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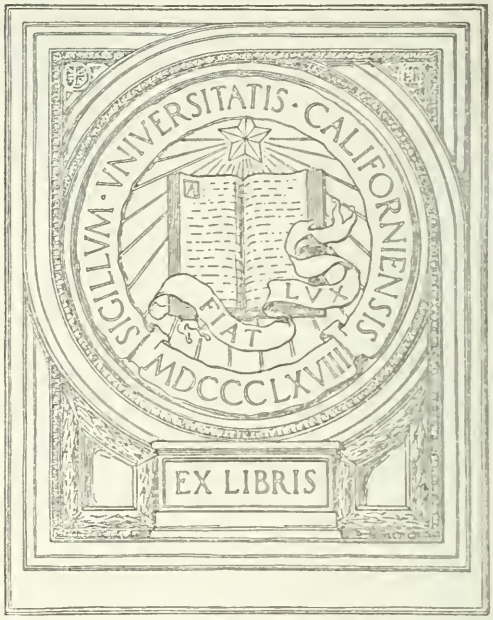

THE GIFT OF
MAY TREAT MORRISON
IN MEMORY OF
ALEXANDER F MORRISON

Wm. W. Bates.

AMERICAN MARINE

THE SHIPPING QUESTION IN HISTORY AND POLITICS

BY

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BOSTON AND NEW YORK
HOUGHTON, MIFFLIN AND COMPANY
The Riverside Press, Cambridge
1893

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The Riverside Press, Cambridge, Mass., U. S. A.
Electrotyped and Printed by H. O. Houghton & Company.

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TO

WILLIAM H. WEBB, OF NEW YORK,

AN EMINENT REPRESENTATIVE OF AMERICAN NAVAL ART IN THE ERA OF ITS GLORY, THIS VOLUME IS DEDICATED BY THE AUTHOR.

GIFT OF MRS. A. F. MORRISON MAR 27 '43

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PREFACE.

EVERY workman should know his own trade well. Having been for fifty years a student of ships and navigation, I have felt that it was needful to know the causes that have contributed, first, to the upbuilding, second, to the decline, and third, to the ruin of our shipping interest in the foreign trade. In pursuit of this information time and patience have been well spent, since there was no other way out of darkness into light.

The necessity for a work on American Marine has long been felt by its friends. While there have been a few pamphlets and an essay or two published, books of the kind requisite have not been produced. This may have been because shipbuilding, navigation, and foreign trade form so broad a field that few acquire the practical knowledge, or can command the time needful for their composition. Moreover, a writer on the subject of the present work can find so little in libraries, and must look for so many facts outside of books, that his task is one mainly of investigation and original thought.

It is only by a rare course of business experience and a fortunate succession of circumstances that the author has found an opportunity to be the first in the field which this volume is an attempt to explore and explain. In early life he was the projector and co-editor of the only magazine in the United States ever devoted to the interests of shipbuilding, engineering, navigation, and commerce, — 1854–58. The insight then enjoyed has ever been remembered. Though many trade experiences have intervened since that time, the impressions

received in regard to the shipping business have been not only deepened, but increased in number.

Light is for distribution. No longer young, it may be full time that some of the facts which the author has learned be given to those who shall follow him; while it is certain, any light that his efforts can cast upon the "Shipping Question" cannot be thrown too soon for the country's good. Making no pretensions to literary skill, but sensible that men of letters are also men of ideas, he trusts that his facts and figures have sufficient eloquence to make their way. In this age, facts make their own best arguments; nevertheless, it has seemed useful to impress their teaching, since all readers have not time to spare for study. In all that has been undertaken, the object has been the arrival at truth. The author has not searched for support to theories of any kind. If he has argued for "protection" to shipping, it is because he sees that it is necessary for the reinstatement of that great interest. He believes that this action would be for the public good. A prosperous marine in the foreign trade would be advantageous for each and all of our people. Every loyal citizen must want an American marine. How to obtain it seems clear enough. The concluding chapters discuss the legislation required.

That this volume shall arouse our nation, and inspire a vigorous public sentiment, which shall demand the enactments essential to the full enjoyment of our maritime rights, of solid prosperity and real independence, is the earnest desire of the author.

William W. Bates.

New York, *October* 1, 1892.

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CHAPTER I.

THE NATIONAL INTEREST IN A MARINE.

It may be laid down as fundamental, that every interest which largely employs and rewards labor, develops resources and augments wealth, aids social progress and increases knowledge, is of national concern. But especially is this true of those trades and pursuits whose growth strengthens the state, guards its independence, and makes its safety sure. In line with this maxim, our foremost statesmen, from Washington down, have endeavored to square their work. In our early history Mr. Jefferson declared that Agriculture, Manufactures, Commerce, and Navigation constituted the four pillars of our prosperity. Mr. Webster expressed a similar thought in 1824. He said that it was a fundamental axiom that the great interests of the country were united and inseparable; that agriculture, commerce, and manufactures must flourish together or languish together, and that all legislation was dangerous which proposed to benefit one of them without looking to the consequences that might fall upon the others.

It is, therefore, for fitting and peculiar reasons that shipbuilding, navigation, and commerce have always called for national care and promotion from politic maritime states. As a maritime people, not only have we a common right in the sea, and consequently a national interest in all its pursuits, but the protection of our trade abroad, resistance to aggression and retaliation for wrongs, and our defense against naval attacks, must be effected by ships and seamen. As a maritime people, our home is not only on our own soil, and our industries those of the land, but our abode is likewise on the ocean, and our pursuits include the work of the sea. On the sea, as

or the land, our people live and toil; therefore, on both elements must our national power be shown. As an independent nation, we must build up and maintain, as well in peace as in war, a marine and navy of our own, or possess no real greatness as a state, no influential rank among the powers of the world, and no valid voice in its affairs.

Sovereignty of the Sea. The ocean is a vast domain. Of the earth's surface, seventy-three per cent. is water and twenty-seven per cent. is land. While military power has been most displayed ashore, history tells of many struggles for possession of the sea. Although the oceans and navigable seas belong in common to all the nations of the earth, only the maritime states and people can enjoy their advantages and profit from their pursuits. These benefits may thus be proved: though the maritime nations fly their flags over forty per cent. only of the habitable land, yet, through their shipbuilding and navigation, they virtually rule all the land and sea, and the world entire.

When we consider that in territory, population, production, coast lines, harbors, and foreign trade we rank now either first or second in the world, the idea presents itself that in future we may rightfully stand preëminent among the maritime powers, — if only we do but claim our rights and cultivate our natural interest in the domain of the sea.

Necessity for Ships. Nations are like men; they concede no rights that are not asserted. To assert our rights at sea, we must sail it with our ships. With no marine, we shall have no rights and receive no benefits from the wide domain which is given into our hands. Such a situation would be that of a people planted in the heart of a continent, disunited and distant from the sea. To choose a lot like theirs evidences no statesmanship guiding our course; discloses neither enterprise nor skill, independence nor courage. It is not becoming to American character and the high civilization of our people. It sacrifices our self-respect, while it forfeits our title to rank among navigating nations, who alone control the world. To give up the ship and relinquish the sea is to yield so much of right, of possession, and advantage, that our delinquency would surely bring disrepute and invite attack from inferior powers.

In the present state of maritime advancement, so much of the

power of nations is exerted and shown on the sea, it is not less a matter of military necessity than of commercial policy, that on the same arena our own nation should renew and enlarge its power. The national interest in shipping of our own has not been lessened, but increased, by the alternative of late presented by foreign powers, that we must yield to them our shipping and commercial trades, or hold these great and essential interests by the direct expenditure of money, or, if need be, by force of arms. Indeed, the granting or giving of each new foreign subsidy, bounty, or other protection, such as has been resorted to in the past fifty years, to cut our merchants and their shipping out of business, adds one more to the many necessitous circumstances making national aid imperative, if we would have ships and seamen of our own. Deplorable as the truth may be, it is nevertheless the fact that our rights on the land or the sea, to our independence and national life, have only been secured by expenditure or by force, by money or by blood.

The Means of Peace and Progress. The United States has long been the victim of skillful aggression on the part of certain European powers, eager to engross our trade. It is true that we retain our domestic navigation, but, under present conditions of railway development, the home-trade is only a small part of our transportation by sea. The destruction of our coastwise navigation would only be an inconvenience, while the ruin of our foreign-trade shipping business has greatly impaired our financial strength, weakened our defensive power, and daily threatens our national peace. At whatever cost, we must have the means of regaining the relative position that has been long lost, and of rescuing all that is still imperiled. We must have the means of meeting our foes at sea, in readiness to fall upon or defend, with speed to overtake and power to conquer, while all other powers make martial preparations. We must have the means of winning and holding our proper rank among the nations, of insuring our progress and perfecting our institutions, with our rights undisputed and our peace secured. What are those means? They are simply (1) the ships and seamen, the merchants and mechanics, the materials, labor, skill, and capital of our country employed in doing our just proportion of foreign commerce; and (2) the ships, sea-

men, and marines employed in the naval service, sufficient in number and force to keep the sea in national defense at all times. These resources, as precious as they are simple, should be developed and made available without delay. They must not be wasted or destroyed. If wisely cherished, the marine will always furnish indispensable requisites, and ample reserves of naval power. It is essential to that object; and what is indisputable, so long as the European nations pour out money like water, not only in "subsidies," "subventions," "bounties," and other aids, *but through great naval establishments for military protection to their marines*, our own government must do likewise, or the nation will suffer for its weakness.

When the Norsemen of Europe had developed their naval skill, they became the undisputed masters of the sea, and for centuries afterward preyed upon the unprotected countries that built no ships and had no maritime power. They ceased to conquer and to colonize better lands than their own when other nations built shipping and took the sea in effective defense.

The national interest in cultivating nautical and naval power was well shown at the beginning of our government, in the protective legislation which built up our early marine. It was estimated in 1789 that 600,000 tons of shipping, two thirds of it foreign, chiefly under the British flag, was engaged in our commerce at home and abroad. In six years' time foreign tonnage fell off to *one tenth* in the foreign trade, and wholly disappeared from the domestic traffic. It was not long ere it was found that naval protection must be extended to the new marine. Thus our navy originated, and our naval power was developed. While it has been observed that nations without shipping sometimes have no navy, history has proved in every instance that naval power is a natural necessity to a maritime nation. The seacoast of a country is one of its frontiers, and the safer the passage to and from the sea, the greater will be the facility for commerce. Good harbors, busied in trade and transportation, are sources of wealth, and should be also of strength, even in time of war. But in proportion to their accessibility and importance, if not properly defended in time of war, they become the means of weakness and defeat.

Sea-Power in History. History affords many examples of the growth and decay, the restoration and studied improvement

of shipping power. The importance of maritime nations has depended so greatly upon it, that the ablest statesmanship has always looked to strengthening the naval arm. The enactment of the British navigation laws in Cromwell's time is often referred to, but a more conspicuous case is that of the French government in the reign of Louis XIV. At that period England on the sea and Austria on the land seriously menaced the development of France. But Providence had raised up to her two great rulers, Henry IV. and Richelieu, whose politics had traced the lines of strength and mastery. Four elements were deemed necessary to the national greatness. These were, (1) internal union with religious tolerance; (2) alliance with the Dutch and German States; (3) extension of boundary eastward; and (4) the creation and development of a great *sea power*, adding to the wealth of the kingdom and making head against its enemies. In the means to be employed, maritime development — ocean carrying and commerce — was only second in importance. At this time England had decreed the fall of the Dutch Republic, a power based wholly on navigation and commerce, and was succeeding by superior naval strength; while the naval power of Spain was in decay. As for France, she had then but little commerce by sea or land; the treasury was low, the army small, and there was practically no navy. To advance his power, Louis preferred finally the way of the land. Some of his plans and movements were successful, but others proved abortive.

Colbert's Great Work in France. "Meanwhile the greatest and wisest of his ministers, Colbert, was diligently building up that system of administration which, by solidly basing the wealth of the state, should bring a surer greatness and prosperity than the king's more showy enterprises. . . . Production, both agricultural and manufacturing, received attention, but a policy of skillful aggression upon the shipping and commerce of the Dutch and English quickly began, and was instantly resented. Great trading companies were formed, directing French enterprise to the Baltic, to the Levant, to the East and West Indies. Customs regulations were amended to encourage manufactures, and to allow goods to be stored in bond in the great ports, by which means it was hoped to make France take Holland's place as the great warehouse for Europe,

a function for which her geographical position eminently fitted her, while tonnage duties on foreign shipping, direct premiums on home-built ships, and careful, rigorous colonial decrees giving French vessels the monopoly of trade to and from the colonies, combined to encourage the growth of her mercantile marine. England retaliated at once; the Dutch, more seriously threatened, because their carrying trade was greater and their home resources smaller, only remonstrated for a time; but after three years made reprisals. Colbert, relying on the great superiority of France as an actual, and still more as a possible producer, feared not to move steadily on the grasping path marked out; which, in building up a great merchant shipping, would lay the broad base for the navy which was being yet more rapidly forced by the government. Prosperity grew apace. At the end of twelve years everything was flourishing, everything rich in the state, which was in utter confusion when he took charge of the finances and marine."[1]

The Fall of French Sea-Power. At length Louis XIV., with his kingdom and navy in the highest pitch of efficiency, was advised by the great Leibnitz to conquer Egypt and control the commerce of the East, as a step towards attaining such a strength on the sea as would insure a preponderance of military power in Europe. It seemed that this was not to be, for when Louis stood where the roads parted, he took the one which settled that France should not be the power of the sea. "This decision, which killed Colbert and ruined the prosperity of France, was felt in its consequences from generation to generation afterward, as the great navy of England, in war after war, swept the seas, insuring the growing wealth of the island kingdom through exhausting strifes, while drying up the external resources of French trade and inflicting consequent misery. The false line of policy that began with Louis XIV. also turned France away from a promising career in India, in the days of his successor."[1]

Such are the lessons of history. While our own experience is ample to guide our statesmen, we may well learn from England and France that the question of power on the sea is at all times of national interest. A merchant marine breeds seamen.

[1] *The Influence of Sea-Power upon History*, by Capt. Mahan, U. S. Navy, 1890.

British historians have remarked upon the consequences, to the cause of the crown, of 18,000 seamen passing from its support to our defense, in the Revolutionary War, as this loss crippled England considerably in naval enlistments for battle with the French navy. A merchant marine makes shipwrights. In the time of Charles II., such was the need for building and repairing naval fleets, the British Admiralty imported shipwrights from Italy. A merchant marine educates a reserve of masters and officers qualified to navigate armed vessels or command privateers. A merchant marine furnishes transports for troops and materials of war, and should supply cruisers and privateers, and also the men to man them.

In a message to Congress in 1870, President Grant said: —

Warning of the War for the Union. "Building ships and navigating them utilizes vast capital at home; it creates a home market for the farm and the shop; it diminishes the balance of trade against us precisely to the extent of freights and passage money paid to American vessels, and gives us a supremacy of the seas of inestimable value in case of foreign war.

