, of course, to create a balance of trade against us in England.

The imports into China, from all other countries, amounted to but		$401,025
The exports from China, to all other countries, amounted to	$895,896	

It therefore appears that Great Britain and the United States are the great competitors for the China trade.

We have stated the balance of trade against China, and in favor of Great Britain, for 1844, at		$18,003,772
If we deduct from this amount the balance against the United States	$5,366,001	
And *all other* countries	494,871	
		5,860,872
We have the exact balance of		12,142,900

against China, and in favor of Great Britain, which was paid in treasure.

It is stated in the report of the select committee of the House of Commons on commercial relations with China, dated 12th July, 1847, that the *recognized* imports into China were, in

1845		$20,390,784
In British ships	$16,073,682	
In American ships, including specie	2,909,669	
All other countries	1,417,433	
To this is to be added 38,000 chests of opium, smuggled, valued at		23,000,000
Total imports for 1845		$43,390,784
The exports from China were, to Great Britain and her colonies	$26,697,321	
To the United States	8,261,702	
To all other countries	1,972,875	
		36,931,898
Balance against China, paid in treasure		6,458,886

The balance of trade in favor of China, and against the United States, in 1845, paid by bills on London, was $5,352,033.

It appears from the synoptical tables of the import and export trade from foreign countries at the port of Canton, for the year

1846, published in the Canton Mail of July 8th, 1847, that the recognized imports from all counties were:

In British ships	$9,997,583	
In American ships	1,609,404	
Ships of all other countries	783,226	
		$12,390,213
Add for opium, smuggled, estimated at		22,000,000
Total imports		34,390,213
The exports were, on British account	$15,378,560	
On American account	5,207,378	
On account of all other countries	1,611,555	
		23,198,493
Balance of trade against China, paid in treasure		11,192,720

Balance of trade against the United States, paid in bills on London, $4,597,967.

This statement shows a falling off in the British imports for 1846, as compared with 1845, of $6,096,099, and a diminution of exports on British account of $11,319,761, while it exhibits a gradual but steady increase of American imports into China. This statement would probably be slightly varied if we had returns from the other ports open to foreign trade, but as they are mostly supplied by re-exportations from Canton, it cannot be far from correct.

The select Committee of the House of Commons, before referred to, assign, in their report, the cause of this declension in the British trade with China. They say: "In reporting on the condition of our commercial relations with China, your committee regret to state, on undoubted evidence, that the trade with that country has been for some time in a very unsatisfactory position, and that the result of our extended intercourse has by no means realized the just expectations which had been naturally founded on a freer access to so magnificent a market.

"Whether we look to the tables of exports, which mark a declension of exports in nearly every branch of manufacture, or listen to the statements of experienced merchants and manufacturers, we are brought to the same conclusion.

"We find the exports of cotton manufactures decline between the years 1845–46 from 1,735,141*l.* to 1,246,518*l.* in value; those of woollens, in the same period, from 539,223*l.* to 439,668*l.*

"We find that on a great proportion of the trade for the same years the loss, taken both ways, *i. e.* that on the manufactures sent out and on the tea brought home in payment, may be fairly stated at from 35 to 40 per cent.; so great, indeed, that some manufacturers have abandoned the trade altogether, and that much of the tea

lately sent home has been sent on Chinese account, the English merchant declining to run the risk of the venture.

"We find that the difficulties of the trade do not arise from any want of demand in China for articles of British manufacture, or from the increasing competition of other nations. There is no evidence that foreign competition is to be seriously apprehended in the articles of general demand. The sole difficulty is in providing a return.

"Stripping the question of minor details, which may fairly be left out, as not affecting the general results, and setting aside the junk or native trade, which, though considerable, does not assist in the general adjustment of foreign accounts, the trade of China may be thus shortly described. The bulk of its transactions are with England, British India, and the United States."

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"From England, China buys largely of manufactured goods. From the United States, the same articles. From British India, opium and cotton wool to a very large amount. In the year 1845 these imports, as will have seen above, were valued at $43,390,784, equal to £9,401,336.

"The whole of this vast import has to be paid for, with slight exceptions, by tea, silk and silver, though sugar and Chinese grass, as a substitute for hemp, may possibly be hereafter of some importance.

"The payment for opium, from the inordinate desire for it which prevails, and from the unrecognized nature of the transaction, which requires a prompt settlement of accounts, absorbs the silver, to the great inconvenience of the general traffic of the Chinese;* and tea and silk must, in fact, pay the rest.

"Of these, England and the United States are nearly the sole consumers; and thus it happens that the advantages which were so naturally expected from commercial access to a civilized empire of above 300,000,000 people are practically limited by the extent to which these countries are willing or able to consume these two products of the soil of China.

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* The British consul, in his despatch dated 15th of February, 1847, says: "How long the Chinese will be able to sustain this continual drain (*i. e.* of £2,000,000) of the precious metals is impossible to determine; but the fact being now well established, that the export of tea to England cannot be increased under the present system of duties, it is not difficult to foresee, that unless a new opening be found for a larger consumption of China exports in our markets, a gradual reduction must take place, either in the quantity or the prices of our imports in China, until they come to a proper level. On the other hand, it is beyond calculation to what extent the Chinese would purchase our woollens and our cottons, were we enabled to take their produce in return, especially after having attained the legalization of the opium trade.

He further states, and is confirmed by Sir J. Davis in the statement, that "it must be borne in mind that the import trade is regulated by and depends wholly on the export trade, and that therefore only an increase of exports can cause a corresponding increase in imports. The China trade being essentially a direct barter trade, it is obvious that unless means can be found to take from the Chinese a larger amount of their principal export, tea, there seems to be but a limited prospect of deriving for the British manufacturing interests all those advantages which the new position we hold in the country, consequent on the late war, must lead them to expect."

"The balance of trade will no doubt adjust itself sooner or later, in accordance with the severe lessons of loss and disappointment which the three last years have taught; but unless we can look forward to an increased consumption of those products in which alone China has the means of paying, this adjustment can only be made at the cost of largely diminished exports, and of restricted employment to every branch of industry connected with them.

"The export of silk from China is steadily on the increase; and as it labors under no heavy taxation on its entrance either into the United States or Great Britain, and as the access now opened to the port of Shanghae has brought us into closer contact with the districts most productive of it, there is every reason to hope that it will grow with the growing wealth and luxury of nations, and progressively become an element of greater importance amongst the means of payment."

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It is perfectly obvious that the causes which operate to depress and limit the trade between China and Great Britain do not prevail or exist in the intercourse between the United States and China. In the former case, the balance of trade is enormously against China; in the latter, it is very largely in her favor. The balance of trade in favor of Great Britain, as stated for 1845,-'46,-'47, is founded on an estimated value of the opium which is smuggled in, and is probably below the mark. The British consul, as we have seen, estimates it at two millions of pounds sterling, or about $10,000,000 per annum. The average balance in those years against the United States, and in favor of China, was $5,347,442. The average price of exchange at Canton on London for nine years, from 1837 to 1846, was six per cent.; or, to state it differently, a bill of exchange on London of $100, was worth, at Canton, $106. Consequently it cost our merchants an average of $366,101 per annum for the three years, 1845,-'46,-'47, to adjust this balance of trade, and that amount should be added to that balance, which will make it $5,713,543. Some years past, the rate of exchange was much higher. In 1834, it was 14 per cent., and the amount paid to settle the balance of trade against us must have been near *one million of dollars*. We, therefore, perceive, that to the extent we introduce American products and manufactures, in exchange for those of China, we obviate the payment of this tax.

In 1844, our imports into China were carried in 49 vessels, of 10,292 tons burden. This brings up the number of our vessels employed in all parts of the Pacific and in the China trade to 985 sail, of 328,441 tons. The British trade with China, in that year, was carried on in 206 British vessels, of 104,322 tons, and 96 Hong Kong lorches, of 5,774 tons. Total, 302 vessels, of 114,096 tons. We have no returns of the number or tonnage of British vessels employed in other parts of the Pacific.

As has been stated, the recognized imports into Canton, in 1846, amounted to $12,390,213. Cotton and cotton fabrics constituted more than two-thirds the value of these imports, viz:

Raw cotton	$5,095,407
Cotton fabrics	3,684,494
Total	8,779,901
The total amount of imports from all countries into Canton in the year 1844, was	$17,843,249
Of this, raw cotton amounted to	$6,983,347
Cotton fabrics	5,383,093
Total	12,366,440

Showing that more than two-thirds the value of the imports of that year also were of cotton and cotton manufactures.