"Our navy at the commencement of the late war consisted of less than 100 vessels, of about 150,000 tons, and a force of about 8,000 men. We drew from the merchant marine, which had cost the government nothing, but which had been a source of national wealth, 600 vessels, exceeding 1,000,000 tons, and about 70,000 men to aid in the suppression of the rebellion.

"This statement demonstrates the value of the merchant marine as a means of national defense in time of need."

Looking at the subject from whatever view we may, we cannot, if we would, screen from sight the imperative need of ships for the public good and national advantage, knowing well, as we do, that our independence and political existence, our dignity, and our rights in the future, as in the past, will be respected only so far as we are able to enforce their respect through our naval power. An illustration of our disadvantage in consequence of disability is at the moment of this writing presented. If Great Britain had made our purchase of the Russian sealing rights in Behring Sea, she would have claimed the ownership of every seal visiting the Pribyloff Islands, and no spoilers under any flag would have dared to assert a right to slaughter one of them. Great Britain has naval power; the

United States has none worth her notice: therefore her subjects have done just what might have been expected when we paid Russia for her property — set up a claim, founded on our naval disability, to every seal that they can catch off the rocks, where they must breed, or become extinct. As we are unprepared to fight, we must therefore "arbitrate;" that is to say, submit to the best terms attainable, since arbitration means compromise, and not justice. Were we prepared, as England is, for a naval war, and dared to assert and maintain our rights, there would have been no cause for diplomacy and arbitration. Now we can assert nothing and defend nothing without the fear of a desolating war, a fact showing that we have to deal with a warlike nation, whose instinct was well expressed by its great Admiral Monk in 1665: —

"What matters this or that reason? What we want is more of the trade which the Dutch now have."

CHAPTER II.

THE NATIONAL ECONOMY OF SHIPPING OF OUR OWN.

THE question of an American marine includes many problems of national interest and concern. To carry our own commerce, and to have a commerce of our own to carry, is of scarcely less consequence than to possess the means of maritime defense; since ships and merchants of our own, besides increasing wealth, insure safety in our foreign trade. In other words, there is a National Economy in the use of shipping of our own, by our own citizens. This science is simple and easily comprehended, though one might think, from the inattention prevalent, that it must needs be complicated or obscure, if it exists at all.

In the study of economic science, American scholars are heavily handicapped. This branch of knowledge has been taught so generally, not only from an English point of view, but from English data of fifty to one hundred years ago, that modern conditions are quite ignored, and sound, practical thought turned aside and withstood. It is not at all surprising that literary men, journalists, and politicians, unfamiliar with actual transactions and the practical ways of trade; having, as to the building and use of ships, neither special interest nor special knowledge; gathering what they think they know from books, whose authors had no experience for their guide, sometimes distinguish themselves in the perpetration of errors in the discussion of shipping questions. A general mistake is this one: that navigation is transportation, and being so, is non-production, and therefore not to be encouraged. While there is neither sense nor science in such reasoning, it is not seen that shipping in the foreign trade differs at all, in its national economy, from shipping in the domestic trade, and yet there is an important distinction to be made between them.

The shipping business in the domestic trade is a valuable in-

dustry deserving of cultivation and protection. It is protected, and consequently well developed. On the other hand, transportation in the foreign trade is not only an industry worthy of national regard, the same as its sister business, but it is a ready and commanding means of regulating the balance of trade abroad. Surely, it is not for this serviceable function that it is unprotected, neglected, and cast off as a burden. One reason for its disfavor is, undoubtedly, a general misconception of its utility and importance.

Advantages of Shipping. Since the rule of Cromwell there has been no need of dissertations to the British people on the usefulness of merchant fleets. While their pedants teach, as political economy, that navigation is a private interest, holding no relation to and in no way serving the public good, their rulers are careful to practice government on a different principle. In fact, they all believe in history, and the wisdom of national effort to monopolize the commerce of the world. In 1651 Parliament passed an act that no goods should be imported into England, or exported abroad, except in vessels belonging to British owners, that were built by British builders. An English historian has made this record: —

"The result of that act far transcends the wildest dream of Lombard and Venetian avarice, or the grandest schemes of Spanish and Portuguese conquest. It not only secured to the people who enacted it the greatest share of the world's carrying-trade, but the trade also knew its master, and followed at once with becoming servility."

From the time of the enactment of the navigation laws, Great Britain has planned and actively worked to advance her shipping interests, and contrived to keep in her own hand the building and sailing of her own ships. To this end she has fought bloody wars, broken up weaker powers, entrapped her rivals into treaties, spent millions of money to support steam lines, and hundreds of millions more to keep up an enormous navy. Has all this been done for private interest? Was this policy started to benefit a few greedy shipowners? Or is private interest the public concern in British government? How absurd to teach, that what is national in England must be private in the United States!

The historic fact is, that British navigation has been, is now,

and always will be, treated as an enterprise of national utility and not a business of individual concern. Thus established and cared for, navigation is not an object of solicitude with British economists, and their thought is mainly given to trade and manufacture. It is thus that partial views of science become the study of American scholars. With shipping set aside, agriculture must be overrated and manufactures overvalued. In the balancing of foreign trade, the great part played by British shipping, if seen or heard of by a student, is treated as a piece of luck. It is never shown as an advantage that gains the day for trade, or a public service that often saves all overstrained pursuits. The fact that ocean transportation is on a cash basis, and always so conducted, uniting in one business many trades, and requiring much labor in building, repairing, loading, running, and discharging, is proof of the best kind that a large marine acts like a balance-wheel to all other industries.

Ocean transportation of freightage to foreign countries, by vessels of our own, is itself an export: but, done by foreign flags it is an import, or the equivalent of these transactions in settling the balance of trade abroad. From foreign countries, freightage is an equivalent of an import by foreign vessels, but an export by our own. In other words freightage, transportation, carriage, freight-money, whatever the name given, is a product, — the production of vessels, of shipping, of a merchant marine. When we ship a cargo abroad under a foreign flag, the merchandise goes to our credit, but the freightage, being a foreign product, goes to foreign credit. When, however, we ship under our own flag, both the merchandise and the freightage go to our credit. On the other hand, when we import cargoes by foreign ships, we import also the freightage, and must pay abroad for both merchandise and carriage; whereas, if we import by our own ships we only pay abroad for the merchandise, and may earn part of the money for that by our vessels' work. In our early West India trade in lumber, first opened by North Carolina and Georgia, the vessels engaged earned from ten to twenty-five per cent. more than the mills. So they do now in Puget Sound trade.

A Sample of Economic Misteaching. To illustrate the current economic science, here is an extract from an editorial writer: —

"It is difficult to comprehend at a glance the full extent of the changes in our industrial and commercial conditions, which are involved in a serious diminution of our agricultural exports. Probably no economic law is more rigid than that a nation's imports must, in the long run, be paid for by its exports. If its exports of goods fall short, it must make up the deficiency by its export of gold and silver. If these are continuously exported, the consequent scarcity of gold and silver money will produce poverty and depression of prices, until the import of goods is checked and the outflow of merchandise is enlarged."

While this sounds like science, it cannot be accepted for it, because the writer overlooks an important, and sometimes controlling element of international trade, — ocean transportation. The inclusion of this element with the others is essential to correct calculations of foreign-trade balances, as every shipping merchant knows. The writer quoted goes on to anticipate the working of our tariff system, to increase prosperity and thereby enlarge our import of luxuries and articles on the free list, causing our country to "still have a steadily growing volume of imports to pay for," and he inquires: —

"Where, then, may we look for a larger volume of exports, and to make up for the prospective decrease of agricultural exports? A survey of our resources indicates that the only way (?) within our power to offset our imports, and prevent the impoverishment that would follow continuous exports of precious metals, is by the extension of our manufactures. During the past decade these exports have more than doubled, while agricultural exports have remained stationary."

On reading these quotations, which have been chosen as fair samples of economic misteaching, the thought that springs to the practical mind is this: Here is a student, perhaps a professor, of political economy, who has never heard of shipping; or, if he has and knows its use in transportation, then he is unaware of its productive function, of its weight in foreign trade balancing, and of the power it exerts for national good or evil, according as we may hire foreign tonnage, or have it in supply of our own in the foreign trade. Here is a simple problem that will illustrate the functions of a ship employed in foreign traffic: —

The National Use of Merchant Shipping. There are two

cargoes in New York and two other cargoes in Liverpool, each valued at $100,000. The freightage will amount to the same sum both ways. An American ship takes one of the New York cargoes to Liverpool, and returns with one of the Liverpool cargoes to New York; and a British ship takes the remaining Liverpool cargo to New York, and returns with the remaining New York cargo to Liverpool. We build, equip, man, provision, insure, and run our own ship, and the British do likewise by their ship. We do the banking, commission, and insurance on our cargoes, and the British do likewise for their cargoes. There is a fair exchange of merchandise and a just reciprocation of services, and the balance of trade is even between the two countries, thus: —

THE AMERICAN ACCOUNT.

Two cargoes at $100,000 each	$200,000
Freight on two cargoes at 20 per cent. of value .	40,000
Insurance, banking, etc., two cargoes at 5 per cent. .	10,000
Total	$250,000

THE BRITISH ACCOUNT.

Two cargoes at $100,000 each	$200,000
Freight on two cargoes at 20 per cent. of value .	40,000
Insurance, banking, etc., two cargoes at 5 per cent. .	10,000
Total	$250,000

Now suppose that two British ships, one at Liverpool and the other at New York, carry each one of the British and one of the American cargoes. The freightage or freight is equivalent to twenty per cent. of cargo value in each case. The banking, insurance, and other items of expenditure are five per cent. Then the British account will stand: —

THE BRITISH ACCOUNT.

Two cargoes at $100,000 each	$200,000
Freight on four cargoes at 20 per cent. of value .	80,000
Insurance, banking, etc., four cargoes at 5 per cent. .	20,000
Total	$300,000

THE AMERICAN ACCOUNT.

Two cargoes at $100,000 each	$200,000
Adverse balance of trade	100,000
Total	$300,000

From these examples it will be easily seen how an adverse balance of over-sea commerce may be due, not to a lack of exported goods (for which there may be no market), but to the freighting of a foreign marine, and the use of foreign capital in banking and insurance in connection therewith. It is no answer to say that our people not engaged in shipbuilding, navigation, insurance, banking, etc., are "as well employed" at other work, earning lower wages or none at all, perhaps, for this is not, and cannot be true; and there is no practical way in which they can be so well employed as in directly preventing panics, bankruptcy, and ruin, by doing our own proper share of international business, and thus keeping our precious metals at home. For, be it observed, there are only two ways to deal with the problem of transportation. The first and better is to do our proper share of it; the second and worse, is to hire it done. Either way we may solve the problem, it involves an export. In the first case we export freightage; in the second case, the export must be merchandise or specie. Right here the question is practical, why not choose the first and better way to do our over-sea trade, — that is, by our own marine? Why should we resort to other employments, many of them less remunerative, for the production and shipment of goods on which freight must be paid? Is it to agriculture we should apply, instead of to shipbuilding and navigation, for the means of paying our foreign freights? Have we not too many farmers now, and too few shipwrights, engineers, and seamen? British economic teaching approves the present plan. The American editorial writer, quoted from on a preceding page, advises dependence on "manufactures," but is not his philosophy affected by want of shipping knowledge?

The Business of Foreign Shipping. Seeing it is the business of foreign shipping to create adverse balances of trade for rival flags, and the office of shipping of our own to make and maintain a favorable balance for our own flag, is it not strange that such notable facts have been overlooked by our public men?

Had they not been overlooked, and British theories (not facts) gained no ground in American colleges, our shipping in the foreign trade, protected in its existence and its work, would now be making the country safe from specie exportation,[1] and enriching all our citizens by its earning power. The fathers of our Republic, all of them from seaboard States, and many of them acquainted with shipping business, made no mistake in political economy, but, by a wise protection of shipbuilding and navigation, created an American marine, to keep our country out of foreign debt. They preferred safety in our foreign trade to the good-will of any people on the earth.

After the war of the Revolution, Great Britain soon engrossed our richest commerce, both in carrying and in trade. In a few years we were deeply in her debt. The adverse balance, caused in the first place by the British marine, began to crush the country in all its parts. The imports in 1784 and 1785 amounted to $30,000,000. Of this amount, $6,000,000 were for freights: that was twenty-five per cent. of the value of the goods. The exports to England in the same two years did not exceed $9,000,000, carried mostly in British ships. Thus it was that the monthly "London Packets" carried off our money, a quarter of a million at a time, until currency could no more be paid, and ruin ruled on every hand. For six years free trade and free ships carried full sail. It was realized then, as it may be again before long, that an adverse balance of trade, whether for merchandise or freightage, is equally distressing. The difference between the employment of a foreign and a home marine was well exemplified in this ante-Union, free-trade commerce. Granting the transportation was wholly by British ships, the account was as follows: —

		British.	American.
Dr.	Merchandise imported	$24,000,000	
	Freightage on same	6,000,000	
	Total	$30,000,000	
Cr.	Merchandise exported		$9,000,000
	Adverse balance of trade		21,000,000
	Total		$30,000,000

[1] In the past four years (1889–92) the excess of exports over imports amounts to $171,897,207.

If the transportation had been wholly by American vessels, the account would have been as follows:—

		British.	American.
Dr.	Merchandise imported . .	$24,000,000	
Cr.	Freightage on same		$6,000,000
	Merchandise exported		9,000,000
	Freightage on same at 25 per cent. . . .		2,250,000
	Adverse balance of trade		6,750,000
	Total		$24,000,000

And if the transportation had been half by British and American vessels, the adverse balance would have been, $13,875,000.

But if we had been then, as after the Union we became, by protective legislation, "our own merchants" as well as "our own carriers," it is practical to suppose our exports would have been larger and our imports relatively less; while if we had been also, as now we are to a great extent, "our own manufacturers," it is quite certain the adverse balance of trade would have been for England to have paid.

We had some doctrinaires among our early statesmen, nevertheless the facts of trade prevailed in debate, before and after the adoption of the Constitution. In the judgment of the fathers, shipping of our own held equal importance with the Union itself. The wise and great of every State spoke freely on this point in the canvass for Federal government. A statesman of South Carolina said: —

"A great part of the riches gained and revenue raised by England, through the monopoly of our trade, may be saved to these States, by our becoming our own merchants and carriers."

The prospect of Great Britain's regaining the rule of the rebel colonies through the medium of trade and transportation excited the patriotic mind in all the States. While much was said of "regulating trade" so as to encourage manufactures, it was ever kept in mind that shipping of our own should likewise constitute a national interest. The question of the national welfare came up in the very first debate in Congress, and was thus settled by Mr. Madison: —

"I am sensible that there is great weight in the observation that fell from the honorable gentleman from South Carolina (Mr. Tucker), that it will be necessary, on the one hand, to weigh and regard the sentiments of the gentlemen from the different parts of the United States; but on the other hand, we must limit our consideration on this head; and, notwithstanding all the deference and respect we pay to those sentiments, we must consider the general interest of the Union; for this is as much every gentleman's duty to consider as is the local or State interest, and any system of impost that this committee may adopt must be founded upon the principle of mutual concession.

"Gentlemen will be pleased to recollect that those parts of the Union which contribute more under one system than the other are also those parts more thinly planted, and consequently stand most in need of national protection; therefore they will have less reason to complain of unequal burdens.

"There is another consideration: the States that are most advanced in population, and ripe for manufactures, ought to have their particular interests attended to in some degree. While these States retained the power of making regulations of trade, they had the power to protect and cherish such institutions; by adopting the present Constitution they have thrown this power into other hands; they must have done this with an expectation that those interests would not be neglected here."

Early Experience in Balancing Trade. It is not our purpose here to trace the course of the American ship in history and politics, but to note briefly the statesman's care and the politician's neglect. Before the enactment of the protective laws, which built up quickly our early marine, foreign vessels, mainly British, were doing seventy-five per cent. or more of our foreign freighting. In six years thereafter, and then for seventeen years following, they did but 10 per cent. of it. Then came the war of 1812, which was purposely provoked with the object of wrecking our navigation. After that outrageous war, however, under our ship-protection system, in five years' time we regained much of our lost business; and, until after the stripping of protection, held again an average of 90 per cent. of carriage in our foreign trade. Thus, by the action of wise laws, our shipping business was built up a second time.

In 1789 we had 123,893 tons in foreign traffic. The earning

and saving power of this little fleet may be estimated at $30 per ton annually; its employment being good for $3,716,790 to our credit on the balance sheet of foreign trade. In the next year, 1790, we had 346,254 tons, with a balancing power of $10,387,620. Up to the peace of 1815, twenty-six years, the average tonnage so employed was 682,832 tons. The balancing power of this fleet was not less than $25,000,000 annually. The yearly average value of our imports and exports, being about $125,000,000, for the period named, the estimated ratio of freight to merchandise estimated at 20 per cent.,[1] and the profits of commerce, with insurance, banking, etc., amounting to the same figure, it follows that our trade and transportation were worth about $50,000,000 annually to the country at large. It was by means of this business, most of it on a cash basis, that our young nation got out of foreign debt, paid the revenues of the government, enjoyed its early prosperity, and imported so largely per capita as it did. The following table will show the average condition of our navigation and commerce in three very interesting periods of thirteen years each; (1) in their morning glory, 1795–1807; (2) in their noontide greatness, 1847–1860; and (3) in their immediate past of neglect and failure, 1878–1890: —

NAVIGATION AND COMMERCE FOR DIFFERENT PERIODS.

Periods of Time.	Tonnage in Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
13 years.	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1795–1807	646,865	11.71	29.90	90.4	87.4
1847–1860	2,203,782	8.19	21.96	84.5	79.6
1878–1890	1,199,691	2.20	26.69	21.5	13.8

In the first period our favorable balance of trade was secured mainly by our merchants using a marine of our own. In the second, it was about equally dependent on our shipping, our merchants, and the mines of California, which furnished for shipment to Europe fifty millions of precious metals annually.

[1] This was also Mr. Jefferson's estimate, in 1791.

In the third and present time, our shipping helps but little; but, little as it aids, it saves the exportation of millions of gold. As we have said, exports of manufactures have taken the place of our freightage to some extent; but our merchants and their profits, our underwriters and their allotments, our bankers and their dividends, have largely disappeared with our ships, and foreign subjects and institutions have taken their places. We are going into the future with the single resource of agriculture and a morsel of manufactures to depend on, instead of adding thereto the products of navigation and commerce of our own, for discharging our foreign debts. A single resource is almost sure to fail. Our precious mines do not supply the loss of American merchants. Agriculture now pays for carrying seven eighths of our foreign cargoes. This is, indeed, a tax on every industry of our land. The payment of a transportation tax is wholly needless, because, with a marine of our own, it may be done away with.

Cost of Our Present Dependence on Foreign Shipping. The extent to which we have permitted ourselves to become dependent on foreign shipping, and the enormous sum expended annually for its transport service, is so great as to merit the deepest concern of every patriot. Our ocean transportation for the last fiscal year, 1891, at 15 per cent. of value carried, amounted to $248,481,121. Of this sum the share of foreign carriage was 87.54 per cent., or $217,515,163; and the American share, 12.46 per cent., or $30,965,958. If we add the passenger traffic and postal service in foreign steamers, fairly estimated, the amount would swell up to the towering total of $312,500,000,— the business of 1891 being exceptionally large, 239,732 cabin, and 675,010 other than cabin passengers, coming and going. Our share of the whole business was nine per cent.

To realize the extent of our shipping subjection in the recent past, we may compare the freightage paid foreigners by the value of one of our cereal crops. Take the period of eleven years, 1880–1890, inclusive, select the oat crop, and we will have the following statement: —

	Average Annual Amount.
Freight charges paid foreign shipping . . .	$180,679,030
Value of the oat crop	184,610,237

The passenger and postal transport (not including the immigrant traffic) would swell the total amount paid annually to $230,000,000, leaving the oat crop $45,000,000 minus. Now, although we have been raising oats instead of carrying goods, we cannot pay freighting charges with the oat crop, unless it shall be sold at home, its value put into products salable abroad (on which freight must be paid) or turned into gold for export.

To approximate closely the national interest in shipping of our own, let us suppose that our marine in foreign trade for a recent period of ten years, 1880–1889, inclusive, could have done 50 or 75 per cent. of the export and import carriage. Of foreign commerce by sea, there was an annual average of $1,525,838,050. Statistics of freight should be, but are not collected, and must necessarily be estimated. The ratio of carriage to cargo, in value, ranges from 2.5 to 145 per cent. While the author believes that 15 per cent. would be a fair estimate of the average cost of freight, suppose we take 12.5 per cent. as the lowest figure for the period in question. (This would be arrived at by allowing 15 per cent. for exports and 10 per cent. for imports.) At this ratio, the average annual freightage paid amounted to $190,729,756. Our marine, performing 50 per cent. of this business, would have earned and saved $95,364,878; and, doing 75 per cent. of it, $143,047,317. Instead of making either of these sums, however, our shipping carried an average of only 15 per cent., earning and saving us only $28,609,463. And even this amount considerably exceeded our exports of beef and pork, or of lard. Adding our export of freightage, $28,609,463, to the export of merchandise, $758,246,364, the former is found to be 3.63 per cent. of the total; and, consequently, of the whole credit made abroad. If we had had 75 per cent., in place of 15.0 of carriage, then the ratio of freightage export to total (of merchandise and freightage) would have been 15.87 per cent. which is but one per cent. less than that for exports of "domestic manufactures" of all kinds, in the same period.

It will bear repeating here that the use of foreign shipping brings us into foreign debt. For each of the ten years of the period above taken, we have made and paid a freightage account of $162,120,293 for the ocean carriage of merchandise

alone. The annual average value of exports by American vessels was $89,475,029. It therefore took all our fleet in foreign trade twenty-two months to carry products enough to discharge our debt for foreign transport for a single year. If the passenger traffic be added, the time would be twenty-five months, and the total of debt $187,000,000.

The writer quoted from in the beginning of this chapter, oblivious to the flow from the bung of foreign transport, urges to save at the spigot of goods production, by making more largely for ourselves and enlarging our "manufactured exports." Where will he find at home, or secure abroad, a market that will meet "the case of a serious loss in sales foreign of leading staples," much more to compensate the absence of shipping and related industries? Why not see the wiser and better course, to put the bung into the barrel, and stop the flow of gold into the lockers of foreign fleets; raise fewer farmers and more mechanics, increase the number of seamen, and have less factory workers; and devote a little more time to balancing the industries of the country, to the increase of its safety and prosperity?

If all the countries with whom we deal by sea had vessels of their own, to share the business of transportation, the most that could be asked by them would be an equal part. That would give us half the carriage in our trade. But many nations with whom we traffic much have few, if any vessels, whence it follows that our equitable share of carriage is much more than half, and fully 75 per cent. of our total foreign trade, leaving out the passenger and postal services.

Foreign Ship and "Tariff" Taxes Compared. Certain political economists affect acute distress because our government collects "tariff taxes" for its support. To the taxes collected by foreign shipping for the support of foreign government they seem to give no patriotic thought. Here is a comparative statement of the customs tariff revenue, and the freighting charges paid foreign shipping for the past twenty-one years, 1870–1890, computed on the basis of 15 per cent. on the valuation of merchandise carried, which is approximately correct for the period taken, for the whole commerce of the United States: —

COMPARISON OF "TAXES."

Year.	Revenue Tariff Taxes.	Foreign Ship-Freight Taxes.
1870	$194,538,374	$95,312,000
1871	206,270,408	121,102,800
1872	216,370,286	127,100,250
1873	188,089,522	146,136,900
1874	163,103,833	141,725,550
1875	157,167,722	143,449,700
1876	148,071,984	155,500,800
1877	130,956,493	129,654,000
1878	130,170,680	132,268,500
1879	137,250,047	137,450,300
1880	186,522,064	184,233,090
1881	198,159,676	191,018,400
1882	220,410,730	182,736,000
1883	214,706,496	189,908,310
1884	195,067,489	170,386,200
1885	181,471,939	162,893,640
1886	192,905,023	162,052,500
1887	217,286,893	175,848,000
1888	219,091,173	177,361,440
1889	223,832,741	183,948,450
1890	229,668,584	207,083,310
Totals	$3,951,112,157	$3,317,170,140
Averages	$188,148,198	$157,960,483
Average, 10 years past	209,260,074	180,323,625
Average, 2 years past	226,750,662	195,515,660

The period begins with a ratio of foreign freightage-tax to customs revenue of 49 per cent., and ends with a ratio of 90 percent., showing that the evil has enormously increased. In 1876 the foreign freightage-tax exceeded tariff revenue by $7,428,816 (more than 5 per cent.), in 1878 by $2,097,820, in 1879 by $200,253. For the whole period, the average ratio of foreign-ship tax to tariff revenue was 84 per cent.; for the last ten years it was 86.12 per cent.; and for the year 1890, 90.16 per cent.

For the year 1891, however, under the reduction of customs receipts from the McKinley tariff, — the ratio has bounded up to 110.8 per cent. A reduction of the tariff, and consequent increase of importations, has always had the effect to increase business for foreign shipping.

If we reflect that customs revenue receipts are disbursed at

home, while the foreign freighting-tax is paid abroad, another view is had of the bad economy involved. The tariff revenue for support of government we must always have. It is in large part paid by foreign manufacturers. But the freight-money paid to foreign shipping, the most of it by our own people, may, and should be speedily dispensed with by having shipping of our own, and employing our own people for building, managing, and sailing it. In 1891, the total of sea-freightage (at 15 per cent. ratio) was $248,481,121. Foreign shipping was paid $217,515,163, or 87.54 per cent, while American shipping received $30,965,958, or 12.46 per cent. Had it done 75 per cent. of the carrying, it would have received $186,360,840, and foreign shipping been paid $62,120,281, and we should have been saved the payment abroad of $155,394,882 in the year. Had we done 50 per cent. of carriage, the saving would have been $110,263,254. It is thus apparent that there is in sight, as it were, and not beyond reach, an annual ocean transportation business considerably exceeding $100,000,000, and by right not less than $150,000,000, which we should recover into the hands of our own people, besides the gains to be made from an increase of commerce, consequent upon our retaking and holding again our rightful place on the sea.

The Silver Problem. Having more than a hundred millions less to pay abroad every year, it is clear that our need for gold, and the ever recurring fear of its exportation to balance trade, would disappear. It is this need, and expectation of use of money abroad, that makes it necessary to guard so carefully against a copious silver coinage. This bad state of business has grown out of our loss of ocean transportation; it may be corrected, and a sound condition caused by the "rehabilitation" of our merchant marine. In our present situation, the increase of transportation is even more important than the growth of manufactures or the extension of commerce, because the national defense demands the former, while the national economy requires the latter, and trade is not comparable with safety. If our old-time shipping power was regained, the solution of the silver problem would be at hand.

In the course of the ten years, 1851–1860, when our shipping carried an average of 71 per cent. of our foreign com-

merce, the excess of exports over imports of gold and silver was $417,423,789, or an average of $41,742,378 annually. In that period the exports of domestic manufactures were very light, only an average of about $30,000,000, annually. If they had been proportionate to the present volume, we would have had no cause to export, but would have imported specie.

Here it would be well to examine the working of British policy, and get an understanding of its success. The key to this is, not the application of free-trade theory, but practical ascendency on the sea. Britain is great in factories, but she is sovereign in ships. She sells and buys with perfect freedom, caring nothing about the balance of trade, because her overgrown marine takes care of that, and her treasury, her bankers, merchants, and underwriters maintain it. As between imports and exports of merchandise, her balance of trade is always adverse. For the five years of 1885–1889, the average debit was $465,720,857. But this deficit was not paid in coin. It was easily discharged by the service of her steam fleet alone, which, at $60 per ton, could earn $466,478,640 annually. Then, Great Britain has a sailing marine, which, at $30 per ton, can earn an additional sum of $74,016,360. And these estimates are well within the mark. In other words, the exports of freightage alone well secures the commercial safety of British commerce. It has no need to call upon interest money, railroad and bank dividends, insurance profits and mercantile balances due annually from foreign countries, as some political economists suppose is done to even up international accounts.[1]

Great Britain would not part with her money-making marine for all the factories in the United States, if they could be added to her own; for, if she had them, she would then need a market for their products. She has already a market for her enormous freightage, and would prefer a bird in the hand to two in the bush. She is also ruled by men who know the use

[1] Robert Griffin, England's greatest statistical authority, estimates the foreign investments of British capital at $5,000,000,000. The interest of this sum at five per cent. would be only $250,000,000. Of this income it has been computed that our citizens and government pay about one fourth. The British tax upon our people is therefore probably twice as great through shipping as through investments.

and appreciate the worth of shipping of her own, and a market for the product of that shipping. They do not, as we do, depend on chance for the existence of the one or the other. That sort of statecraft is no part of her "free-trade" system. Ours are the statesmen who have taken the chances, and we are the fishermen, whose boats, neglected on the beach, have drifted to sea with the outgoing tide.

An amount of money not less than $4,500,000,000, or an average of $150,000,000 annually, for thirty years past, has been paid out to foreign ships for ocean transportation. To stop this drain nothing effective has been done, the political mind seeming to be fully occupied with other questions, of local or secondary importance.

CHAPTER III.

THE NATIONAL INTEREST IN MARITIME PURSUITS.