Most of this raw cotton goes from British India, and is used by the Chinese in the manufacture of the coarse fabrics worn by the common people. It is very inferior to American cotton, and the articles made of it are, of course, not as durable or desirable as our manufactures. Hence it is that the import of American fabrics into China is gradually and surely increasing. The common people, in the middle and southern parts of China, are clothed almost exclusively in these coarse cotton cloths; and when we consider that the empire contains more than three hundred millions of people, it may not be regarded as an over estimate to suppose that they consume more cotton than is now grown in the United States. *It is quite clear, therefore, that the great field for American enterprise and skill, in our intercourse with China, lies in the adaptation of our cotton fabrics to the wants and tastes of the Chinese.*

We have seen that Great Britain now supplies China with raw cotton and cotton manufactures to more than twice the amount of the balance of trade against us, in her favor. This trade properly belongs to the United States, and the difference of exchange between Canton and London, which operates as a discriminating duty, or bounty, of at least six per cent. in favor of American imports, is aiding our manufacturers and shippers to compete successfully with their British rivals. When the superiority of American fabrics shall have been fully tested by the Chinese, there can be but little doubt that the demand for them will increase to the full amount of our exports from China, whatever that may be. The balance of trade against us shows an opening for an increased export to that country of our products and manufactures, without disturbing the laws of trade, to the amount of near six millions of dollars per annum, and a further amount of more than $10,000,000 which our cotton and cotton fabrics ought to supply, in place of those of Great Britain and India. It is not to be supposed, however, that our commercial intercourse with that vast empire will be limited to, or controlled by, the present amount of exports from it. As we have said, our commerce with that country possesses the elements of indefinite expansion. Our great staple, cotton, in a raw or manufactured state, together with lead, ginseng, and other commodi-

ties, afford the materials on our part, for which China may exchange her teas, raw silk, and an infinite variety of articles of taste and luxury. Certainty and rapidity of intercourse are now only wanted to bring these two great nations nearer together, to give them a more perfect knowledge of each other, develope their resources, and build up a commerce more extensive than has probably ever heretofore existed between two nations. The improved condition of our relations with that country, under the new treaties, and the extension of our territorial possessions to the Pacific, have placed it in our power, *ultimately*, to communicate with China almost as rapidly as we now do with Europe. To accomplish this, however, we must extend telegraphic wires across the continent, and establish a line of steamers from San Francisco or Monterey to Shanghai and Canton; the practicability and utility of which the committee will now proceed to examine into.

The idea has generally, if not universally, prevailed, that to communicate advantageously with the west coast of this continent, and increase our intercourse with China, it would be necessary to construct a ship canal from Chagres to Panama, or from some other point on the Gulf to the Pacific, and to proceed from thence, by way of the Sandwich Islands, to Canton. It had not occurred to any one who has written or spoken on this subject, that the distance across the Pacific on this line is almost twice as great as it is to go northerly on a great circle, in conformity to the figure of the earth, and cross from one continent to the other where the degrees of longitude converge towards the pole, and are not much more than half as far across as they are within the tropics.

This route was proposed by Lieutenant Maury, United States navy, in a letter dated 20th December, 1847, to the chairman of your committee, and more fully and perfectly described in his communication of the 10th January last.—See Appendix A, in reply to suggestions and inquiries propounded to him under date of 21st December, 1847. The chart which is attached to and forms a part of this report shows the courses and distances across the Pacific on the two routes, and the advantages of the great circle. As is stated by Lieutenant Maury, to place one end of a string on a globe at Panama, draw it tight with the other end at Shanghae, it will cross the isthmus diagonally, pass up the Gulf of Mexico, and through Louisiana to the west of the Mississippi river, and describing a circle, will pass to the south of Columbia river, and, crossing the Pacific will, in its greatest northerly inclination, touch along the chain of Aleutian or Fox islands, and as it approaches Japan and China, pass the straits of Sanger, between the islands of Niphon or Japan and Jesso, and through the sea of Japan, passing near to Quelpaert's island—which has been taken possession of by the British—and terminate at Shanghai. This line explodes the idea of a ship canal across the isthmus, and establishes, beyond controversy, the great necessity and importance of a railway from the Mississippi to the Pacific ocean. As this work—the greatest of the age in which we live—has not yet been commenced, and its completion will require several years, it be-

comes necessary to avail ourselves, in the meantime, of the most practicable and expeditious route. This forces us to run down the coast of the Atlantic, which enables us to touch at our southern ports and at Havana, and across the gulf to Chagres and the continent at the isthmus to Panama, and from thence northwardly along the coast of the Pacific, until we arrive at or near the point where the great circle crosses, and from thence on that line, as described, to China. Taking up the distances on this whole route, we find them to be—

From New York to Chagres	2,500	miles.
From thence to Panama.....	50	"
From Panama to Monterey or San Francisco.....	3,000	"
From San Francisco to Shanghae.....	5,400	"
Total distance from New York to Shanghae.....	10,950	"

The present sailing route, round either Cape Horn or the Cape of Good Hope, is from 18 to 20,000 miles. This new route saves, therefore, from 7 to 9,000 miles going to or returning from China, making a total saving of 14 to 18,000 in the voyage out and back. This statement shows that by the act of 3d March, 1847, establishing the line of steamers from New York to New Orleans, touching at Havana, with a branch line from thence to Chagres, and from Panama to Oregon, we have actually overcome 5,550 miles, or more than half of the distance from New York to China. We have now but 5,400 miles of steam navigation to accomplish to carry us to Shanghae. From what has been said respecting the great circle route, and by an examination of the chart, it will be perceived that either Monterey or San Francisco must become the port of departure for China, as being situated almost immediately on the route from Panama. The mouth of Columbia river and the ports in the straits of Fuca are too far north, and would lead us out of our way, besides not being equal in any respect to San Fancisco or Monterey. Another important consideration is, the latter are in the best position from which to communicate with the present rendezvous of our whalemen in the Sandwich Islands; an object of very great importance, which will be embraced in the views and recommendations of the committee. Recent examinations have shown that the shifting sands at the mouth of the Columbia river form bars, where there were deep channels but a short time previously, and that in rough weather the ocean swell breaks entirely across its mouth. In 1846, the schooner Shark, commanded by Lieutenant Howison, a most gallant and accomplished officer, was wrecked in attempting to go to sea, where the exploring expedition found water enough to float a seventy-four. He chartered a small vessel to convey himself and crew to Monterey. This drew but eight feet water, yet he was detained *sixty-two days, in sight of the open sea*, by unfavorable weather. Lieutenant H. says:

"The Cadboro anchored in Bakers' bay November 17th, where we remained, pent up by adverse winds and a turbulent sea on

the bar, until the 18th of January. Her master, an old seamen, had been navigating this river and coast for the last 18 years, and his vessel drew but eight feet water; yet, in this long interval of sixty-two days, he could find no opportunity of getting to sea safely. This is in itself a commentary upon the dangerous character of the navigation of the mouth of the Columbia."

Again he says: "I lay at anchor in Bakers' bay, some three hundred yards inside the cape, from November 17, 1846, until January 18, 1847; and although we were unfortunately destitute of barometer and theremometers, we had a good opportunity of observing, during these two winter months, the wind and weather. The heavens were almost always overcast; the wind would spring up moderately at E., haul within four hours to SE., increasing in force and attended with rain. It would continue at this point some 20 hours, and shift suddenly in a hail storm to SW., whence, hauling westwardly and blowing heavy, accompanied with hail and sleet, it would give us a continuance of bad weather for three or four days, and force the enormous Pacific swell to break upon shore with terrific violence, tossing its spray over the tops of the rocks more than two hundred feet high. A day of moderate weather, with the wind at NE., might succeed this; but before the sea on the bar would have sufficiently gone down to render it passable, a renewal of the southeaster would begin and go on around the compass as before."

The Hudson's Bay Company, some years before the settlement of the Oregon question, had found the navigation of the mouth of the Columbia river so dangerous that they established their principal depot at one of the harbors of Vancouver's island.

Again we quote from Lieutenant H.: "A very snug harbor has, within a few years, been sounded out and taken possession of by the Hudson's Bay Company on the southeastern part of Vancouver's island. They have named it Victoria, and it is destined to become the most important British seaport contiguous to our territory. Eighteen feet water can be carried into its inmost recesses, which is a fine large basin. There is besides pretty good anchorage for frigates outside this basin. The company are making this their principal shipping port, depositing, by means of small craft during the summer, all their furs and other articles for the English market at this place, which is safe for their large ships to enter during the winter season. They no longer permit them to come into the Columbia between November and March."

Monterey is situated six hundred miles to the southward of the mouth of the Columbia river, is therefore in a better climate and a more central position. The harbors of San Francisco and Monterey are now so well known, that a particular description of them is not deemed necessary. They are so near together that it is not material which shall be selected as our great naval station and dockyard on the Pacific coast. Whichever may be occupied for that purpose will unquestionably become the rendezvous of our whaling and other merchant vessels, and the terminus of the railway

across the continent. As an unquestionable evidence of the excellence of the harbor of San Francisco, it is stated that our men-of-war have beat out of it in a gale of wind.

As has been stated, and as may have been perceived from the facts and arguments advanced, it is the object of this report to propose the establishment of a line of steamers from San Francisco, or Monterey, to Shanghae, and thence to Canton, in China; and also the employment of a steam mail packet from the same port to the Sandwich islands. The committee are of opinion that the extent and value of our commerce on the Pacific and with China not only warrant such a measure, but that the interests of our whole country require it. Frequency and rapidity of intercourse are found to be the surest means of extending and increasing commerce. When the lines of steamers were first established across the Atlantic, it was supposed by some, and feared by many, that our sailing packets would be thrown out of employ, and that, if successful at all, we should, for the sake of celerity of movement, simply substitute an expensive for a cheap mode of communication. So far from this having been the result, our sailing packets have gone on increasing in size and number beyond all former precedent, showing clearly that the whole range of our commercial intercourse has been increased by the rapid movements of these steamers far beyond what they themselves are able to accommodate or control. Imagine, for a moment, the sudden withdrawal of all steamers from the navigation of the Atlantic, and who does not perceive that every branch of trade would receive a shock which would cause, in a few months, losses to a vastly greater amount than their value. It is with steam ships as it is with railways, they create wealth by facilitating intercourse.