The occupations and employments of a people are always of the first importance to their national life. Every industrial development of natural resource, in any part of a country, enriches, strengthens, and benefits the whole. We have only to look on the map of the United States, and be informed of the wonderful gifts of nature, to understand that every industry and proper pursuit of man is provided for, and may be advantageously carried on. In other words, that the national interest in our country must necessarily embrace the whole catalogue of labor. Our extensive seacoast; the bays, sounds, rivers, and good harbors, so numerous as not to be carried in the public mind; the abundance of wood and metal materials of every kind; the productive soil and temperate climate of nearly every State; the industry, enterprise, and skill of our people; and the history of our country itself, indicate distinctly that shipbuilding, navigation and commerce, agriculture, mining, and manufactures are the great and grand occupations, employments, and pursuits natural to our population and essential to the right performance of our part in history.

After agriculture and manufactures, commerce is the first necessity of our people. Commerce by sea must be carried on by navigation; navigation necessitates shipbuilding; shipbuilding requires materials from forest and mine, starts many kinds of business, and supports scores of separate trades. In the same way, navigation makes constant demand on the farm, the mine, and the workshop, while it brings into being many occupations and employments. Commerce, also, enlarges the field of labor, accumulates and distributes wealth; and the triumphant three united improve humanity, secure prosperity, and confirm authority.

Maritime pursuits were among the first that gave employ-

ment to enterprising citizens in colonial times, and, naturally, should furnish business and profitable work at all times for a population proportional to that of the interior States. While it is true that our continent teems with opportunities, and the hand of diligence is everywhere invited, it is indisputable that maritime development is of most importance in a national point of view. To the maritime States will come the first shock of foreign war. Their cities, shipping, trades, persons, and fortunes will suffer most from the blows of battle. Therefore, they should be strengthened in every way for the defense, mostly devolving upon them, by encouraging such occupations and pursuits of the people as will support them in numbers sufficient to build and man a naval force, not merely to prevent an enemy's landing, but to keep him distant from our shores. Foreigners may, as now, do our foreign commerce for us, with a navigation, not of our flag, but of their own. They may dwell in our seacoast cities to some extent, and constitute, as they do, a mercantile interest of large proportions, engaged in exchanging foreign for domestic products and precious metals; but aliens and strangers as merchants, bankers, underwriters, agents, brokers, shipowners, shipbuilders, mariners, engineers, and seamen, will not render patriotic services. They will not build up and strengthen the national arm. Their ships are built, repaired, and manned abroad. Their navigation creates no industry here. The wealth gained from our commerce belongs, and mostly goes, abroad. The different landed interests of the country sustain all the charges and expenses of our ocean commerce and navigation, while they receive in return no coöperation in national advancement or defense. Foreign merchants and speculators in our ocean ports largely control the capital of our nation, bear down the prices of our products, and hold the interior in debt and dependence, in disregard of public welfare, because there are neither social nor patriotic obligations to regulate their conduct, since these strangers are here for what they can get and take away.

Our foreign commerce and the navigation by which it is carried on are not now a source of unity and strength, as they would be in the hands of our own people, where they once were held and well protected. An eminent patriot once declared in debate: —

"The iron we have recommended is necessary in war and in peace. The cannon and the ball that defend your land should be 'native here.' The axe and the ploughshare that subdue the forest and turn the soil should be the product of your country. The steel that edges the sword and points the bayonet of your defense should be of national metal."

How much more important is it, that the mercantile interest, the shipping concerns, the shipbuilding, and every other occupation engaged in our foreign commerce should be American, belong to our nation, and originate at home. The independence of the United States should extend to all things and affairs that we can make or transact for ourselves. As our country creates its own government, and produces its own people, so it should have and hold its own industries and manage its own business, and this on the sea as on the land. There can be no greater folly than for a nation like ours, having resources within itself, both as to men and materials requisite for every art and industry, choosing to disregard the rights and prerogatives of our own people, and voluntarily becoming dependent on the men and materials of foreign countries for the supply of such essentials to national life as the means and machinery of commerce and navigation.

The American View a Century Ago. If there was one thing more than another that our forefathers prized in their day, it was steady employment for all our people and independence of foreign skill. This appreciation, based on broad experience, was especially manifest at the time of effecting the union of the States. Daniel Webster, in a characteristic speech delivered sixty years ago, well described the evil consequences of unregulated foreign commerce and unprotected navigation, during the period following the independence of the colonies up to the adoption of the Constitution, in these unerring words: —

"From the close of the war of the Revolution there came on a period of depression and distress on the Atlantic coast, such as the people had hardly felt during the sharpest crisis of the war itself. Shipowners, shipbuilders, mechanics, all were destitute of employment, and some of them were destitute of bread. British ships came freely and British ships came plentifully, while to American ships and American products there

was neither protection, on the one side, nor the equivalent of reciprocal free-trade on the other. The cheaper labor of England supplied the inhabitants of the Atlantic shores with everything. Ready-made clothes, among the rest, from the crown of the head to the soles of the feet, were for sale in every city. All these things came free from any general system of imposts. Some of the States attempted to establish their own partial systems; but they failed. Voluntary association was resorted to, but that failed also."

In the first Congress, Fisher Ames declared that the present Constitution was dictated by commercial necessity more than any other cause. The want of an efficient government to secure the manufacturing interest and to advance our commerce was long seen by men of judgment and pointed out by patriots solicitous to promote our general welfare. Strange as it may seem, while "the manufacturing interest" has been "secured" for many years, the original want of "an efficient government" "to advance our commerce" still stares American patriotism in the face. When the adoption of the Constitution was before the country, an orator of Pennsylvania argued thus: —

"The people of Pennsylvania in general are composed of men of three occupations, — the farmer, the merchant, the mechanic. The interests of these three are intimately blended together. A government, then, which will be conducive to their happiness and best promote their interest is the government which these people should adopt. The Constitution now presented to them is such a one. Every person must long since have discovered the necessity of placing the exclusive power of regulating the commerce of America in the same body; without this it is impossible to regulate their trade. The same imposts, duties, and customs must equally prevail over the whole.

"Whence comes it that the trade of this State, which abounds with materials for shipbuilding, is carried on in foreign bottoms? Whence comes it that shoes, boots, made-up clothes, hats, nails, sheet-iron, hinges, and all other utensils of iron are of British manufacture? Whence comes it that Spain can regulate our flour market? These evils proceed from a want of one supreme controlling power in these States. They will all be done away with by adopting the present form of

government. It will have energy and power to regulate your trade and commerce, — to enforce the execution of your imposts, duties, and customs. Instead of the trade of this country being carried on in foreign bottoms, our ports will be crowded with our own ships, and we shall become the carriers of Europe. Heavy duties will be laid on all foreign articles which can be manufactured in this country, and bounties will be granted on the exportation of our commodities; the manufactories of our country will flourish; our mechanics will lift up their heads and rise to opulence and wealth."

Between the conditions of the present time and a century ago, there is no great difference in shipping. Mistaken measures, bad administration, unfortunate sectional strife, civil war, and party spirit have set at naught the work of the fathers under the Constitution. Our ocean navigation and active commerce stand far below the proportions complained of by the patriots of 1787. The retaking of our equitable share of international trade and transportation was the redeeming work of our early statesmen. Every one of them, distinguished for constructive talent, contributed to rear the castle of our industrial strength. Among the memorable workers, whose purpose was that our castle's strength should be such as to "laugh a siege to scorn," was Thomas Jefferson. When Secretary of State, in 1791, he made a masterly report on the fisheries, in which the national advantages of an active commerce in our own vessels were thus set forth: —

Jefferson's Appreciation of Navigation. "The produce of the United States which is carried to foreign markets is extremely bulky. That part of it now in the hands of foreigners, and which we may resume into our own without touching the rights of those nations who have met us in fair arrangements by treaty, or the interests of those who by their voluntary regulation have paid so just and liberal a respect to our interests, — the proportion, I say, of our carrying trade which may be resumed without affecting either of these descriptions of nations[1] will find constant employment for 10,000 seamen, be worth $2,000,000 annually,[2] will go on augmenting with the population of the United States, secure to us a full indemnifi-

[1] A few friendly powers and the free cities of Europe.

[2] This estimate included only the single interest of transportation.

cation for the seamen we lose, and be taken wholly from those who force us to this act of self-protection in navigation. . . .

"If regulations the exact counterpart of those established against us would be ineffectual, from a difference of circumstances, other regulations equivalent can give no ground of complaint to any nation. Admitting their right of keeping their markets to themselves, ours cannot be denied of keeping our carrying trade to ourselves; and if there be anything unfriendly in this, it was in the first example.

"The loss of seamen unnoticed would be followed by other losses in a long train. If we have no seamen, our ships will be useless, consequently our ship-timber, iron, and hemp; our shipbuilding will be at an end; ship-carpenters will go over to other nations; our young men have no call to the sea; our products, carried in foreign bottoms, be saddled with war freight and insurance in time of war, — and the history of the last hundred years shows that the nation which is our carrier[1] has three years of war for every four years of peace.

"We lose during the same periods the carriage for belligerent powers, which the neutrality of our flag would render an incalculable source of profit. We lose at this moment the carriage of our own produce to the amount of $2,000,000, which, in the possible progress of the encroachment, may extend to $5,000,000, or $6,000,000, with an increase in the proportion of the increase of our numbers. It is easier, as well as better, to stop this train at its entrance than when it shall have ruined or banished whole classes of useful and industrious citizens."

In conclusion, Mr. Jefferson favored encouraging the fisheries, and bounties were given for that purpose down to a recent date. He also submitted the following statement, based probably on the returns for 1790, in illustration of the views above declared: —

	Export Business.
"The total exports of the United States . . .	$25,000,000
Great Britain carries two fifths of this . .	10,000,000
Freight and insurance on this amount at 22½ per cent.	2,250,000
Freight and insurance on same in war, estimated at	5,500,000
Difference between peace and war for freights and insurance	3,250,000

[1] Now, as then, the British principally.

This last is taxed on our agriculture by British wars during their continuance and our dependence on British bottoms. In every term of seven years we pay three times $3,250,000, or, in all . .	$9,750.000
Which, averaged on the years of peace and war, is annually	1,392,857

More than if we had our own shipping."

If a similar statement had been made for import business, the figures would have differed considerably, as the imports were greater than the exports by $2,500,000, and at least half in value ($13,750,000) carried by British vessels.

On this basis our loss by war freights and insurance on imports would have stood at . . .	$1,856,250
Add the loss on exports	1,392,857
Total annual loss by war freights and insurance .	$3,249,107
Total annual loss by foreign instead of American freightage	5,343,750
Advantage in resuming our navigation . .	$8,592,857

This advantage equivalent to saving of 16.37 per cent.

Facts and figures like these convinced our primitive statesmen that the national interest in maritime pursuits should be thoroughly protected. In the first Congress, in relation to a proposed duty on cordage, Mr. Madison said he "very much doubted the propriety of laying a duty on such articles as entered into shipbuilding, but if it was necessary to lay a duty on cordage for the purpose of encouraging the manufacture and making us independent of the world as to that article, it was also politic to make us alike independent for the raw material." Mr. Madison also advocated the policy of discriminating between those foreign nations in alliance (as the French and Spanish) and those not in alliance with the United States. Under his leadership, these measures, with others protective of shipbuilding and navigation, were carried.

The Utility of Our Early Marine. The wisdom and goodness of our primal policy of navigation were not exceeded by the Union itself. It was in force intact for twenty-six years, then for thirteen years following exercised a diminishing power. It gave to our country the business of shipbuilding;

of getting ship-timber; of building dry-docks and repairing vessels; of making spars, blocks, and pumps; of fitting rigging and sailmaking; of making anchors and chains, windlasses and capstans; of building boats and making oars; of equipping and outfitting vessels; of supplying provisions and clothing for crews, and of many other minor trades. It gave to our country the business of ocean traffic in vessels of our own building and navigation; secured the coasting, lake, and river transportation; induced the early application of propulsion by steam, the erection of engine and boiler shops; and gave impetus to the business of marine engineering. It vastly enlarged the field and increased the number of mechanical pursuits; opened new avenues for labor of every kind, on ship and shore; provided fresh opportunities for enterprise and skill; raised the wages of labor and the rewards of industry in every employment and occupation of the people.

A farmer's son could learn the shipwright's trade and become a builder and perhaps an owner; a laborer's son could follow the sea and become a shipmaster and perhaps a merchant. Under this policy, the rising generation of town and country found the hard conditions existing in their parents' time greatly modified and improved. Our merchants, shipowners, builders, mariners, underwriters, and all classes of business men rose from the ranks of the people. They all served the country with credit. Our merchants are said to have been princes in liberality; our shipowners were never surpassed in enterprise; our builders and architects led the world in naval improvement; our mariners excelled all others in energy and skill; our underwriters were liberal and public-spirited.

Under our early policy our seaports became cities, with warehouses, docks, and wharves and harbors improved. Eligible farms became town sites, land everywhere rose in value, and, even in the distant west, the soil appreciated because our ships sailed the sea. There was not an interest in the country that was not benefited by the policy that received the sanction of the great men responsible for the creation and early administration of our government. They all believed with Humboldt, the greatest philosopher of his time, "that contact with the ocean had been one of the chief influences in forming the char-

acter of nations, as well as in adding to their wealth and power."

Let us look now at the commercial results of our original navigation policy. The culmination in point of tonnage, shipping per capita, and proportionate carriage in foreign trade, taken together, occurred in 1810, while maritime Europe was in a state of war, and considerable of our shipping engaged in carrying for belligerents. After the peace of 1812 we carried less for foreign nations and ourselves, as they resumed their former business as fast as they could; and for this and other reasons, as explained elsewhere, our commerce fell off. Before the check to our prosperity, consequent on diminishing ship-protection, took full effect, our tonnage, shipping per capita, commerce per capita, and proportionate carriage had a second culmination in 1825. The figures for a period of five years stand thus: —

CULMINATION OF CARRIAGE.

Year.	Shipping in Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1823	600,003	5.63	14.03	92.1	87.4
1824	636,807	5.79	14.23	93.4	88.7
1825	665,409	5.88	17.33	95.2	89.2
1826	696,221	6.00	14.01	95.0	89.6
1827	701,515	5.87	13.54	94.3	87.5
Average . .	659,991	5.83	14.63	94.0	88.5

It will be seen that our share of carriage, annual average value, exceeded ninety-one per cent. Commerce per capita was lower than before the war of 1812, being for the term an annual average of $14.63 (an average figure not exceeded for the period of twenty-six years following, viz.: 1828–1853). The annual average American carriage of imports was $78,884,544; of exports, $72,634,236; and of both, $151,518,780. Estimating the import freightage at 12.5 per cent. and the export at 17.5, we have the following statement of transportation, trade, and insurance: —

Carriage of $72,634,236 exports at 17.5 per cent.	$12,710,991
Carriage of $78,884,544 imports at 15 per cent.	11,832,681
Whole value of carriage	$24,543,672
Profit on the commerce of equal amount	24,543,672
Insurance on cargoes, $151,518,780 at 2 per cent.	3,030,375
Amount of business	$52,117,719

Allowing foreign merchants, shipowners, and underwriters to have done the remainder of business at equal rates, we have the following statement of the foreign side of the case: —

Carriage of $9,393,628 exports at 17.5 per cent.	$1,643,884
Carriage of $4,900,834 imports at 15 per cent.	735,125
Whole value of carriage	$2,379,009
Profit on the commerce of equal amount	2,379,009
Insurance on cargoes, $14,294,462 at 2 per cent.	285,889
Amount of business	$5,043,907

Now, summing up the total of American and foreign business, we find it to be as follows: —

Imports and exports	$165,813,242
American and foreign trade profits	26,922,681
American and foreign carriage	26,922,681
American and foreign insurance	3,316,264
Whole amount of business	$222,974,868
American share of business 91.33 per cent.	$203,636,499
Foreign share of business 9.67 per cent.	19,338,369

As we had 659,991 tons of shipping engaged in creating the volume of business shown as American, it follows that each ton produced, —

Of commercial business	$266.76
Of shipping business	37.19
Of insurance business	4.59
And in the total	$308.54

Estimating 10 per cent. for depreciation of a wooden sailing marine, we have a sum of $3,719,000 to lay out each year of

the period in building, repairing, recoppering, new sails, etc. Allowing 6.5 per cent. for building alone, we have a sum of $2,417,350, which at $45 a ton, would pay for 53,709 tons of shipping annually. This was about the amount then built.

During the period in question, although we imported more per capita than subsequently for many years, and in each year of the period averaged an importation of $6,250,308, or 8.6 per cent. more than the value exported, we were not obliged to send specie abroad to balance our trade.

As for the distribution of the amount earned by our shipowners, merchants, and underwriters, stated above at $52,117,719, if we estimate that every dollar of it represented a day's labor, then, if $365 would support five in a family for a year, 713,940 persons gained support from the business which was done.

It is sometimes said of navigation, "If it is profitable somebody will carry it on, but if it be unprofitable nobody should engage in it." It is overlooked that this view is narrow and distorted. Like every other business, navigation is not an oyster to be consumed by those only who carry it on. Business men and all kinds of business carried on by labor serve the community, and through the community the nation. Every kind of business that makes a market for labor is profitable to the community and to all the people. The shipowner is only one, it may be, of a hundred persons that can lose a dollar if his vessels do not make money. It is a peculiarity of the shipping business that vessels pay every debt before the owners can call a cent of earnings their own. It is therefore possible, as has been proved, for a merchant marine to be a public blessing, though its owners for a short time fail to make a dollar for themselves. From this it may be seen that protection to shipowners, to help them to overcome rivalry and insure success, is not misapplied to advance private interests.

The Inadequacy of our Present Marine. This fact, however, did not prevent the removal of protection, and it seems to have had little power to restore it. We are now upon a period perilously near the point of no marine at all, at a pitch of declination as to foreign trade, all circumstances considered, below any degree that our fathers ever knew. The protection to the domestic trade alone floats any marine at all

worthy of mention. The figures for a period of the last five years will now be examined: —

DEPRESSION OF CARRIAGE.

Year.	Shipping in Foreign Trade.	Foreign Trade Shipping per Capita.	Foreign Commerce per Capita by Sea.[1]	Proportion of American Carriage in Foreign Trade.[1]	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1887	989,412	1.67	23.00	18.25	10.50
1888	919,302	1.52	22.61	17.85	9.99
1889	999,619	1.61	22.99	17.08	11.62
1890	928,062	1.47	24.97	16.68	9.03
1891	988,718	1.53	26.90	15.85	9.26
Average . .	965,022	1.56	24.09	17.14	10.08

It is a defect in our official statistics that the figures for tonnage in the foreign trade do not stand for the capacity constantly employed. What that is will have to be estimated. Vessels engaged in the foreign trade must sail under "register," while they may also engage in coasting voyages. Vessels in the domestic trade sail under "enrollment," and cannot go on foreign voyages without changing papers from enrollment to register. The consequence is, that there are two kinds of registered and of enrolled tonnage, viz.: "permanently" and "temporarily" registered, and "permanently" and "temporarily" enrolled. It has been closely estimated by the Bureau of Navigation, Treasury Department, that the tonnage "temporarily" under register will average two months in each year. The steam tonnage under register is mostly "permanently" in the foreign trade, but there is a fraction under register employed in coasting, which may be estimated at 10 per cent. Then, the efficiency of steamers exceeds that of sailing vessels. Comparing by gross tonnage, the ratio is about 2 to 1. In order to compare the tonnage and efficiency of our fleet in the foreign trade in 1823–1827 with that in the same business from 1887 to 1891, these allowances must be made. The rules for admeasurement of tonnage were changed in 1865, but the difference on that account, being small, may be neglected.

[1] Merchandise only, coin and bullion excluded.

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We will therefore make the needful corrections, and for the foregoing table substitute the following, the difference being in the first two statistical columns: —

DEPRESSION OF CARRIAGE — CORRECTED TABLE.

Year.	Corrected Shipping in Foreign Trade.	Corrected Shipping per Capita.	Foreign Commerce per Capita by Sea.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1887	907,232	1.53	23.00	18.25	10.50
1888	849,602	1.40	22.61	17.85	9.99
1889	893,544	1.44	22.99	17.08	11.62
1890	874,012	1.38	24.97	16.68	9.03
1891	918,741	1.43	26.90	15.85	9.26
Average. .	888,626	1.43	24.09	17.14	10.08
Averages of the period of 1823–27.	659,991	5.83	14.63	94.0	88.5

From the comparison of averages we may note that great changes have occurred in sixty-four years' time. While our tonnage is one third greater, and commerce nearly two thirds more per capita, we have lost extremely in carriage; of imports 76.86 per cent., of exports 78.42 per cent.; and in shipping per capita the excessive rate of 75 per cent.

In the period last taken, the annual average of American carriage of imports was $123,618,865; of exports, $75,963,162; and of both $199,582,027. Estimating the import freightage at 10 per cent., and the export at 15, we have the following statement of transportation, trade, and insurance: —

Carriage of $75.963,162 exports at 15 per cent.	$11,394,474
Carriage of $123,618,865 imports at 10 per cent.	12.361,886
Whole value of carriage	$23,756,360
Profit on the commerce of equal amount . .	23,756,360
Insurance on cargoes, $199.582,027 at 1 per cent.	1,995,820
Amount of business	$49,508,540

Here is an amount of American business fully 5 per cent. less than was transacted in the period of sixty-four years ago.

Allowing foreign merchants, shipowners, and underwriters to have done the remainder of business at equal rates, we have the following statement of the foreign side of the case: —

Carriage of $676,037,177 exports at 15 per cent.	$101,405,576
Carriage of $599,597,463 imports at 10 per cent.	59,959,746
Whole value of carriage	$161,365,322
Profit on the commerce of equal amount	161,365,322
Insurance on cargoes, $1,275,634,640 at 1 per cent.	12,756,346
Amount of business	$335,486,990

Here is an amount of foreign business increased so much beyond the limit of sixty-four years ago as to be enormous in its ratio, which is 6,551 per cent. Summing up the total of American and foreign business, we have the following statement: —

Imports and exports	$1,475,216,667
American and foreign trade profits	185,121,682
American and foreign carriage	185,121,682
American and foreign insurance	14,752,166
Whole amount of business	$1,860,212,197
American share of business 13.39 per cent.	249,090,567
Foreign share of business 86.61 per cent.	1,611,121,630

As we had 888,626 tons of shipping, on a basis of sail, engaged in creating the volume of business shown as American, it follows that each ton produced: —

Of commercial business	$251.33
Of shipping business	26.73
Of insurance business	2.24
And in the total	$280.30

Thus it appears, shipping is much less productive now than sixty-four years ago; also, to carry the same value, more tonnage is required, prices being lower and voyages longer, as a rule. It further appears, that to transact and carry 75 per cent. of the trade between our own and foreign countries, on the average for the past five years, we needed 1,860,212,197

÷ 280.3 = 6,640,072 tons of sail, or 3,320,036 tons of steam; or, if mixed in due proportion (about 30 per cent. of sail[1] and 70 per cent. of steam),[1] we would have required of sail, 1,171,770, and of steam, 2,734,151 tons.

The Present and the Future Need of Tonnage. An estimate of our shipping necessities for the present year may be fixed at 1,200,000 tons of sail, and 3,000,000 tons of steam. To increase the shipping we now have in foreign trade to this amount would require an outlay of $300,000,000. Under due protection, with this preparation made, we might command a business of $2,000,000,000, a vanishing fraction of which is now barely possible of attainment.

It will be seen that, without shipping of our own, the sum which might be earned and saved by carriage is but a small portion of the business lost. The loss of tonnage is but an index to the loss of business. Merchants without ships must needs give way to merchants with ships, therefore our commerce, as well as carriage, has become foreign. Foreign merchants and their agents, their ships and underwriters, now do, or let go undone, our foreign commerce and navigation, as they find it convenient or profitable. Is this a matter of private or national interest? Our own people should be interested and employed in this business, which should be in greater part our own. Is this subject not one of national concern? In the words of Webster, "Where there is employment there will be bread. Employment feeds and clothes and instructs. Employment gives health, sobriety, and morals. Constant employment and well-paid labor produce in a country like ours general prosperity, content, and cheerfulness." In every trade and calling not closely connected with commerce and navigation, our statesmen claim it is constitutional to clear the way for the employment of our people, but when they go from north to south, from east to west, and get to the water's edge, they lose their faculty for further work. In the language of Chauncy M. Depew, a few years ago: —

"A chance in the markets of the world for our increasing surplus of production is one of the safety valves for the energies and the needs of a growing population. We build 140,000

[1] The entrances and clearances in the salt water foreign trade in 1891 were in these proportions.

miles of railroad at a capitalization of $8,000,000,000 to bring the output of our farms, our mills, and our mines to the seacoast, and then sit on our treasures and gaze upon the ocean with something of the helpless wonder of the simple aborigines who first roamed these States."

Such helplessness did not characterize our people a century ago. All the worthies of our early government believed in an American marine. Their works responded to their faith. On their wise action shipbuilding, navigation, and commerce securely rested for twenty-five years of our national life. Affirming that a marine of our own was a national need, they created it, in the interest of the people. Knowing that the sole condition of its prosperity was governmental protection, they fortified it by policy and statesmanship, — by navigation laws, discriminating against the tonnage and carriage of foreign nations, and in favor of freighting our own fleets.

In the beginning, Thomas Jefferson foreshadowed the consequences of letting our foreign trade fall into rival hands. His words were these: —

"If particular nations grasp at undue shares of our commerce, and more especially, if they seize on the means of the United States, to convert them into aliment for their own strength, and withdraw them entirely from the support of those to whom they belong, defensive and protective measures become necessary on the part of the nation whose marine resources are thus invaded; or it will be disarmed of its defense, its productions will be at the mercy of the nation which has possessed itself exclusively of the means of carrying them, and its politics may be influenced by those who command its commerce."

After all their care for navigation, it is scarcely possible that any of the fathers ever thought the time would come when Mr. Jefferson's tact and foresight would be appreciated, as they deserve to be to-day.

CHAPTER IV.

THE NAVAL ARTS AND NATIONAL PROGRESS.

With nations, as with men, substantial progress comes of a contest with nature. Gaining knowledge and winning wealth means conquering its forces. Through agriculture and the mechanic arts; by mining, metal-working, and manufacturing; by engineering, shipbuilding, and navigation; by commerce, transportation, and telegraphy; in short, through and by industrial science and diligent labor, lies the true, the only way to national progress. The history of civilization gives no example of ignorance and indolence making their way to wealth and power.

Among the arts the skill of man has many monuments, but one masterpiece, wonderful in adaptation, capital in utility, controlling in influence, and that is the ocean ship, at once an engine of pride and power, and the arm of empire over sea and land. Shipbuilding is indeed the crowning glory of constructive art. If we question this, think for a moment what the world would be without vessels to-day. How many would be the pursuits cut off, the resources forfeited, the wants unsupplied; and what opportunities would be lost to our race, its progress, civilization, and happiness; to the employment of labor, the increase of wealth, and the power of nations, if the shipbuilder should close his yard and the mariner sail no more. Shipbuilding and navigation have wrested from barbarism two thirds of the globe. Without these trades the Dark Ages might yet return, for the arts of peace came in with commerce, and have flourished on nautical and commercial life. They have never otherwise succeeded. Science gained but small advances while the deep was unexplored. Grim-visaged war held high carnival on land, until bold and heroic minds spent their forces on the sea.

The Progress of Navigation — British Ascendency. While

shipbuilding was rudimental it cut no figure in any land. The pole, the paddle, and the oar, had little influence on savage or barbarous life. Sail was the first power, and sailing vessels the first machines that gave to seacoast people enterprising pursuits and the means for wealth; motives for invention and the spirit to excel; opportunities for knowledge and the medium for spreading it. But the art of sailing was long in perfecting. Before the use of the compass little was accomplished. Improvements in rigging and sails followed. Then sailing to windward, when longer voyages were undertaken. At first there was rivalry, then emulation developed.

The art of sailing made but passable progress down to four hundred years ago, when the African cape had been doubled by the Portuguese, and, crossing the Atlantic Ocean, Columbus had found a new world for Spain. Indeed, the time of tolerable sea-going shipping dates no farther back than 1650, when the British, for the second time, enacted "navigation laws." From the ninth century down, England has been the most important maritime nation, though the permanent English marine dates only from the reign of Henry VIII., four centuries ago. The Portuguese, Spanish, French, and Dutch marines were of much consequence at that time. Commerce had been free, and Holland, in particular, had shown the world how the use of ships could stimulate the growth and increase the wealth of nations. Great Britain's timely legislation and effective naval victories soon gave her the lead. For two hundred and forty years she has shown the way in nautical pursuits and national progress. In extension of language, laws, and institutions, she has surpassed all modern nations. The leading principle of her success has been the policy of ship-protection, which first gave her merchant fleets, built by her own mechanics and manned by her own seamen, and then a navy that swept her rivals from the seas. In one or another form, that policy still prevails.

Following Spain's example, the nautical powers of Europe attempted the making of settlements abroad on a grand scale. Of course, England was first to see that colonies could be planted, possessed, and held by ships, as by no other means. Her naval progress had taught her truly, that if she had the ships she could take her choice of lands and climes, of races

and of nations, to sow the seeds of gain, and gather wealth or booty for her own enrichment. With ships on every sea, securing the lines of trade, her merchants might engross it all, and thus the world accept her commercial rule.