The amount of our tonnage on the Pacific and in the China trade is much larger than that of Great Britain, yet she maintains a strong military establishment at her newly acquired posts in China, and a naval force almost equal to our whole navy, and also a large squadron on the west coast of America, with mail steamers conveying passengers and intelligence in all directions, for the protection and encouragement of that commerce, while our government has not, until recently, taken the first step towards placing our merchants on a footing, in these respects, with their British competitors. Her policy is to protect her commerce with her navy, and by extending her trade, make it support both her manufactures and her navy. Take away either, and the others will perish, and with them, British supremacy. She collects the elements of commerce from other countries. Nature has sown them broadcast over ours. Their development and value will depend on the wisdom and energy of our commercial policy. So vast are the products of our soil that a reduction of one cent a pound on cotton, or one cent a bushel on Indian corn, or two cents a bushel on wheat, would be a larger sum of money than the ordinary annual appropriations for the naval service. Who does not know that the price of these products depends on commerce. Cut off our power to export, and what would be the value of these great staples;

they would not pay transportation to market. In fact, there would not be a market for them. Were we to manufacture every pound of cotton we produce, and forbidden to export what we could not consume, the fabrics would be of comparatively little value; and this would be the case with all products, whether of the soil or the loom. This shows that our wealth as a nation depends, in a great degree, on commerce.

As the route from San Francisco or Monterey, by way of the Aleutian or Fox islands, to Shanghae and Canton is but little known, and the difficulties which may arise in the establishment of depots of coal cannot be foreseen, it is proposed, in the joint resolutions which accompany this report, to employ on this line, for the two first years, or longer, as may be found expedient, three or four sailing steamers now belonging to the navy, or in the course of construction. Being fully rigged, it will not be necessary for them to use coal except in adverse weather, winds or calms, and therefore the expense attending this service will be but little greater than that of ordinary sailing ships. By using steam only as an auxiliary power, it is quite probable that the whole distance from San Francisco or Monterey may be performed with one supply of coal. It will be necessary, however, to obtain permission from the emperor of Russia to establish a depot of coal at the Fox islands, which are situated so as to afford a convenient stopping place, as nearly as may be, half way between Monterey and Shanghai. This depot would be resorted to by our whaling vessels in the north Pacific, for the purpose of receiving and communicating intelligence.

As we proceed on the great circle we approach the coast of Japan, and, passing through the straits of Sanger, between the islands of Jesso and Japan, we pass down the Japan and China seas to the city of Shanghae, which is situated in latitude 31° north, and immediately adjacent to the richest districts of the Chinese empire. In 1845 it exported 16,000 bales of silk and 10,000,000 pounds of tea. Sir John Davis, in his despatch of the 24th February, 1847, states that, in his opinion, "Shanghai must be expected to attract to itself, in due time, the larger portion of the British trade, it seeming to be impossible that teas should long continue to bear the heavy charge of a transport to Canton from the north, when they can be delivered to us so near the place of production."

As Canton is, and probably will long continue to be, the great emporium of the China trade, it is proper to make it the terminus of the proposed line of steamers. It is also the residence of our commissioner or minister, and of our consul, in China.

It is believed there will be no want of coal to supply our steamers. It has been found in great quantity on Vancouver's island, and so easily procured that the Indians sell it to the Hudson Bay Company for four shillings a ton. Coal abounds near San Diego, in California. It is found in Japan and China, and on the island of Formosa, to the northwest of Canton.

As the climate of the straits of Sanger is represented as being very cold in winter, it may be found expedient, in that season of

the year, to make the voyage to the eastward of Japan, and to enter the China sea to the northward of the Loo Choo islands. This course would enable us to have a depot of coal on the north end of Formosa, where it is said to be found in great quantity.

With respect to the number of passengers and letters that may be expected to pass over this route, the committee have no data on which to form an estimate. They can only give the grounds on which to form an opinion by stating the distance and the time which will probably be required to perform it as compared with the British overland route. The distance from New York to Shanghae has been stated at 10,950 miles. At an average speed of 10 miles per hour it would require a little over 45½ days to perform the journey. If we allow 4½ days from Shanghai to Canton, and five days detention at the various stopping places, we have 55 days as the probable time required to pass from New York to Canton, or vice versa. The British overland mail is an average of about 65 days in making the passage from Canton or Hong Kong to London. If, therefore, we accelerate the speed of our steamers but one mile per hour we shall perform the distance in 52 days, and enable passengers to arrive in London from Canton by the American, in as short time as they now do by the British route. To all passengers from this continent, the former will offer greatly superior inducements and advantages. From New York, and all our Atlantic ports, there will be a saving of at least 20 to 25 days, and, of course, a corresponding economy of expenses. The expense of a passage on the overland route from Canton to London, and thence to New York, is stated at $1,000. From London to Canton, exclusive of hotel expenses, $800. By the extension of the telegraphic wires to the Pacific, at the port of departure for the steamers, the transmission of intelligence may be greatly accelerated. If we give to our steamers on the Pacific a speed of fifteen miles an hour, which is believed to be quite practicable on that ocean, the distance from Shanghai to San Francisco, or Monterey, may be performed in 15 days; and on the day of the arrival of the steamer, the intelligence may be communicated to all our Atlantic cities. From New York to London in 12 days—making 27 days from Canton or Shanghae to England, or less than half the time now required on the overland route. The distance from Calcutta, the seat of the British government and power in India, to Canton, is 3,800. At 10 miles an hour—the speed of the British post office steamers in those waters—it would require about 16 days to pass from Calcutta to Canton. Add this to the 27 days from Canton to England, and we have 43 days from Calcutta to London, which is some days less than the time now required to send intelligence by the British line. We, therefore, have it in our power, ultimately, to establish and control the most rapid means of communication with all India as well as China. This, in a commercial point of view, is of vast importance.

The Dutch mail from Batavia, and the Spanish mail from Manilla, are brought in steamers to Singapore, to be placed in the British line for Europe. These despatches will, as a matter of course,

come this way on the establishment of the American line. Mr. Macgregor, the British consul at Canton, in assigning the reasons for the languid state of trade at that port in 1844, says: "Another cause of the detention of the ships was the suspense in which the merchants were kept as to the state of the European markets, deprived as they were of all advices during nearly five months." The proposed line of communication will give the American merchants and manufacturers greatly the advantage of those of Europe, in the means of communicating with correspondents in China. Intelligence of the favorable state of the market from fifteen to twenty days later than it can be communicated to England, shipments may be made to meet the demand, and arrive in time to supply it long before any arrivals can take place from London or Liverpool.

Many elaborate and seemingly accurate calculations have been made by Mr. Whitney and others, respecting the practicability of transporting freight from the Pacific to the Atlantic on a railway, especially teas and silks, and of conveying cotton, indian corn, and other products, from the western and southwestern, and manufactured goods from the eastern States to the Pacific, and thence to China and other markets of the east. The committee do not deem it necessary to repeat these facts and figures, but will merely say that they appear to lead to practical and attainable results of a most remarkable character. All going to show the great importance of the proposed lines of communication to China and the Sandwich Islands. The distance from the Atlantic to the Pacific, on the proposed railway route, will be about 3,000 miles. At 20 miles per hour, including delays, it will require five days to pass from ocean to ocean. If we allow 15 days for the passage across the Pacific, we find that the mails and passengers may be conveyed from Canton to New York in 20, and to London in 32 days. Bringing them to New York in less than one third, and to London in about one half the time now required to pass over the British, or overland route.

The completion of this system of communication would, undoubtedly, in a few years, cause the balance of trade with all nations to turn in our favor, and make New York, what London now is, the great settling house of the world. Situated, as this continent is on the globe, almost midway between Europe and Asia, with this concentration of intelligence by steamships, railways, and telegraphs, we should extend our communications with equal facility to both, and each would be dependent on us for information from the other.

For some very important facts and arguments, on the subject of the proposed railway from the Mississippi to Monterey, or San Francisco, we refer to the very able letter of Lieutenant Maury, in the appendix.

For the purpose of meeting the immediate wants of the whale fishery, the committee propose to place a steamer belonging to the navy on the route from Monterey, or San Francisco, to the Sandwich Islands. The distance is a little over two thousand miles, as marked on the chart; and a steamer, at the rate of ten miles an

hour, will pass over it in a little more than eight days. The object is to secure the transmission of the mail once a month from Monterey, or San Francisco, to the Sandwich islands and back, so as to form a connexion with the monthly line from New York to Oregon.

The great object in the establishment of these lines of steamers being to protect our commerce, as well as to communicate intelligence in the shortest possible time from one continent to the other, and to the Sandwich islands, it is proposed to employ, for a few years at least, government war steamers of a large class, with suitable accommodations for passengers, who shall, under proper regulations, be received on board.

For the purpose of accomplishing these objects, the committee offer the accompanying joint resolutions.

JOINT RESOLUTIONS, proposing the establishment of lines of government war steamers from the port of Monterey, or San Francisco, in California, to Shanghai and Canton, in China, and from the same port to the Sandwich islands.

1st. *Resolved by the Senate and House of Representatives of the United States of America, in Congress assembled*, That, for the purpose of affording suitable encouragement and protection to our extensive and rapidly increasing commerce on the Pacific ocean, and with China, it is expedient to provide the means of frequent and speedy communication with the present rendezvous of our whaling vessels in the Sandwich islands, and with the principal ports open to foreign trade in China. In the absence of such information as would enable our merchants to offer to contract, on reasonable terms, for this service, and that our flag may be the more respected in those distant portions of the globe, it is expedient that it shall be performed, for some years to come, by a large class of government war steamers, therefore to accomplish these objects as speedily and effectually as possible, the Secretary of the Navy is hereby directed to employ one war steamer, of a large class, in the transportation of the mail and passengers from Monterey, or San Francisco, in California, to the Sandwich islands and back, once a month; that he shall, as soon as practicable, establish a line of war steamers, to consist of three or four, now built, or being constructed, from one of the above ports on the American coast, by way of the Aleutian, or Fox islands, to Shanghai, and thence to Canton, in China. The mail to be taken from the port of departure on the American coast, immediately on its arrival from Panama, and delivered as regularly as practicable, once a month, at the above-named ports in China, and to be conveyed from those ports to the port of departure, in California, once a month, so as to be placed on board the steamer bound to Panama, with the mail from Oregon.

2d. *Resolved*, That the Secretary of the Navy shall cause to be prepared such accommodations on board said ships as they will admit of, for passengers, who shall be conveyed for such price, and

subject to such rules and regulations as he shall prescribe. That the pursers of said ships shall take charge of the mails, deliver all letters and papers on board ship, in foreign ports, and receive the postage thereon, which shall be equal, in proportion to the distance, to the postage charged on mailable matter in the British mail from China. He shall also receive the fare from passengers, and account for all money so received to the accounting officers of the Treasury.

3d. *Resolved*, That the Secretary of the Navy is hereby authorized to establish such depots of coal as may be found necessary to supply the steamers to be employed in the service hereby ordered.

4th. *Resolved*, That two years after the passage of these joint resolutions, the Secretary of the Navy shall advertise, three months, in two of the principal newspapers of Boston, New York, Baltimore, Charleston, Savannah, and New Orleans, for contracts for the transportation of the mail in five steamers on the route to China, and two on the route to the Sandwich islands, of not less than one thousand tons burthen each. Said steamers to be so constructed as to carry a suitable armament of long heavy guns; to have an average speed of at least fifteen miles an hour at sea; to be convertible at the least possible expense into war steamers, and subject at all times to be taken by the government at a reasonable valuation; to be commanded by officers of the line of the navy, not below the grade of lieutenant, and to receive four midshipmen each, as watch officers, and to carry a mail agent on board; all of whom shall be suitably accommodated without charge to the government. The said steamers shall make twenty-four passages, twelve each way, in a year, between San Francisco, or Monterey, and Shanghai and Canton, and an equal number to the Sandwich islands. After having advertised three months for proposals, the Secretary of the Navy shall open them in presence of the parties making them, and shall contract, on the part of the government of the United States, for the service herein described and ordered. No proposals shall be accepted from any party or parties who cannot show, to the satisfaction of the Secretary of the Navy, that he or they, and his or their associates, can perform, in good faith, all the contract or contracts shall require. The most favorable proposal or proposals made by parties thus able to perform, shall be accepted, and the contract or contracts shall continue for ten years.

APPENDIX.

A.

NATIONAL OBSERVATORY, WASHINGTON,
January 10, 1847.

MY DEAR SIR: Yours, of the 21st December, 1847, in reply to mine of the day previous, has been received. As it is the text for what is to follow, I take the liberty of quoting it:

"I am greatly indebted for your note of yesterday, this moment received. It discloses the remarkable fact that, in establishing the line of steamers from Panama to Oregon, we have actually taken a step of three thousand miles on our way to China. That California must afford the point of departure for our line of steamers to Shanghai, which must consequently become our commercial and naval depot on the Pacific. Why should it not also become the rendezvous for our whale ships instead of the Sandwich islands, and the terminus of the great railway to connect the Atlantic and the Pacific? This great circle route from the shores of the Pacific to those of China, may justly be regarded in the light of an important discovery made by you, no other person ever having suggested it. I must, therefore, beg the favor of you to give me your views respecting it, and the suggestions above more in detail; and also of the gulf steamer to which you allude.

"Most truly, yours,

"T. BUTLER KING."

With regard to a current of warm water across the north Pacific to the northwest coast, corresponding to the gulf stream in the north Atlantic, I know but little more than that was stated by me in a paper on the *currents of the ocean*, read before the National Institute in 1844, and published in the Southern Literary Messenger for July of that year.

I beg leave to refer you to that paper, with the remark, that all that I have since learned tends to confirm the views therein taken with regard to such a current. Should it be found really to exist, it will exercise a great influence upon the course of navigation, and, consequently, upon the commerce of that ocean.

Thanks to the enlarged views of the statesman at the head of the Navy Department, I am enabled to carry out a favorite project, long entertained, of preparing, from the log-books of our men-of-war and merchantmen, a chart which shall show the prevailing winds and currents in all parts of the Atlantic and Pacific oceans.

The plan is to lay down on this chart the tracks of several thousand navigators, in such a manner as to show, at a glance, the

winds and currents encountered every day by each. Lieutenant Whiting and other officers have been detailed for the purpose of assisting me in this undertaking.

The sheets of the North Atlantic, prepared by that officer, and already published, have, by the importance of the results, attracted the attention of navigators and given the undertaking renewed impulse. With a liberality worth of the enterprise of American ship owners, and in a manner characteristic of the intelligence of American navigators, the most active co-operation has been promptly and freely granted; so that, in the course of this year, I expect to have the voluntary, but effective, co-operation of several hundred merchant vessels, making daily, in all parts of the sea and on their passages to and fro, the requisite observations for this purpose.

When the facts and materials thus collected shall be brought together, spread out upon the chart, and discussed, we shall then know certainly as to *this* gulf stream, and be enabled to form correct ideas as to the prevailing winds and currents in all parts of that broad ocean—a desideratum of great importance.

In the various projects which have, from time to time, been proposed for reaching China, partly by railroad or canal across the isthmus of Darien, or other parts of the continent, it does not appear that the great circle route across the ocean has ever been considered.

If we examine the course and distance from Panama to Shanghae, as they appear on a Mercator's chart, (which is the projection used in navigation,) we shall find the distance to be about 9,500 miles, and the course to be by the way of the Sandwich islands, which are midway this route.

But on this chart, as on all others, the surface of the earth, which is a sphere, is represented as a plane, and is, therefore, distorted. The shortest distance between any two places, unless they both be on the equator or on the same meridian, is *not* the straight line on the chart which joins them; but it is along the arc of the great circle, in the plane of which the two places are situated; and this arc, when projected on the chart, will appear as a curved line.

Now, if we take a common terrestrial globe and draw a string tightly across it from Panama to Shanghae, it will show the shortest distance between the two places, and will represent the great circle route between them; and this string, so far from touching the Sandwich islands, will pass up through the gulf of Mexico, thence through Louisiana towards Oregon, crossing the ocean several thousand miles to the north of them.

The distance from Panama to Shanghae, by this route, were it practicable to travel it, is 8,200 miles, or about 1,200 less than it is by the way of the Sandwich islands.

Now to those who are accustomed to form ideas of bearings and distance from maps and charts, and not from *globes*, this statement may appear startling: yet it is nevertheless true that a person standing at New Orleans is about 3,000 miles nearer to China than he is when he starts from Panama by the way of the Sandwich

islands, notwithstanding he will have travelled 1,500 miles to reach Panama.

But the great circle from Panama, through the Gulf and Louisiana to China, as a travelling route, is impracticable. The next step, therefore, is to find a route which is practicable, and which shall deviate from this as little as head lands or other obstacles to navigation will admit.

When we have found such a route, we can examine the advantages which it offers, compare them with the other routes that have been proposed, and then form conclusions. By still holding one end of the string at Shanghae on the globe, and carrying the end that is on this side out into the Pacific, until the string will just clear the peninsula of California, we shall have an arc of a great circle, along which a steamer, with fuel sufficient, might sail all the way from Chili to the islands of Japan, without ever having to turn aside for the land. This, therefore, is the shortest route, and the nearest navigable distance to China for all vessels, whether from Chili, Bolivia, Peru, Ecuador, Central America, or the Pacific ports of Mexico. In point of distance *it is the great highway from America to the Indies*, and will hereafter be regarded the great commercial circle of the Pacific ocean.

After running along this route, and passing Cape St. Lucas and Bartholomew, if we look to the right, we shall find, at the distance of a few leagues, the beautiful ports of Upper California, including the safe and commodious harbors of San Diego, Monterey, and San Francisco. These ports are right on the wayside of this great circle and commercial highway. They occupy that geographical position, and present, in the future, those commercial advantages which will assuredly make the most favored of them the great half-way house between China and all parts of Pacific America. The harbor of Monterey is said to resemble the beautiful bay of Naples. It has water and capacity for the combined navies and ships of the world. The winds here never blow home; the harbor therefore is always smooth and perfectly safe.

Merely as sheets of water, however, both San Diego and Francisco are, in the eyes of the sailor, still more beautiful; but San Diego is on the verge of a sterile country, while San Francisco is further out of the way of the "great circle" route than either of the other two. My enterprising friend Wheelwright has a monthly line of steamers from Valparaiso, touching at the "Intermedios," Callao and Guayaquil, to Panama.

Under your bill of the last session, and by the energy of the Navy Department in giving it effect, Aspinwall & Co., of New York, have the contract for another monthly line of steamers from Panama to the mouth of the Columbia river. This line, no doubt, will connect at Panama with Wheelwright's, and with one or more lines on this side to Chagres. The steamers of Aspinwall's line are to touch at Monterey; and Monterey is, therefore, the port for the American terminus of the China line.

It is in latitude 36° 38′, and is one-third of the distance and directly on the wayside from Panama to China; and from Monterey,

by the great circle to Japan, is not nearly as far as it is from Panama, by the compass, to the Sandwich Islands—the latter is 4,500 miles, the former 3,700, or just the distance from Charleston to Liverpool.

There is no stopping place between Panama and the Sandwich Islands, and in the present stage of steam navigation, no steamer can carry fuel for 4,500 miles at a stretch, and pay owners.