Possession of ships confers a peculiar power. Merchant fleets are but navies needing guns. By traffic they seize the sea in time of peace. By cruising, blockade, and battle, in time of war, they hold and conquer both sea and land. At all times, success gains wealth, and victory wins power. Foreign merchants may be peaceful and their ships of use; yet, are they not opponents and adversaries living by encroachment, whose profits are made by taking away more than they bring, whose interest is to intrude, to trespass and invade? The mechanics who build foreign fleets, and the mariners who sail them, act for their nation in a military as well as civil character. Their trade is their drill; their daily work an engagement. The merchant's scheming course is but a covetous campaign. He and his retainers accumulate riches; but for their king and country this is power and the sinews of war. Alien merchants and foreign ships, carrying on another nation's trade, may bring about more than the occupation of its wharves and stores and the government of its ports. Debt abroad brings a foreign yoke, while bankruptcy invites the sword.

Nations that take and keep the sea develop military as well as civil prowess. Ships are weapons for war no less than tools for trade. Not only are they platforms for guns, but ramparts and fortresses. Their decks are parts of the national domain. Their flags cover the seas they constantly sail. They are the outworks, fortifications, and champions of a nation. Our second war with England was mainly fought by ships. Our Union was assuredly preserved by ships. The national life and safety cannot be secured, except by ships and those our own. The power to build and sail is in itself a pillar of independence. It was different in the olden time. Then, the armies of tyrants trampled liberty down. Henceforth it may be navies, mostly, that shall subjugate the weak. Then, the defense of freedom was on the land. Henceforth, for maritime nations, it must be made at sea. The ocean now, more than ever, is the threatened arena for military triumphs. Tremendous conflicts on the deep are yet to come. Philanthropists

may cry Peace! Peace! but Britain's ascendency and menacing opposition to stronger powers on land make for war and conquest. Since England became a naval power, she has waged more wars than any other two states known. The four nations who might war with England single-handed, in merchant shipping, and, consequently, in power to build and sail, compare with her as follows: —

PROPORTION OF THE WORLD'S TONNAGE UNDER THE FLAGS OF FIVE NATIONS.

Flags.	Percentage of Steam Tonnage.	Percentage of Sail Tonnage.	Percentage of Total Tonnage.
British and Colonial	63.4	36.6	52.34
American	3.9	14.2	8.27
French	6.2	2.7	4.74
German	7.3	6.9	7.08
Russian	1.2	2.9	1.92
The four nations	18.6	26.7	22.01

What predominant power has shipbuilding and navigation put into the hands of a single nation! Insular and enterprising, sea-power at all costs has been, and probably ever will be, the maxim of Great Britain. A British authority[1] makes the following declaration: —

"To those who take a patriotic interest in the British trade routes and coaling stations we recommend a careful perusal of Captain Mahan's fascinating volume on 'The Influence of Sea-Power upon History, 1660–1783.' Never, perhaps, was the maintenance of this predominating 'sea-power' more necessary to us than at present. No Englishman can read this book without an ever-increasing conviction that British 'sea-power' must be retained at all costs and against all combinations. British commercial supremacy has been attained through 'sea-power,' and by 'sea-power' only can that supremacy be upheld."

European Solicitude and American Indifference. Perceiv-

[1] *The London Chamber of Commerce Journal.*

ing the advantage and necessity of cultivating the naval arts, the European nations are all emulating Great Britain. Subsidies, subventions, and bounties are generally applied. Within the last decade shipbuilding and navigation have been stimulated as never before. Only in the United States is there little doing to lessen the predominance of Great Britain. Throughout the country lethargy prevails. We look idly on, as if a vain procession were passing by. In twelve years' time we have lost 42 per cent. of ships and seamen in our unprotected foreign trade. The British want us to buy our ships from them. We have listened to this proposal. Some of our people think it wise. The British know it means monopoly of our commerce by them. The abrogation of our navigation laws, so often urged in House and Senate, signifies nothing so much as British anxiety for the end of shipbuilding in the United States. The clamor in the press for "free ships" means freedom, not so much for Americans to buy, as for Englishmen to sell and sail under a convenient flag. British objection to American shipbuilding has always existed. A British king once ordered that "no vessels other than sloops shall be built in the North American colonies." Now it is asserted that ships are mere "vehicles of commerce," to be prized only as articles of trade. This was not the British thought when Spain and Holland held the main, and Oliver Cromwell ruled the realm. Then, the Admiralty imported shipwrights instead of ships, and Parliament compelled the building of English tonnage at home. British history, as a lamp of experience, had lighted this course.[1] Indeed, the time never was, nor will it ever be, when sailing ships and steamers can be rightly compared with carts or carriages; or shipwrights, engineers, and seamen be matched with wheelwrights, teamsters, or laborers. Ships, and the men who build and run them, are essential to

[1] The first navigation law, 1381, did not protect shipbuilding, but only compelled preference for freighting British-owned vessels when they were in readiness. Consequently it soon fell into desuetude, and foreign flags resumed the carriage of British commerce.

The second navigation law, passed under Cromwell in 1650–51, protected both shipbuilding and navigation. Under Charles II., in 1660, it was perfected to protect seamen, by providing that three fourths of all crews must be British subjects. The same law reserved the coasting trade, which was to include all colonies and possessions.

national progress. No maritime nation can attain rank and power, much less achieve greatness, without them. Commercial independence and political freedom have their best defense in the naval arts.

Influence of Shipbuilding on Ancient History. After Julius Cæsar burned an Egyptian fleet of 110 sail, on the open sea, and sacked Alexandria and Cairo, the Egyptian marine, which had flourished for two thousand years, scarce made a trace in the subsequent records of history. Egypt had never been a shipbuilding nation, but had purchased vessels from the Phœnicians. The Phœnicians, but for their skill in the naval arts, would be as little known in history as the petty peoples whom they displaced around the Mediterranean shores and the west coast of Spain. The civilization and greatness of Greece had probably never been developed but for shipbuilding and navigation. The siege of Troy took place with a fleet of 1,186 vessels, the largest carrying 120, and the smallest 50 men. The Greeks, like the Phœnicians, built their own shipping. The Romans held but a subordinate power while they performed their voyages, mostly coasting, in hired vessels. Even their first distant voyages were made in foreign-built shipping, until after the first war with Carthage. At that time they built themselves a fleet, with which they broke their rival's power, and never afterward did they depend on rivals or enemies for the means of navigation. In the interval between the first and second Punic wars, the Romans took the lead of the Carthaginians in shipbuilding, as they were well able to do, having ample materials at hand, while their enemy depended on importations either of ships or timber. Superior shipbuilding power enabled the Romans to control the sea. When the war came, inferiority of sea-power obliged Hannibal to invade the Roman territory by land, via Spain. Through this weakness, dangerous and broken communications existed, the aid of allies was prevented, and reinforcements intercepted.

Influence of Shipbuilding on Modern History. History teaches many lessons of the importance of shipbuilding and of a nation producing from its own soil the materials for its fleets, whether military or mercantile. While the example of Great Britain is full of interest, perhaps the most instructive are the cases of Holland and Spain.

In the height of her prosperity and influence as a European power, the agriculture of Holland could not support more than one eighth of her people. Shipping, commerce, and manufactures gave a living to the other portion. The shipping interest was the first developed; manufacturing came afterward. The poverty of the soil and the abundance of the sea first made fishermen of the Dutch. When they had discovered a process for curing the catch, the material for export was at hand. This foreign trade induced shipbuilding and navigation, and so laid the corner-stone of their wealth and dominance on the sea. Fortunately, on the discovery of the passage to the East round the Cape of Good Hope, and when the Italian republics were giving way to the pressure of Turkish power, the Dutch succeeded to the great trade of the Levant. Favored also by their position, at the entrance of the German rivers, and midway between the countries of the north and south of Europe, they quickly absorbed nearly all the carrying trade. The commerce of the Baltic states, the trade of France and Spain, of England even, were carried on by Dutch merchants under their own flag but little more than two centuries ago. The key to this success was shipbuilding and navigation, the mastery of the sea. The failure which followed was due to the legislation of foreign nations, and the consequent wars for the protection of British, French, and other marines. Other causes contributed. The Dutch lacked in naval protection. They imported too freely. "Their food, their clothing, the raw material for their manufactures, the very timber and hemp with which they built and rigged their ships (and they built nearly as many as all Europe besides), were imported; and when a disastrous war with England in 1653 and 1654 had lasted eighteen months, and their shipping business was stopped, a humiliating peace alone saved them from ruin."

While the reverses suffered by the Dutch in this and subsequent wars teach the instability of a national economy based wholly on commerce, they show the folly of carrying on the shipping trade of the world with deficient naval protection. An unprotected trade always invites the spoiler. However, the Dutch, being a great shipbuilding people, soon recovered much of their commerce after peace came. They also increased their navy, and later waged two wasting naval wars against

England and France united, though their commerce again suffered greatly.

In the same century Spain suffered the loss of many possessions from a weakness the exact opposite of the Dutch defect. In the previous century she had discovered, conquered, and colonized with energy, depending on her navy for the lines of communication. She had given no attention to legitimate commerce, nor developed a mercantile marine to serve as a base for the sea-power which she boasted, and with which she threatened England and brought about "not only disaster, but annihilation; not only humiliation, but degradation." While Holland depended on foreign countries for ship materials, and had too small a navy to protect its marine, Spain had an insignificant marine, and, therefore, its braggart navy could not stand a staggering blow. Contrariwise, the Dutch navy, backed by a great marine, stood many severe blows in its day. At the time of the Dutch defeat by the English in 1654, Spain still held Belgium, Sicily, and other Italian territory, besides her possessions in America; yet so low had fallen Spanish shipping power that a Dutch writer could asseverate: —

"In Spain all the coast is navigated by a few Dutch ships; and since the peace of 1648 their ships and seamen are so few that they have publicly begun to hire our ships to sail to the Indies, whereas they were formerly careful to exclude all foreigners from there. . . . It is manifest that the West Indies, being as the stomach to Spain (for from it nearly all the revenue is drawn), must be joined to the Spanish head by a sea force; and that Naples and the Netherlands, being like two arms, they cannot lay out their strength for Spain, nor receive anything thence but by shipping, — all which may easily be done by our shipping in peace, and by it obstructed in war."

This happened as predicted. Fifty years previous Spain had been characterized "as one of those states whose legs and arms are strong and powerful, but the heart infinitely weak and feeble." The government depended for support upon the safe arrival of a few treasure-ships from America, instead of the taxes from internal resources and a widespread commerce. The loss of half a dozen silver-laden galleons more than once crippled its forces for a year. While the war with the Netherlands was carried on, the Dutch control of the sea compelled

Spain to march her troops overland, instead of sending them by transports. The same lack of maritime power caused her to wink at the employment of Dutch ships in bringing necessaries from foreign countries. For thus preserving their enemy's power, the Dutch received in return the specie which maintained the Amsterdam Exchange. It was a singular warfare. "In the course of history," says a forcible writer, "the Netherlands, Naples, Sicily, Minorca, Havana, Manila, and Jamaica were wrenched away, at one time or another, from this empire *without a shipping*. In short, while Spain's maritime impotence may have been primarily a symptom of her general decay, it became a marked factor in precipitating her into the abyss from which she has not yet wholly emerged."

The study of these examples has not been lost on British statesmen, since Great Britain affords, to-day, the only perfect example of a nation whose enormous naval power is founded on an immense marine and a vast commerce of her own. Every element of her power is British, except the food and clothing of her seamen; and no element of her strength is of greater consequence than the building of her own ships with materials of her own production.

Improving Influence of the Naval Arts. The building of ships and steamers excites the energies of whole communities. We shall search in vain for a physical employment better adapted to arouse the emotions of men, to lift up, broaden out, and enlarge the minds of nations. It develops community of interest and ambition, intensity of purpose and patriotism. If it is grand to think of the objects and uses of the ocean ship, to weigh the service which she renders to man, and the prestige and progress which make her a blessing, it is inglorious and disgraceful to propose that the character and power instinctively accorded to shipbuilding nations be cast out of one's own country to the advantage of its rivals and foes. It is a matter of true economy, and it should be a subject of national pride, to build our own ships.

Shipbuilding is a test of manliness. It is because the well-built ship is a trial of the finite with the infinite, a measuring of man's capacity with the omnipotence of Deity, that we glory in the thought of her construction. It is because its building is a marvel of skill, able to defy the ocean and its waves, that

we laud and cheer the launching ship. We know that the forces of the mighty deep sometimes exhibit stupendous power, but the strongly-built, well-manned ship safely rides and securely sails from youth to age. At sea the largest ships, thousands of tons in weight, tossed like floating corks, but for nautical skill would be wrecked like drifting clouds. It is because the mariner strives with the genius of infinitude that seamanship has furnished the most triumphant exhibitions of courage and intelligence. Only the bravest of mankind become intrepid seamen. The skill shown in building ships, and the prowess developed by sailing them, fitly supplement each other and crown these employments with lasting advantage. For our own, as well as other nations, the trackless sea affords a grand highway for commerce and communication, a fitting field for glorious enterprise, noble achievement, and national progress.

Navigation arouses even the dullest minds. It changes habits, feelings, and associations, and, for multitudes, improves their faculties and affections. For numbers, it ravels out and knits anew the texture of their social and moral being. For many, it breaks up the mould of their inner nature, and recasts their characters in better and manlier types. The utility of the naval arts, without a doubt, is incalculable to our people. If we inspect our national domain, with its coast line long enough to unite the poles; with half the harbors of the New World, and double the number of ports belonging to any other nation; having now the greatest productive power of any land, and the largest per capita commerce, domestic and foreign, — we shall seek in vain for any physical or social reason for giving up the sea, as giving it up for years past has been the order of the day, enforced by our rivals. But, on the contrary, we will see our every frontier weak and exposed, and the utmost need existing for a marine of our own, supported by a navy of our own, able and ready at all times for the national defense. Having in view the lessons of history, it will be easy to anticipate "the rude awakening" that has never failed to shock, if not to ruin, such maritime powers as neglected or abandoned their interest in commerce with their own marine.

The Question of the Flag at Sea. We are to-day a nationality of 65,000,000 souls; in the view of the world, a great

state with a strong body, enfeebled in legs and arms. A single idea of continental extension has engrossed the public mind, and produced an unbalanced national body. We have no national military policy, and seem to have no care for independence, no concern for safety. The protection of our Constitution seems only for citizens ashore. At sea, or in a foreign land — there, Destiny defends, and our rights are not maintained.

The question of the flag at sea is not of moment to our coast States only, or the few there who happen to own shipping. It is a subject of serious concern to all our people. Shipping renders a general, and not a partial service; is of public, and not of private use. Individuals carry on the shipping business; so they do other occupations, but individuals make the nation. The prosperity of one is the interest of all. The strength of all is for the protection of each. Every industry produces for all. Each State reciprocates with all other States, and must stand united, or divided fall. A marine and a navy are national necessities, and just as much for the interior as for the coast. A marine is a highly productive and wealth-making machine, a mainstay of social progress of prosperity and power. The marine is an arm of the navy. The navy is our maritime defense. A wise public policy demands the maintenance of a navigation and commerce of our own, as agriculture and manufactures of our own or improved rivers and harbors, transcontinental railroads and markets of our own.