Midway between Monterey and Shanghae, and immediately on the way side, are the Fox or Aleoutian islands, where the Monterey line can have its depot of coal. It is just about the distance, both from Monterey and Shanghae, to those islands, that it is from Liverpool to Halifax, where the Cunard line has its depot; though the lines from New York to Liverpool, Havre and Bremen have proved that 3,000 miles are not beyond the fuel limits of steamers.

By examining the chart, or a globe, you will see that this route from Monterey lies wholly without the limits of the NE. trade winds; and, therefore, so much the better for steamers. Though little or nothing is known of this part of the ocean, except to the enterprising whalemen of New England, yet, reasoning from what we know as to the prevailing winds, between the same parallels, in the north Atlantic, I suppose that this route, under certain circumstances, will also be found the best for sailing vessels. But the "wind and current chart," which is in the course of preparation, will determine this point.

Before the navigation of the north Atlantic was as well understood as it is at present, and indeed the practice is scarcely wholly abandoned at this day, it was customary for vessels, trading between this country and Europe, to run down to the south, many hundred miles out of their way, in order to get the NE. trades. This was done with the expectation of more favorable winds and a quicker passage; but experience has proved the contrary; and there are but few navigators now who, unless they be bound to the West Indies, pursue the "southern route" across the Atlantic.

The old practice in the Atlantic, however, still obtains in the Pacific. The Sandwich islands are within the trade wind region; and all vessels bound westwardly across the north Pacific are in the habit of getting into the trades and making those islands.

The New York packet ships, in their trips *to* Liverpool, average 130 miles a day; where the trade winds blow, a vessel will average about 150 miles a day. From Shanghae to Monterey, by the great circle, a vessel would be, for much of the way, between the same parallels of latitude that she would be from New York to Liverpool. The prevailing winds are probably the same for each ocean. This, however, is conjecture; but like causes produce like effects the world over; and those physical conditions, which make the west winds blow across the north Atlantic, require them to blow, at least with equal prevalence, across the north Pacific.

The latter is a more open sea and a wider ocean; there is less land in it to interfere with the prevalence of winds, to intercept them, to change their direction or modify their force; and, therefore, we may suppose that the prevailing winds of the north Pacific are more

uniform than they are in the Atlantic. But supposing them equal, one of the New York packets, at her average outward bound rate of sailing, would make the passage, by the great circle, from Shanghae *to* Monterey in 41 days; which is about equal to the passage from Rio to the United States.

If we suppose the same ratio to hold in the Pacific which obtains between the outward and the homeward passage across the Atlantic, then the average sailing distance the other way, that is, from Monterey to Shanghae, would be 57 days by the great circle. The trades are favorable for the outward bound trips of sailing vessels from Monterey, and therefore the old sailor adage, "the longest way round is the shortest way home," will probably continue to hold good for that half of the voyage.

But you have asked me to consider the best route, not for sailing vessels, but for a line of steamers.

The great circle is the route for steamers, both ways; and supposing the vessels, upon the proposed line, to be equal in speed to the "Great Western," in her palmy days, (and why should they not be superior?) they will make the passage to and fro, between Shanghae and Monterey, in 26 days, including the stoppage of a day for coaling at the Fox islands.

It has been shown that Monterey is directly on the great highway from western South America and Mexico to China. This fact is of itself sufficient to show why the preference should be given to it as the American terminus of the line.

Intimately connected with this subject, however, is a railroad from the Atlantic to the Pacific.

A railroad from Savannah and Charleston to Memphis has been already projected, and is partly completed. From Memphis to Monterey the distance, by an *air-line*, is 1500 miles.

Supposing your proposed line of steamers established to China, and this railroad completed to Monterey, the productions and rich merchandise of China and Japan might be placed in the lap of the great valley of the Mississippi within 30 days.

The intelligence brought by each arrival would be instantly caught up by telegraph, and as instantly delivered in New York and Boston. Here the steamers would receive it on board, and in 13 days more arrive with it in England; thence it would be taken across the channel in a few hours, and immediately communicated through the magnetic wires to all parts of the continent. And thus, by this route, intelligence might be conveyed from China, through the United States, to the people of St. Petersburg and Moscow, and, perhaps, at no distant day, to Constantinople also, within 45 days.

I see no reason why the rate of travel over the railroads hereafter to be built in America should not, at least, be equal to that of the English and European railroads. I believe the usual rate in England to be about 40 miles the hour. Over some roads it is more. But supposing the rate over the great Atlantic and Pacific railroad to be only 20 miles the hour, the time from Monterey to Memphis would occupy three days.

This route has, further, the advantage of being at once the most central and direct route that has ever been proposed from the United States to China.

The distance from Memphis, by Monterey and the great circle, is only 7 per cent. greater than it is by a "bee line" drawn through the air from Memphis, direct to Shanghae.

If you look to the long and much talked of canal across the Isthmus of Darien to Panama, you will find that a person from Memphis to China, by that route, would, on making Cape St. Lucas, the southern point of the peninsula of California, be no nearer to Shanghae, in point of distance, than he was the day he embarked at Memphis, notwithstanding that, to reach Cape St. Lucas, he would have travelled upwards of 4,000 miles; and if he should go by way of the Sandwich Islands, he would, to reach China, have to perform a journey of 5,000 miles greater than would be required of him on this new route by railroad and great circle, via Monterey.

In the progressive spirit of the age, time has become to be reckoned as money; and if there were a canal already cut from Chagres to Panama, the circuity of the route, and the loss of time, compared with what is to be gained by the proposed line from Memphis and Monterey, would, in time, cause the abandonment of that, and the completion of this; at least so far as raw silk for England, other small parcels of merchandise, travellers, and the people of the United States are concerned.

The route across the isthmus of Tehuantepec, though not so circuitous as that by Panama, is nevertheless quite a roundabout way, the distance by it to China being over 2,000 miles greater than it is from Memphis, via Monterey.

In 1521, Cortes caused a survey to be made of the Isthmus of Tehuantepec, for the purpose of uniting the two oceans through it. Afterwards it became the favorite route by which the Manilla merchants and others crossed over from Acapulco to the Gulf of Mexico.

Towards the latter part of the last century, an accidental circumstance gave it fresh importance. The viceroy, Bucareli, observing some brass pieces in or near the famous castle of San Juan d'Ulloa, with the stamp of the Manilla foundry upon them, wished to know how they were brought to the gulf. It was ascertained from the archives of the imperial city of Tehuantepec, that those heavy pieces had been transported from the Pacific to the gulf, partly by land and partly by water, across that isthmus. The route from the Pacific being up the Chicapa across the Mal-paso, thence by land over the grand Cordilleras, to the head waters of the Coatzacoalcos, which empties into the gulf. At what sacrifice of money, time, and men, those pieces were transported, is not stated; but it should be recollected that the feat was performed when the Spanish galleons from Acapulco were ballasted with silver and ladened with gold.

In 1814, the Spanish Cortes actually ordered the canal to be made. But this order produced no other result than a reconnoissance by General Obregoso, which I have before me in the very

excellent work of De Mofras, entitled "Exploration de Terretoire de L'Oregon, Paris, 1844." Although the general's geodetic report was never completed, it gives, in the language of that intelligent writer, "very correct ideas of the nature of the ground and of the difficulties it presents."

I have also, a manuscript copy of the survey made three or four years ago by Cayetano Moro, in connexion with the grant by Santa Anna to Don José Garay, for connecting the two oceans by canal through this isthmus. This manuscript was obtained by Commander McKenzie, U. S. navy, at Mina-titlan, from one of the assistants of the survey. It was copied by Lieutenant May, U. S. N., by order of Commodore Perry, and sent here, and is now in the hands of the engraver for publication.

With these and other sources of information to guide me, I have attentively considered the practicability of a ship canal through the mountains of Tehuantepec.

From sea to sea, the distance across is in a north and south direction, between the parallels of 16° and 18°, is rather less than 120 miles. And by Moro's manuscript, you can carry nine feet of water fifty miles up the Coatzacoalcos, though other authorities put the head of schooner navigation at the island of Tacanachipa, which is only 25 miles from the gulf.

But taking the most favorable view, which gives nine feet for fifty miles, and commencing the canal at the point proposed, which is about fifteen miles further up at the confluence of the Malatengo, there remains a circuitous distance of seventy odd miles, in which there is an ascent and descent of at least seven hundred feet to be overcome.

In this distance, the Sierra Madre is to be crossed; and I have never heard that here is to be found the famous Irish mountain, "with a bog on the top of it," affording water enough to feed a *ship* canal! The Mexican engineers, however, propose to bring the water by two lateral cuts, twenty or thirty miles, from a mountain streamlet.

The canal, to be a bona fide *ship* canal, should be at least seventeen feet deep by eighty feet broad at the surface. It must be a copious stream, indeed, to supply water enough to lift up through seven hundred feet, and safely to let down from this elevation again, the fleets of ships which we are told are daily to pass through such a canal.

Suppose the feeder to be ample; let any one who would form an idea as to the cost of a ship canal in the pestilential climate and inhospitable country of this isthmus, recollect the expense of the Louisville canal, constructed with everything at hand in a healthy and settled country, around the falls of the Ohio, and it is but as a rod in length and only as a race for shallops in comparison with this. Let him recollect the difficulties, nay, practically, the *impossibility* of deepening the western waters. We have not been able to increase the depth of the Mississippi itself, at low water, even so much as two feet, much less sixteen. What, think you, would have been the expense of digging out the Ohio river from Wheeling to Pittsburg,

before that country was settled, so as to afford a uniform depth of seventeen feet at low water? Go into the calculation and examine the items; after that, you may be able to form something like an approximate estimate as to the cost of a ship canal across this continent in the most unhealthy region of the globe; a region in which native or acclimated laborers are not to be found; and where foreign laborers, knowing they should have to work knee-deep in mud and water, under a tropical sun and in such a climate, could not be had for wages.

So impressed are the Mexicans themselves with the unhealthiness of the route, that Santa Anna, after granting to Garay the privilege which he proclaimed to his countrymen would make Mexico the focus of the world's commerce, the emporium of wealth and power, issued a decree directing judges to sentence malefactors to work on this canal, and then ordered a prison to be built on its banks to keep the laborers in.

But, suppose the mines of Potosi to be exhausted, and the canal to be made, I doubt much of its extensive use; for there are, in the minds of sailors, obstacles still in the way. It is well known that, in that part of America, during the sickly season, even a few hours on shore are considered sometimes fatal, and always dangerous to unacclimated foreigners.

Two years ago, the United States frigate Savannah, when cruising in the Pacific, touched on the coast of Tehuantepec during the *healthy* season. Four of her crew deserted, and in two weeks, three out of the four were dead. She was followed by a sloop of war seven of her crew deserted, one of whom, in a very short time after, wasted and worn down with disease, found his way back, and reported himself as the only surviving man of the party.

During any season, and especially the sickly season, which, on this isthmus, is most of the year, a night in the "black hole of Calcutta" would be quite as inviting to travellers, as would be a passage through this canal. And I suppose that seamen would not ship to sail through it, at such seasons, on any terms. But if they would, there are other obstacles still in the back ground. Perhaps they are *the* obstacles; I allude now to the bars across the harbors, and the dangers at either terminus of the canal.

They are shifting bars, and, therefore, the more difficult to remove. The water over the bar at the mouth of the harbor on the gulf is variously stated at from 14 to 20 feet, while the outlet of the other end is obstructed by the bars both of Teresa and Francisco. As often as vessels should be caught in a *norther*, on approaching the mouth of the Coatzacoalcas from the gulf, and hurricanes prevail here for much of the year, there would be danger, if not wreck. The ships would be embayed close on a lee shore, from which there is no escape; there is no harbor nor shelter to the south of Vera Cruz, that a vessel at such times could make. During a *norther*, the sea breaks "feather white" across this bar; and where the sea breaks in a gale, no ship can live. With such an exposure to the swell from the north as this bar presents, to pre-

vent the rollers from breaking over it, would require a depth twice, if not thrice, as great as it now has.

There are bars at the mouth of the Mississippi river, choking up the commerce of that great valley, and checking, if not damping, the prosperity of the whole country; and yet the labor and cost of deepening them, even so much as two feet more, are such that the enterprise of the nation has not yet found itself equal to the task.

Look at the coast line about the Coatzacoalcos. The port is in the middle of the crescent formed between the peninsula of Yucatry and the coast below Tampico. Now, you will observe, that if a vessel were caught in a *norther* off the bar of the Coatzoalcos, she could not make any course that would take her clear of the shore; she is now in a "*cul de sac*," and there is no escape for her.

On the Pacific side it is worse. The bars have not as much water on them, and the outer one is exposed to the full force of the waves that come across that broad ocean.

Moreover, the sea there is visited by the most violent storms. They are accompanied with thunder and lightning that are described by sailors as truly awful. In short, such are the dangers and difficulties of navigation in that region, that there is I am told an admiralty order forbidding British ships of war to visit it between June and November.

There are also the Nicaragua and three or four other routes that have occupied, more or less, the attention of nations and capitalists from time to time; but the difficulties and objections with regard to them are quite as serious as those which I have been considering with regard to Tehuantepec and Panama.

But if the connexion by any of the routes across Central America could be made at half the expense of the Monterey, or of Wilkes's, or Whitney's railroad, I should consider either of the last three of far greater importance, in a national point of view, to this country and its people, than any route that can be projected to the south of us, free though it should be to them, and to it.

To canals, railroads, and all such improvements, there are attached two values: a PARTICULAR and a GENERAL value, if I may so call them. By the PARTICULAR value of a railroad, or canal, I mean that value which attracts the capitalist, and which induces him to invest his money in it for the sake of dividends. It is simply that value which enures exclusively to the benefit of stockholders, and consists in the aggregate only of the net proceeds of the work.

By the GENERAL value, I mean all the collateral advantages which such an improvement draws after it, and distributes through the country, and to the people of the country, through which it passes. These advantages are far greater than the other; they consist, first, in the benefits of the original expenditure in making the new highway, and the daily disbursements along it afterwards in using it and keeping it in order, with a large train of numerous benefits to the working men who find profit or employment in con-

sequence of its existence. These collateral advantages consist, too, in the increased value which the improvement, be it railroad or canal, gives to the land along it, and to the produce which is taken up on the way-side and conveyed to market. Take an example: in consequence of the internal improvements which benefit New York, it is estimated that each house-keeper in that city pays, on the average, $50 less a year for such little items even as eggs, milk, and butter, than he did pay, before those improvements were made, and than he would now pay were they destroyed. Each house-keeper, therefore, in that city, who uses milk, butter, and eggs, may be considered to have, on account of those items alone, a moneyed interest in these improvements sufficient to produce an annual dividend of $50, which is equivalent to 6 per cent. interest on a permanent investment in those improvements of $833 33. The country dairymen, who supply those articles, are equally benefitted.

Were it possible to enumerate all the items under the head of general value of the canals and railroads in the State of New York, we should find millions of people, who never invested a dollar in those improvements, reaping large annual dividends from their general value. Destroy the great Erie canal to-morrow, and the worth of real estate and other property along it, which constitutes but a part of its general value, would be depreciated by an amount exceeding many times the original cost of the work.

Suppose, on the other hand, the whole region of rich country through which this canal passes were to be blighted in a day, and made as barren as the deserts, and as pestilential as the coasts of Africa, leaving the canal only as a connecting link between the lake country and the sea.

In this case, what would be the *general* value of that canal in comparison to what it now is? It still might yield dividends, and its *particular* value be good, but its general value would be merely nominal in comparison with what it now is.

A cut through the isthmus would be the canal through the desert, and, in comparison, would bring to our country and her citizens but few general advantages.

But the railroad to Monterey is the improvement through the rich country; it would increase the value of lands, invite settlers, benefit the public through innumerable sources, under the head of general value, and strengthen the arms of the nation. A canal across the isthmus would do no such thing.

There are annually employed in the Pacific not less than 300 American whaling vessels, manned by twenty-five or thirty seamen each. These vessels have to break out their holds once or twice during the voyage; to overhaul, re-cooper, etc. For this and other purposes of necessity, they seek the ports of South America, of the Sandwich islands, and other islands in the Pacific. They are a hardy set of men, who follow the whale in all parts of the ocean. It is a rule with them to visit port once or twice during the year, to cooper, refresh, and repair, for which several weeks are required. And I presume it is a moderate estimate to set down the average annual expenditure of each of these vessels, whether in money, or

in kind on account of her crew, and ship's expenses of all kinds, at $5,000, or one million and a half for the whole fleet.

The Sandwich islands, on account of the facilities they afford in the way of outfits, stores, and repairs, are at present the principal rendezvous for the vessels of this fleet. But were this railroad to Monterey completed, they would, as soon as that port should be able to furnish them with the necessary facilities, all resort there; and for the following reasons:

First. They would be in immediate, direct, and certain communication with owners and friends in Nantucket and elsewhere.

Second. They would be relieved from the vexations, seizures, forfeiture, duties, and port charges, to which they are at present liable and often subjected.

Third. They would be in their own free country, under the protection of its righteous laws and glorious flag, and to their country they would assuredly come to expend, for pleasure, outfits, and refreshments, that million and a half of money which they now scatter yearly over the broad Pacific. Monterey is within their cruizing grounds, and is, even now, often visited by them.

From this source arises one of those items under the head of general value connected with this railroad, which dollars and cents cannot wholly express. Suppose the railroad to Monterey would induce the whalers to expend annually a million and a half of dollars in our own country, and among our own people, which is now expended in foreign ports—$1,500,000 is 6 per cent. interest upon a principal of twenty-five millions; and if the improvement should realize this result, besides penetrating the rich country between Memphis and Monterey, and tapping many a source of wealth and prosperity that now lies hid on the way, it would prove equal to a funded investment of $25,000,000 by the nation in 6 per cent. stock, the dividends from which would annually be expended among our own people, instead of being taken from the circulation of the country, carried off, and expended among the islands of the Pacific, as it now is.

Suppose the Mexican canal should draw the whalers to Santa Teresa or Tehuantepec, the million and a half would go to the Mexicans and not to "los yankees." We should lose it.

The Sandwich islands owe their commercial importance chiefly to the whalers, and to the circumstance connected with the fact of their being considered the half-way house between America and China. The star of their commercial prosperity has not yet reached its meridian height. Establish this line of steamers, and, the day the decree is made for this railroad, that star will culminate.

This railroad would take the inland trade to Santa Fé and Mexico, and increase it many fold. It is probable that several millions of Mexican people would use this road as their commercial thoroughfare; for the extent of country to be supplied, resolves itself into a question of dollars and cents. All those people who could get articles for less cost over it, than they would pay to receive the same carried on the backs of asses over the rough roads from Vera Cruz and Tampico, would certainly use it.