And yet, there is a proposition to give up shipbuilding, and buy vessels abroad until we can build them cheaper at home. Another, that we repeal the tariff and reduce wages, so that American ships can be built and sailed cheaper than foreign. Then we may have a marine, if we can get it; but if protection is wanted to create a marine and make a navy necessary for its defense, then the United States shall be known in history for its naval weakness, and our people for their ignorance and contempt of the naval arts.

The wise and patriotic Washington in his farewell address said: —

"There is a rank due to the United States among nations, which will be withheld, if not absolutely lost, by the reputation

of weakness. If we desire to avoid insult, we must be able to repel it; if we desire to secure peace, one of the most powerful instruments of our rising prosperity, it must be known that we are at all times prepared for war."

Now, what is our reputation as to the sea? Who believes that we have any power there for the security of peace, or that we can repel directly an insult or attack of a third-class power? Is it not well known abroad that we have no ready or respectable force on the ocean; and since the sea has come to play no part in our politics, our government is without even a policy for maritime power. We have abandoned our early attention to the naval arts, and become a continental, peaceful, gain-loving people, as innocent as babes of the piratical plans of such great powers as rule the seas. We have as guides of public opinion and in authority sticklers for parsimony under the name of "economy," who, rather than protect American shipping in the foreign trade at any apparent cost, would cast away what little remains of sea-going power, and advance another nation, before our own, as the leader, lawgiver, and master of mankind.

The True Lights in our Course. There are rights and prerogatives essential to freedom that for all time to come should be enjoyed by our own people as builders, owners, merchants, and beneficiaries, in carrying our own commerce under our own flag to and from all parts of the world. The purchase or use of foreign ships is incompatible and inconsistent with these rights and prerogatives. Business relations are such that a foreign-built would be mainly a foreign-owned marine. To import ships is to cease building them. This is to slight the skill, disown the ties, and deny the birthright of our fellow-citizens. It is to give to aliens work and wealth, reserving to our countrymen idleness and poverty. It is to close the shipyards and bar the sea to our young men, to exclude our best and bravest from the arena of the ocean. It is to relinquish the natural and the principal means of acquiring rank and gaining power among the nations; because the builders of foreign ships cannot sell these qualities, but they may bestow disgrace. To build or hire foreign ships is to take a sure way to dwarf our national figure and stunt our naval power; because these objects can never be attained by purchase abroad, or

created to stand on such sand as foreign shipyards, alien shipwrights, engineers, and seamen.

Suppose for a moment that private cupidity should fill our ports with foreign-built ships flying the Union flag. What would the nations of the world think of that display? What reason for respect, or ground for rank would they see in such a spectacle? It might indicate wealth and ostentation, but there would be, withal, naught of the national character that we could glory in; nothing to prove our nautical skill, or evince our fitness for mercantile success; nothing to prove our independence, or intimate proudly that our political institutions are the world's best examples. On the contrary, the proof of our ignorance, inferiority, and dependence would be complete; because all this insufficiency and hollowness would be fairly disclosed, from our inability or indisposition to build ships for ourselves. The pretension that "economy" induced the purchase of vessels built abroad would deceive nobody. It would be the story of the Egyptians and the Phœnicians over again.

Moreover, national qualities inhere in the structure of vessels. Character is manifested by the build of a ship. It should say to the world: —

"This is an American ship. She was not built cheap, but *perfect*. Our nation builds the best, the swiftest, and the safest. Our men and institutions are like our ships, the foremost in the world. No people produce more, earn higher wages, or show greater social advancement. None lead Americans in manliness and skill. This ship is a sign of power. This flag and ship symbolize independence, industrial progress, political equality, and republican government. Let none attack their right."

Folly and Danger of British Monopoly. Come to examine it, what a short-sighted, foolish suggestion it is, to quit building ships ourselves, buy from Great Britain, and attempt to rival her, without superior as well as better protected tonnage. What a show we would make, sailing the seas of the world with her ships, advertising the shipyards of the Clyde, and the ability, the greatness, the rank of that nation; the only one on earth that ever waged war (1) for our subjection, (2) for our humiliation, and (3) fitted out cruisers to destroy our shipping, in aid of a war for disunion. A decent self-respect, if no higher motive, should save us from this disgrace.

British wealth and power rest primarily on the shipping trades. The monopoly of building ships, could it be established, would make British power supreme on earth. Great Britain and her colonies now own half the shipping, merchant and naval, on the ocean, and build annually three fourths of all the tonnage launched. No nation intent on social progress should knowingly favor an unlimited expansion of British shipbuilding. The United Kingdom is already a fortress, incomparable and unapproachable, the seat of the very rule best circumstanced to abuse position.

CHAPTER V.

AMERICAN AND BRITISH NAVIGATION LAWS.

Duality of Our Present Shipping Policy. By enactments of Congress since the peace made with England in 1815, our commercial marine has been legislated into two divisions, each having a different policy. What is known as the domestic, or coasting, lake and river trade is under "protection," while the shipping in the ocean or foreign traffic is under "free trade." An interesting view of opposite principles in action may be seen in the operation of the laws relating to these divisions. Certain it is, that free trade has won no laurels in the rule of our foreign transportation. While our domestic trade has realized a water carriage, the cheapest and safest of its kind, which has grown and flourished from the first, our ocean traffic has been cut off and captured by foreign nations. That this defeat is due to some extent to their bad faith, in not truly reciprocating our unprotective and liberal conduct of shipping business, only aggravates the case. A bitter experience would seem to show that our mistaken policy is so abnormal that no nation, not even our own, has put its principle into general practice. We ourselves confine it to a portion only of our marine.

"*Maritime Reciprocity.*" Our free-trade shipping relations with foreign countries have received the title of maritime reciprocity. Let us examine this policy, and trace its adoption and operation. Its origin is referred to the international law, that the ocean is a common highway of nations, and, like the wind that blows over its surface, is free to all. Imaginative philosophers have inferred from this, that transportation carried on upon the ocean should be, like it, without let or hindrance to its motion, the vessels of all nations having the same confidence, receiving equal patronage, and enjoying prosperity, or suffering adversity, in equal degree; in practical

words, that the ocean carrying-trade should ignore the difference in flags, and know only the sameness of ships. The mistake of this theory is, that human nature has not been consulted in its show of reason. The conditions and relations of international traffic have always depended on the will and polity of the stronger nations, with no more of mutuality in interests and benefits conceded to the weaker powers than would be found of sure advantage by the stronger. The freedom of the sea, and the independence of the air, have never cut a figure in the rule of commerce. On this point history teaches better than philosophy.

For example, take Great Britain, for three centuries the "sovereign of the seas." Her policy has been selfish always, with no more of liberality than treaties of peace have promised. That was ever the lion's share to British interest. For thirty-five years after our government offered this nation maritime reciprocity, — freedom from our protective dues and duties, — its government clung for the greater part to its original protective policy of restrictive intercourse. Nor did it, at any time, take down one fence before it was ready to, or had, put up another. The system which Great Britain pursued with so much success, until her sea-power was fully developed and well established, may be described as follows: —

The Original British System. (1) The most bulky articles of importation to be brought in British ships only.

(2) The products of every continent, but Europe, to be imported in British ships only, or in vessels of the country of production.

(3) The entire British dominions included in the domestic division of trade, and foreign shipping prohibited therefrom.

(4) No transportation of merchandise from one British colony to another in foreign vessels.

(5) No imports to be made into any British possessions by foreign vessels, except those belonging to the country of growth, production, or manufacture, and then only when three fourths of the crews were citizens of the same country.

(6) Only vessels built in the British dominions, wholly owned and officered, and three fourths manned by British subjects could obtain registry or fly the British colors.

Such were the characteristics of the code long known as the

"Charta Maritima." It was liberal in nothing, but wise in all things. It favored foreigners not at all, but protected well the British people in all their rights at sea. The increase, employment, and welfare of British merchants, shipowners, shipbuilders, master-mariners, and seamen, were the objects of its administration. The results have been nautical and commercial power, with the rule of the sea and the sway of the land.

In 1815, 1824, and 1830, some modifications were made to govern trade with a few countries, but it was not until 1850 that the general prohibitive features of the British system were relaxed, and our free-trade policy of 1815–28 was fully adopted. The cause for this change has been ascribed to "modern liberality." It had not the honor of that origin, but sprung from necessity. The circumstances were peculiar. In the matter of tonnage supply, the commercial growth had been so great that it had become impossible to stock the market for the increase and maintenance of the marine, from home and colonial shipyards alone. The United Kingdom itself could not longer supply any of the timber that was needed; it was getting scarce, even in the colonies, and importations were becoming enormous. Iron building had not yet been developed sufficiently to furnish much tonnage of a sea-going quality. Withal, the trade of the world was rapidly requiring more ships, particularly between distant countries, and all trades demanded larger and fleeter ships. Our own country, having the materials and workmen to supply itself with superior tonnage at moderate cost, bid fair to gain largely what England would lose, if her owners could not obtain vessels in ample numbers. The remedy was sought in "maritime reciprocity" and "free ships." Four years afterward, home-built iron ships were advantageously substituted for "free ships," it having been found unwise to rest content to purchase ships abroad, instead of having them built at home. In other words, the shipyards of England must not be situated in foreign countries, even in the colonies, with the Atlantic Ocean intervening. British writers pointed out, as "a cause of mischief," the "humiliating spectacle that a great part of our shipping-trade is carried on by American and colonial-built vessels." The returns of the Board of Trade for 1854 disclosed what was

described as an "alarming state of things," that nearly 60 per cent. of the new shipping added that year to the merchant fleet of England was the product of North American shipyards, 267 vessels, of 25,000 tons, being built or bought in the United States alone. (Very few American vessels had been bought before.) On all sides, the British government was roundly denounced for permitting this "practical reproach to the shipbuilding energies of the country, by allowing such an amount of tonnage to be added to their marine by others than subjects of her Majesty."

While the decline of shipbuilding was becoming so marked in England as to draw the attention of the whole press and public to its notice, the shipbuilders of the United States were fast attaining the summit of their prosperity. Our shipbuilding culminated in 1854. In that year the fiat went forth from the British Board of Trade, that iron ships should be made to supply the place of wooden "low-classed vessels," — free ships, — so greatly in demand in England, and the Lloyds carried out the governmental scheme.

The Modern British System. To go back a little, we may judge with what good reason they made, first, a change in their shipping system; and, second, soon returned to the plan of building their own tonnage, by noting the fact that in four years, 1846 to 1850, while they were considering and passing the "free-ship" measure, our tonnage in the foreign trade increased 52 per cent.; and with this great gain we lost 10 per cent. of carriage in the foreign trade, showing plainly that we ourselves were short of ships, and foreign nations were getting away our trade. The means of nutriment for this growth, scant as it was, the British looked upon as aliment which should have nourished themselves. Hence their efforts to overcome our rivalry.

Then, England was prepared for the changes of law that were made. For sixteen years she had been applying subsidy protection to the establishment of steam lines on the most important routes of ocean traffic. Her mercantile houses were old and well-known concerns, holding lines of trade in every port of the globe. Her bankers were rich and powerful, with London long the centre of the world's exchange. Her underwriters, at Lloyds and elsewhere, could and did wield more

power than Parliament, for they covered the trade and transportation of all nations, and could kill or save alive. The risk in adopting "maritime reciprocity" and "free ships" was unsubstantial; in fact, a blank. Of course it meant to tolerate awhile foreign rivalry, and to buy a few ships from the United States; but, as offset, there were the chances, which were duly improved by various means, to cut our commerce out and secure our freighting. It was expected to lose nothing, but to gain much in foreign traffic. Even our coasting-trade could, perhaps, be captured. Anticipating this, Great Britain went beyond our mark in "liberality" and asked for it; but so far Congress has not responded in stripping off protection from our domestic transportation. Besides, all the maritime nations of Europe, except England and Spain, had availed themselves of our reciprocity policy, and were fattening at our expense. Why should England look idly on, while the other rivals of the United States devoured our substance? Her account would be found, like theirs, in taking advantage of our foolish policy. If iron shipbuilding developed, as it was expected, only few Yankee ships would be needed; but, few or many, they had best be British-owned. So the navigation laws were modified, and the "free-ship" act was passed. As an antidote, iron shipbuilding was encouraged by government and people. Lloyds discriminating policies for the favoring of iron ships and their cargoes were instituted. Steamers for subsidized lines were ordered built of iron, in the United Kingdom. The material for the royal navy to be iron, and a new navy to be built in private shipyards, mostly, was decreed. Public sentiment was not neglected. The Great Eastern, of 22,500 tons, was begun, and after a while finished, to advertise the greatness of iron as a ship material.

Since this time, an ardent British sentiment has declared for iron, and against wooden ships, chiefly because the former are home-built, and the latter foreign. For forty years the play of this sentiment has led the Lloyds to overcharge for insurance on hulls and cargoes of wooden ships, to protect the iron vessels of their own land. Discriminative dues and duties, with prohibition on certain trades in the olden time, did not better do the work of protection for the British marine than the subsidy, subvention, insurance, and other mercantile policies have

done since the "reciprocity" and "free-ship" laws were passed in 1849. The competency of the modern system of British ship-protection has depended greatly on the inattention and failure of Congress to counteract and protect against it. Our want of interest in the grand arena, whence England has drawn her wealth and power, has been a godsend to all her people, but a misfortune to our own.

CHAPTER VI.

THE EVOLUTION OF BRITISH MARITIME POWER.

From the previous chapter it will be seen that the shipping success of England must have sprung from many causes; and since our own failure may be attributed in large degree to the active policies of our ascendant rival, we shall do well to glance at them before examining closely the causes of growth, thrift, and decay of our own marine. Without this review of shipping history we shall never realize that British power at sea has become supreme from well-directed effort and constant cultivation; in short, from protection.

The Naval Policy of England. The naval policy of England may be traced to Alfred the Great, whose military mind conceived the thought that a nation like his own, with insufficient defensive power to put to flight the invading armies of its over-sea enemies, might, by creating and maintaining an adequate naval force, prevent wholly their landing upon its soil. Under the protection of the fleets, thus of necessity born, and built from designs superior to those of the Danes, Alfred was enabled to form and establish that framework of national government, to the effectiveness of which Great Britain is deeply indebted down to the present day.

It scarcely admits of a doubt that if Harold, the Saxon monarch of England, had followed the example of Alfred, and depended wholly upon his naval resources, the conquest of William and his Normans would never have been achieved. But even this conquest was overruled to British advantage, since both sides of the British Channel came under the same rule, and constant intercourse, increasing with time across the "narrow seas" for more than three centuries, wonderfully fostered and developed the nautical spirit and commercial life of the British people. It was during the reign of the Norman monarchs, in the twelfth century, that England first put forth

her claim to the "sovereignty of the seas," meaning at that time the waters between her own domain and the continent of Europe.