There are other items of vast importance, under the head of general value, some of which it may be proper to enumerate. Memphis is the point of departure for this route; a city in the heart of the country, and occupying a central position. It is situated right on the way-side of the great national highway and commercial thoroughfares between the north and south, the east and west. The Charleston and Savannah railroad will connect it with the Atlantic. The Mississippi river already connects it with the gulf and the lakes, and with thousands of square leagues of a rich and thriving country, through a ramified system of navigable tributaries which, if drawn out in a continuous stream, would more than encircle the entire globe.

Growing out of these circumstances the statesman will discover a general value, containing items sufficient in consequence and importance to tempt nations into prodigality; for, among the items, he will recognize the sovereign right to tax forever millions of property and people whose ability to pay is derived from the facilities afforded them to buy, sell, and get gain.

Both Whitney's and Wilke's road to the Pacific has each its advantages, friends, and advocates, and deservedly so. The country is wide, and I do not start this in opposition to either of the two. Without the requisite topographical and geodetic information as to either of the routes that have been proposed from the valley of the west to the Pacific, I have been considering the most direct route *geographically* by which some central point of the country may be connected with China by railroad and steamers. I did not select Whitney's as a link in this chain, because it is out of the way of the great circle route from western America to China; because it lies within a colder region, and would be liable to obstructions in winter; and because the harbor at the mouth of the Columbia river is not comparable to those in California.

Lieutenant Howison was wrecked at the mouth of that river two years ago in the United States schooner Shark. She went to pieces at a place on the bar where but a few years before the exploring expedition found water enough to float a 74. He chartered a vessel to take himself and crew to the San Franciso, and, though drawing but eight feet of water, was detained 63 days just inside of the bar, and within one hour's sail of the open sea, waiting to get out. I learn from that officer—and upon professional subjects there is not to be found better authority—that the character of that harbor has entirely changed since Captain Wilkes surveyed it.

I did not select the route, proposed by Wilkes, from the Missouri; because it, too, is out of the way of the great circle, and also liable to obstructions in winter.

Nor did I select, nor have I advocated the route from Memphis, as the very best that is. I wish you to understand that I do not pretend to know anything as to the nature of the ground or the obstacles in the way, further than what one may gather from a mere geographical knowledge. San Diego and San Francisco may either offer a better terminus for the railroad than Monterey.

Lieutenant Minor, U. S. N., who has been the governor of San Diego, informs me that he found out-crops of bituminous coal in

the Solidad valley, about six miles from the port. He procured a wagon load on the surface, and used it in the forge, though it was strongly impregnated with sulphur.

Geographically speaking, however, Memphis and Monterey are *the* points. But geodetically, practically, and commercially, it may be better to improve the navigation of the Rio Grande, so as to ascend it by steamboats some 400 or 500 miles, to the Paso del Norte, or even further up, then cross over the Sierras to the head waters of the Gila; thence down that shallow stream, by locks and dams, to its junction with the Colorado; and thence to San Diego and the ocean.

But see ng that, practically, with us it is not so easy to make navigable those rivers which are not so, I do not expect ever to see this route successfully pursued, or even seriously advocated.

Crossing the Mississippi midway between the gulf and the lakes, the proposed route from Memphis would be through a healthy and, for the most part, fertile country. It never would be blocked up with snow. Of all the routes ever proposed from the United States to China, it is the most direct for the people of the States, the West Indies, Brazil, Bolivia, and all the intermediate country. The length of the railroad may be shortened several hundred miles, for the present at least, by starting it from the sources or head of navigation of the Arkansas.

The effects of a substantial railroad from Memphis to one of the ports of California, in connexion with a line of steamers thence to China, would do much to break up old thoroughfares and channels of commerce through the Pacific, and to turn them through the United States. A good railroad, with a moderate rate of tolls, but sufficient, nevertheless, to keep the road in repair, would be felt at the Sandwich Islands as a serious injury to them and their commercial importance. A trade of some millions would pass over it with Mexico, and in this we should be without competitors.

Let such a railroad be given to the country, and after it shall have been for a little while in successful operation, you will hear no more said by the people, on the Atlantic side, in favor of a canal or railroad, across the isthmus of the continent, for their convenience in communicating with China and the "Old East." So far from the people of the Atlantic wanting a highway, then, to get to the Pacific, on their way to China, the people of the Pacific, at least of all Pacific America south of Mexico, will want to cut through the Isthmus of Panama to get to us on their way to China and the East.

The time from Panama to Memphis, by steamers, at 220 miles the day, would be nine days, and thence, by railroad, to Monterey, three; total, 12 days and 3,500 miles.

The time from Panama, up the Pacific coast, to Monterey, allowing the same rate at 220 to the steamer, would be 15 days and 3,300 miles. This part of the voyage would be tame, to a degree, having scarcely variety enough to make applicable the traveller's witticism, "sometimes we ship a sea, sometimes we see a ship." Say, then, which of the two lines would a passenger, on arriving from Valparaiso at Panama, or at Cuba from Brazil, or at Jamaica from

England, be most likely to take, the one on this tedious route along the Mexican coast, with its dull monotony, or the one through the Gulf of Mexico, up the Mississippi, and thence across a smiling country, by railroad, to California?

I regard the proposed railroad and line of steamers as but an entering wedge, which, that these new channels of commerce may be advantageously opened, should be driven with energy.

The railroad must be a work of time; the line of steamers may be quickly started. I would, therefore, beg leave to call your attention to the importance of putting into simultaneous operation with the steamers a horse mail, to run in connexion with them, from Monterey to the most convenient point in the "States."

This mail would not probably be oftener than once a month. If it came to Memphis or Little Rock, the direct route would be near Santa Fé, and through Taos. Supposing a good pass should be found through the mountains, this mail would want an escort, and should be carried on horseback. On account of the Indians, &c., which beset this route, it might be well to establish a line of small block houses for the protection and safety of the emigrants to California. These stations could also afford horses, riders, and escorts for the mail.

In that country a journey on horseback, once a month, of 50 miles in 12 hours, four miles an hour, would not be considered impracticable, either for man or beast; with relays to accompany the riders, six miles an hour, or seventy-two miles in twelve hours, would not be impracticable. But suppose the rate to be only 50 miles in 12 hours, or 100 in the 24, it would then be practicable, continuing the mail day and night, to reach Independence, Missouri, or Fort Gibson, Arkansas, from Montery in 10 or 12 days; and thus letters from China might be delivered in New York within 45 days after date. It now takes more than twice that time.

When this mail route shall be established, the merchant in Boston, 45 or 50 days after his ship shall have sailed for China, may send, via Monterey, fresh instructions, and they will reach consignees as soon as the ship will.

Considering the present commercial condition of the Japan and Chinese empires, regarding the destiny of the Pacific States of the Union and their glorious promise, taking into view the changes which are annually occurring, not only in the articles of trade, but in the channels of commerce, and recollecting that, of the eight hundred millions of people who are said to inhabit the earth, six hundred millions of them are to be found in the islands and countries which are washed by the Pacific, it is difficult to overrate the value and importance to the republic of a safe and ready means of communication through California with those people.

These six hundred millions have always been behind the two hundred millions of the Atlantic in the art of ship building and in commercial enterprise.

Their junks and proahs were made only for creeping along the coward shores, not for venturing across the broad ocean. They are content that those white winged vessels which come from beyond the "black waters" should fetch and carry for them.

The islander will cease to go naked, the Chinaman will give up his chop sticks, and the Asiatic Russian his train oil, the moment they shall find that they can exchange the productions of their climate and labor for that which is more pleasing to the taste and fancy. Hitherto the way to reach these people has been around the stormy capes, and the expense of carrying to the laboring classes, whose name there is legion, suitable articles of food and raimant has been greater than they can bear.

Do you suppose that the laboring classes of China would live and die on the unchanged diet of rice, if they could obtain meat and bread? This country will soon be offering from its western shores, not only these articles, but many other items of commerce, which, by constant and familiar intercourse with our people, they will soon learn to want and be taught to buy.

Whether San Diego, Monterey, or San Francisco shall be selected as the terminus of the railroad and the line to China, will, or ought to, depend partly upon the comparative facilities by which these ports may be reached from Memphis, or some other central point on the Mississippi, and partly upon the advantages which they offer for the principal dock yard hereafter to be established on the Pacific. The necessary surveys and examinations are wanting to decide this point.

The bills and reports submitted by you to the House of Representatives, in 1841, and subsequently, have caused you to be considered in the navy as the leader in Congress upon the subject of ocean steamers, as connected with the naval defences of the country. In the policy of encouraging merchants to build for our lines of mail steamers vessels that are convertible, at the pleasure of the government, into efficient men-of-war, are contained the principles of naval expansion, and the sinews of that maritime strength which, when rightly understood by the people, and properly carried out by the government, will make us in war the strongest power on the ocean that the world ever saw.

This system of man-of-war built mail steamers, constructed with the aid of a trifling bounty from the government, and commanded by educated officers of the navy, but manned and sailed, in time of peace, on private account, will be to the navy, in war, precisely what the militia, led by West Point graduates, have proved themselves to be to the army in battle. Closely and intimately connected is this great national railroad with that beautiful system of public defence.

Respectfully, &c.,

M. F. MAURY,
Lieutenant United States Navy.

Hon. T. Butler King,
Chairman Committee on Naval Affairs,
House of Representatives, Washington.

N. B.—I send you a chart with the routes marked off. The distances mentioned on it and in this letter are in *nautical miles.*

B.

The following extracts are taken from the forthcoming work of Aaron H. Palmer, Esq., "On the Unknown Countries of the East:"

The Aleutian islands derive their name from the Russian word aleut, which signifies a bold rock. The groupe is situated in the north Pacific ocean, between Cape Alaska, in North America, and the peninsula of Kamtschatka, in Asia, describing a circular arc which extends from 163° of west, to 166° of east longitude. The islands which form the two extremities of the chain, viz: Oonemak, which is separated by a narrow channel from Cape Alaska and Behring's island, which approaches nearest to the coast of Asia, are both in the 55th parallel of north latitude, while the others extend in a curve towards the south, the centre one of the chain being situated in the 53d parallel.

The number of islands comprising the entire chain are very considerable; above forty have received names. The most important of these situated to the eastward—the Fox islands—are Oonemak, Oonalashka, and Oonemack. Those comprising the Andronovian division are smaller than the other, and are seldom visited. The principal of them are Amlak, Atchka, Tschitchina, Ayag, Kanagn, and Takavangha. The two last mentioned have volcanoes, and Tschitchina possesses a high hill, which is apparently an extinct volcano. The division nearest to the Asiatic coast, contains, among other islands of less importance, Semitchi, Otto, Agattoo, Copper island, and Behring's island.

The coasts of all the Aleutian islands are rocky. They are mostly destitute of trees, but are abundantly supplied with springs and streams of fresh water. Great quantities of drift wood from the American coast are continually thrown upon their shores. Potatoes and several other esculent vegetables arrive at tolerable perfection. The land animals on the islands are bears, wolves, beavers, ermines, and river otters. The sea-otter is nearly exterminated by the hunter. Red, grey, and black foxes are seen in great variety in the Fox islands. Seals and whales are abundant on the coasts, and sea-lions are occasionally met with. The kinds of fish most usually caught are salmon and halibut—the latter of these are sometimes of an immense size.

The only occupations of the islanders are fishing and hunting, and the preparation of implements necessary for those pursuits. The population has greatly diminished since the settlement among them of the Russian fur traders. The civil and military administration is vested in the imperial Russian American Company, which has factories established on several of the islands; their principal establishment is at Oonalashka. * * *

The American whaling ship Lawrence, Captain Baker, of Pokeepsie, was wrecked in May, 1846, during a heavy gale, upon a rock not laid down on any chart, in latitude 44° 30′ north, and longitude 153° east, within about two degrees of the Kurile islands.

The archipelago of the Kuriles consists of 22 islands, including Yeso, and is about 600 miles in extent, connecting the peninsula

of Kamtschatka with the island of Niphon. Yeso, the southernmost, and 22d of the chain, lies in 41°—47° 30′ north latitude, and 140°—147° east longitude. It is about 300 miles in extreme length, and about the same in breadth, and is separated from the island of Niphon, by the strait of Sangar, 18 miles wide; the eastern and southern coasts, containing Atkis and Edermo bays, and the southwestern peninsula, whereon Matsmay and Chakodade are situated, belong to the Japanese; and the rest of this island, containing several spacious bays and harbors, now frequented by our whalers, are in possession of the aboriginal Aïnos tribes, a friendly and hospitable race, who subsist by fishing and hunting.

The town of Matsmay is situated on the strait of Sangar, on a large, commodious bay, with a good anchorage in four fathoms. The harbor is constantly filled with Japanese vessels, trading to every part of the empire. The exports are principally dried and salted fish, charcoal, furs, peltries, and *fucus saccharinus*, a sea weed, called by the Japanese kambou, or "sea cabbage," used extensively as an article of food among all classes in Japan. It has a population of 50,000, and may be considered the most important town in this extremity of Asia. The place is well fortified and garrisoned; guards are constantly kept upon the coast to observe, narrowly, everything that passes. It has the small bays of Koru-yesi on the east, and Otube to the west of the town. It is the residence of the hereditary prince, governor of the southern province of the island.

Chakodade, the second town in magnitude on the island, is also situated on the strait of Sangar, southeast of Matsmay, on the declivity of a high circular hill, which rises above the peninsula there formed. It is washed on the south by the bay of Sangar, and on the north and west by the bay of Chakodade, which is very convenient for receiving a large fleet. The peninsula forms its junction on the east by a narrow strip of land, so that there is at once a view of the open sea and the low grounds.

On the northern side of the bay a spacious valley extends over a circuit of 15 or 20 miles, bounded on three of its sides by hills. In the centre of this valley lies the village of Onno, the inhabitants of which are chiefly occupied in agriculture. The other villages, which are situated on the coast, are, for the most part, inhabited by fishermen. The hill at the foot of which the town is built, serves as an excellent land mark for ships entering the bay, as it is easily recognized at a distance by its circular form, and is detached from any other elevated object.

On the western side, this hill is formed of huge masses of rock, in one of which there is a cavity perceptible from the sea. The depth of water close in land, is very considerable on the southern and western sides of the peninsula, but, as there are neither sand banks, nor rocks to be apprehended, the coast may be approached without danger. There are, however, numerous sand banks on the northern side, and consequently, only small vessels can get up to the town. From the projecting cape opposite the town, a small sand bank of unequal depth extends one-third of the breadth of

the bay. On the northern and eastern sides of the bay the depth of the water gradually diminishes towards the shore.

The Japanese towns and villages on the island are large, have regular streets, and the houses, on account of earthquakes, are all neatly built of wood. Every house has a kitchen garden, and many are furnished with orchards. The boundary between the Japanese and the Yesoite villages is about 100 miles from Chakodade.

The Japanese island of Tsus-Sima, lying in the straits of Corea, is the entrepot of the commerce between Japan and Corea. The trade is under the exclusive control of the prince governor of the island, who has ware-houses for its accommodation at the port of Fung-Fang in Tsus-Sima, and at the maritime town of Fung-Chang, on the opposite coast of Corea. By this course of trade the Coreans receive supplies of American cotton goods brought by Chinese junks from Chapu to Nangasaki.

The river Woosung, on which the city of Shanghae is situated, 14 miles from the sea, comes out of the Ta-hoo or "Great Lake," Chang-keaow-kow, and traverses the Yun-ho, or "Great Canal," and thus communicates with the Yang-tse-kang, the Yellow River, and Pekin; from the Yun-ho it enters the Pang-shan lake, and flows by the beautiful city of Suchau, the most commercial, wealthy and luxurious city of the empire, with a population of nearly 2,000,000, celebrated for the variety and excellence of its manufactures, the politeness and intelligence of its inhabitants, and the beauty of its women. This river enables the inhabitants to trade and communicate with the remotest parts of the empire, from Pekin to Yunnau, and from the eastern coast to the extremity of Central Asia. Shanghae is the port of many great cities, besides Suchau, from which it is distant about 40 miles; the way to it is by the route of rivers, canals, and small lakes, through a continual range of villages and cities. The aggregate population of the whole district is estimated at 5,000,000.

Coal, of the description termed kennel coal, is very abundant at Shanghae, and is burned in British steamers navigating the China seas. It is apparently worked near the surface, and a better sort could most probably be obtained by mining.

Shanghae is a better market for superior textures of silk than Canton; sewing silk of every kind, in colors, is prepared in Henchai and Nankin. The crapes made in this district are superior to those generally seen in Canton. Most of the fabrics made here are with thrown silk. The skill of the workmen in this district, together with the well known enterprise of the manufacturers, have established the character of their goods throughout the empire.

The chief articles manufactured, are damasks, satins, mazarines, and crapes, also figured and plain heavy serges. A peculiar description of singularly woven figured silk, called *Keh sz'*, is manufactured at Suchau, in forming which are the several processes of weaving, printing, embroidery and sewing, exhibiting figures of men, flowers, gardens, &c.

The safest article of export, recommended by Montgomery Martin, is the Hongchow and Nankin plain white, and the Tong-pa, and Ching-tong yellow pongees. If purchased in the gum, and not boiled off, the purchaser will not be so liable to be cheated, as they are frequently increased in weight, and improved in their apparent quality with congee, or "rice paste." Rhubarb may be obtained fully as cheap here as at Canton, and green tea 20 per cent. cheaper. The most important articles of import from the United States are cotton goods and lead. Our coarser cotton fabrics are preferred to those of the English, and we supply China with lead cheaper than any other country.

In addition to teas and silks, among the exports are camphor, china root, cassia, and the best porcelain. Articles are also brought here from Japan, Siam, Cochin China, and Tonquin, such as copper, sugar, gamboge, raw silk, stic-lac, liquid indigo and plumbago, good hemp, and a superior description of fine flax. Provisions of all kinds are very abundant and cheap.

Shanghae is rapidly becoming a place of great commercial importance, on account of the large number of merchants who are crowding there from all parts of the empire, as well as from Siberia and Central Asia, to make purchases. It exports largely, and more than any other emporium in China, to Tientsin, on the Pei-ho, which is covered with its junks. Trade appears to be in a very flourishing condition, and, it is said, 1,000 large sized junks pass in and out of the harbor weekly.

The Woosung river discharges into the Yang-tsze-Kang, and is almost half a mile in breadth, and has about five fathoms in mid-channel; the entrance is through a maze of sand banks without a mark; the tide rises from 15 to 18 feet. The anchorage at the mouth of the river is in latitude 31° 25′ north, longitude 121° 1′ 30″ east. The heat is very great in July, August and September, but at other periods the temperature is very agreeable, and snow falls in winter, remaining on the ground some days.

It appears to have been the uniform policy of the Chinese government to concentrate the foreign trade, as much as possible, to certain privileged marts, in order to subject it to a more rigid system of supervision and monopoly, and more available for exaction. This will account for its reluctance to open the northern ports of the empire to foreign commerce, and free trade has thus far been a failure in China; but that government will, ere long, be compelled to succumb to the spirit of the age.