In the beginning of the thirteenth century this claim was extended, and the masters of foreign ships were required to strike their colors to the English flag, or forfeit their vessels as lawful prizes. After this extraordinary assumption of naval rule, we find all the nations of Europe bordering on the sea appealing to the kings of England to put a stop to certain predatory excursions of the Genoese, — thus proving that the British claim was generally acknowledged. The right to the absolute sovereignty of the seas was maintained up to the reign of James I., and even Queen Elizabeth insisted on and maintained her power to grant or refuse passage through the narrow seas according to her pleasure.

In 1634 Charles I. asserted his right to their sovereignty, and in 1654, after a sanguinary struggle, the Dutch were compelled to submit to its exercise, and agreed to "strike their flags and lower their topsails on meeting any ships of the English navy in the British seas." At the close of the wars ending in 1815 it was deemed politic by the Admiralty of Great Britain to abandon their offensive assumption of power, on the ground that it could not always be maintained as things looked then, and, being highly provocative of war, would seriously threaten the working of a commercial policy by which the "narrow channel" should grow ocean-wide and all "seas" become "British" in the course of time. Intending always to exercise sovereignty over commerce, it was felt to be needless to insist on humbling foreign nations with whom that commerce must be carried on. So Great Britain has pretended to have been moved by considerations of good-will and liberality alone in discontinuing the old obeisance, in acknowledgment of her naval rule. She has taken care, however, always to maintain a navy considered to be able to defeat the combined navies of any two of the other great powers of Europe.

The Navigation Policy of England. Following the naval policy of Alfred came the navigation policy of Richard II., intended as supplementary thereto. This was the first act to encourage English shipbuilding and navigation. It was passed in 1381, and reads thus: —

"That for increasing the shipping of England, of late much diminished, none of the King's subjects shall hereafter ship any kind of merchandise, either outward or homeward, but only in ships of the King's subjects, on forfeiture of ships and merchandise, in which ships also, the greater part of the crews shall be of the King's subjects."

The operation of this law soon secured for the king's use in time of war a large fleet of new and improved vessels, and greatly augmented the power of the state. It had been the custom from early days, for the sovereign to possess war-ships that were hired to the merchants in time of peace. This act introduced a new policy, in reverse of the old one, for the subjects to own the vessels, and the king to hire them on occasion. This idea took such hold of the government that in 1423 the ships of the king's navy were all sold at Southampton, under this restriction, however, that no foreigner could be a purchaser. For twenty years the navy proper was extinct. Then Parliament caused it to be rehabilitated.

The civil wars of the fifteenth century, the rise of the Netherlands, the advancement of discovery, and the improvements made in shipbuilding and navigation by the Continental nations of Europe, left England behind in shipping evolution. Various "foreign" nations bore off the palm of nautical trade, and shipbuilding and navigation became depressed in England at intervals during the fifteenth and sixteenth centuries. The navigation law of 1381 must have fallen into desuetude, for early in the seventeenth century most of the commerce of England was again carried on in vessels of foreign build and ownership. King James I. appointed different commissioners to inquire into the state of the navy, and exertions were made on all sides, with a view to restoring the naval and commercial power of the kingdom. The reports and regulations of these commissions did much to improve the British navy. To enlarge the marine and increase trade the famous East India Company was formed, and a great ship built, intended for a pioneer in driving out of existence the Dutch monopoly of a gainful commerce. At the launching, the king dined on board this ship and named her the Trade's Increase. She was of 1,200 tons burden, — a monster for the times. From the impetus thus given to shipbuilding, British merchants soon again possessed an important marine.

Efforts to Improve British Shipbuilding. In 1612 the Shipwrights' Company was incorporated, with authority to approve plans for vessels of the royal navy, and to exercise authority over the building of merchant shipping. Many improvements were made in the art of shipbuilding by this company, among others the invention of the frigate. To this has been ascribed the naval success of England in the subsequent wars with Continental nations. Peter Pett caused the fact of his great invention to be recorded on his tomb. The original frigate was called the Constant Warwick, and is described as being "so light and swift of sailing that during the Dutch war she took as much money from privateers as would have laden her." Pett built the first three-decker in the English navy in 1637. She was named the Sovereign of the Seas, to express boldly the fixed sentiment of the British government.

In 1615 appeared the first work upon naval improvement ever published in England, written by Sir Walter Raleigh. He published two discourses concerning naval affairs, which had great influence in creating an interest in shipbuilding. Alluding to the influence of the navy on the progress of shipbuilding as an art, he writes: "To say the truth, a miserable shame and dishonor it were for our shipwrights, if they did not excel all others in the setting up of our royal ships, the errors of other nations being far more excusable than ours. For the kings of England have for many years been at the charge to build and furnish a navy of powerful ships for their own defense, and for the wars only. Whereas the French, the Spaniards, the Portuguese, and the Hollanders (till of late) have had no proper fleet belonging to their princes or states. Only the Venetians for a long time have maintained their arsenal of galleys; and the kings of Denmark and Sweden have had good ships for these last fifty years."

Along in the early part of the seventeenth century the Dutch, by their shipbuilding ability, nautical skill, and mercantile enterprise, had wrested from Portugal a share of the East Indian trade; and in the depressed state of the Spanish marine they made bold to attempt the same thing in the new world. Colonies were planted in South America. The wars with Spain, in which the Dutch were constantly, and for the most part successfully engaged, had a most important effect in

developing their naval power. Their fleet was in all respects the best built of any in Europe. Their merchant vessels, of the first class, were cheaply sailed by hardy fishermen, and if Holland had been populous, with supplies of shipbuilding materials abundant, her insular rival might not have easily destroyed her trade.

The unparalleled growth of Holland was inconsistent with the plan of England and her pretensions to rule the sea. The strong hand of Oliver Cromwell held the British helm. The second set of navigation laws were enacted, Dutch carrying in English trade cut off, impediments to Dutch trade everywhere applied, a naval war provoked, when the victories of Admiral Blake decided the nautical rivalry of the two nations in favor of British courage and statesmanship. The efforts put forth in this contest greatly improved the naval prestige and strength of England, while the operation of the navigation laws of 1650 laid the sure foundations of her commercial ascendency. Later in the century when France undertook by a protective policy to create a merchant marine and a navy, able to dispute with England the "sovereignty of the seas," it was found on trial that Cromwell's policy was too much for Colbert's genius. The coveted sceptre of the seas remained in the British grasp.

It has been so, upon the rising of every naval or nautical power, one after another, that the British have waged wars to sink their navies, destroy their shipping, and ruin their trade. British writers have admitted that the rising rivals had the best models, as they had the newest ships, but have claimed that their own people were most experienced and best skilled in navigation. One chief cause of the inferiority of British ships was the practice of "rebuilding" old vessels through a mistaken notion of economy. This practice completely interdicted the improvement of the model, and thus the old forms and dimensions of the previous century passed down to posterity, thereby entailing in action an unnecessary sacrifice of blood and treasure.

The acknowledged superiority of Continental models in the eighteenth century arose from the aid which men of science began to give the shipbuilder in adapting the forms of vessels to the laws of the fluid which they were to navigate. Many valuable hints, thus furnished toward the improvement of

ships, were embodied in the new fleets intended to outsail and outmanœuvre those of England. About the close of the seventeenth century, no less than twenty authors, mostly French, followed each other in succession, with treatises on the designing and building of vessels and the art of navigation; while in England during the same period and until 1754 no English book that could lay any claim to science was published. In that year Mungo Murry, a working shipwright in Deptford dockyard, had the honor to issue the first English work on naval architecture worthy of mention. Sad to tell, this qualified mechanic never was promoted. In aristocratic England, how could he expect to teach the master-builders of his craft, the chief of whom were no other than the sovereigns on the throne! The Stuarts, particularly, are credited in history with devoting personal attention to the promotion of the maritime power of the nation.

Finally, the English adopted the idea of enlarging their scientific knowledge of shipbuilding. A patriotic bookseller formed a society in 1791. King William IV., before his coronation, presided in the meetings and conducted the proceedings. The membership was composed of titled gentlemen, and accordingly proved more ornamental than useful. However, the idea received attention from Parliament. A commission on naval revision, in 1811, recommended a school for naval architecture, and it was straightway founded at the government dockyard at Portsmouth, "the safety of the empire" being said to depend upon its success in educating naval constructors in the science of their art. In the course of twenty-one years forty-two qualified naval architects graduated at this school, then it was abolished at the instigation of the friends of the dockyard officers of the old rule of thumb character. The writings, perhaps more than the dockyard services, of the members of the first school of naval architecture had an important influence on British shipbuilding. One of these members during a lifetime managed the surveyor's department of the Lloyds, and another was the author and director of a tonnage and measurement system that is now international

The British Tonnage Measurement Reform. The education of so many men, the most of them enthusiastically devoted to the science of shipbuilding, could not fail to reward the nation.

Improvements were advocated and undertaken. One of these was the tonnage reform, begun by exciting Parliament to appoint a commission, "To consider the measurement of the tonnage of ships." It took thirty-three years to reach a scientific solution of the tonnage problem. All this time the fortune of American navigation acted as a stimulus to the British search for success. Competition with our lines of sailing-ship packets to London and Liverpool demonstrated the inferior qualities of British ships, especially in velocity and seaworthiness. It was a matter of deep chagrin, that "the vessels of America and the northern nations of Europe, which had been modeled and built in a superior manner," deservedly enjoyed the preference as over-sea carriers.

Scientific opinion was unanimous, that the "old law" lay under the "necessity of great and immediate amendment," and the commission agreed, "that there are sufficient reasons for being dissatisfied with the mode of admeasurement now legally employed." No legislative results accrued, and the old law was left to its injurious operations.

At length, however, in 1833 a second commission was appointed, "To consider the best mode of measuring the tonnage of ships." Upon their report a "new law" was enacted, but the confidence of the government not having been established in the views of scientific men, the subject was empirically treated, and the new rule failed to secure fully the object of the reform, which was to leave modeling free, by obtaining the actual capacity of vessels. Shipowners had been so long accustomed to have their vessels built to carry more than they tonned, it was still sought to contrive proportions and forms for evading the dues to be paid on tonnage. Nevertheless, the new law was of some use for its purpose.

In 1849, British ships still being inferior to American, and a free-ship law being under consideration with a view to the purchase of American clippers, a full reform of tonnage rules seemed more imperative than ever. For, it was manifest that if the time should come that American capital in shipowning could employ fully the shipyards of the United States, there might be none of our superior ships for sale. To maintain and increase British trade and transportation, England and her colonies must be able to build their own vessels, and build

them better, if possible, than the builders of the United States. In view of this necessity, at the instance of the shipowners of the kingdom, for the first time, the third commission was appointed, for the purpose of inquiring into the defects of measuring ships for tonnage, and to frame a more perfect rule, in the event of the confirmation of the faults expressed by the present system. Report was made in 1850, confirming the complaints, and proposing a rule based upon the "entire cubic contents of all vessels measured externally." This system, highly scientific, was not adopted, but its promulgation had one good effect: it educated shipowners to the necessity of correct mensuration if the interests of British shipping were to be advanced. This became apparent in the discussions which followed, of the applicability of the proposed rules to the equitable measurement of vessels built of iron, oak, or fir, with different thicknesses of sides. Then it was discovered that the majority of British cargoes required room in the hold, rather than outside size in the water for burden. It was also foreseen that iron ships were bidding fair to become a monopoly, at least for a while, of British manufacture, and that it would be most unwise to adopt a mode of measurement that would militate in the least against their production. On the contrary, if iron ships, which of the same capacity are smaller (outside) than wooden, should prove successful, a law favoring their production and use would be the very thing wanted to keep British ship-markets for British shipbuilders, to leave out of consideration the prospect of superseding wooden building, and vanquishing the United States.

In deciding the question of systems, external or internal, the iron interest prevailed, and the secretary of the third commission, Mr. George Moorsom, for a wonder a naval architect, framed the present internal method, which was accepted by the government and enacted in 1854. Through the effective work of the writer, this system first became international by an act of Congress in 1864. (The bill was introduced in 1858.) Other nations followed the United States, so that modeling is now free from the bias of taxation the world over.

Here it may be noted that the only instance in which the American Congress has ever passed an act to improve the qualities of ships was that of 1864, following the example of Eng-

land in reforming the tonnage rules, the avowed object of which was, according to British writers, "to compel every one to build strong, fast-sailing, and good sea-going ships." How different it has been in England for the past eighty years! There, many shipping reforms have been instituted and put in force by the government.

Improvement of British Shipping Laws. In 1854 great progress was made in improving the whole system of shipping law. Leading shipowners contributed greatly to the movement. Mr. W. S. Lindsay, an intelligent shipowner of London, in particular, did much to enlighten Parliament by a work entitled "Our Navigation and Mercantile Marine Laws, considered with a View to their General Revision and Consolidation." Lindsay's idea was practically followed out. Not the least interesting matter in his book was a disquisition on the advantages to be derived from a general introduction of iron sailing vessels, and also of such vessels fitted to use auxiliary steam power. He will be remembered in the United States as a sanguine sympathizer with the cause of the Confederacy, who saw still greater advantages for England in the destruction of the American marine by cruisers built and manned by his countrymen.

The "Merchant Shipping Act, 1854," is a voluminous system of law, embraced originally in eleven distinct parts, with 548 sections. Important features have since been added. Its administration is confided to the Board of Trade, which is a special department of government created to superintend all matters relating to ships and seamen. This board is composed of the Lords of the Committee of Privy Council. They are endowed by statute with ample authority for the dispatch of business. From the registering of a new ship to the disposal of her wreck and the cutting up of her junk, every act and duty of her owners, mariners, pilots, shippers, consignees, and creditors are brought under a strict system of fostering law.

A most excellent provision of the act relates to the constitution of local marine boards for carrying into effect its minor regulations, under the superintendence of the Board of Trade. These boards consist of about twelve members, the one half appointed by the Board of Trade, and the other half elected by the shipowners of the port, for the term of three years. By

this simple provision hundreds of shipowners are placed as judges to try the fitness of the laws, with authority to prevent abuses, and power to remove the minor impediments to competitive prosperity. Such government is highly educational.

Provisions for the "Build and Equipment of Iron Steamships," which were essential for safety, were adopted. Full returns by surveyors of the build of vessels, of all accidents at sea, and even of apprehended losses, are reported to the Board of Trade. No ship in the foreign trade, nor home-trade passenger vessel, can proceed to sea without certificates of competency issued to the master and mates; and the deep load-draft permitted must be marked distinctly on the vessel's sides. Thus the confidence of all who do business with British ships is wisely cultivated.

To encourage the ownership of vessels, the law divides the property in a ship into sixty-four equal shares, but provides that not more than thirty-two owners shall be entitled to be registered at the same time as owners of any one ship. This provision, with its supplementary clauses, renders trading in vessel stock extremely facile, for a sixty-fourth part of a ship may be bought, sold, transferred, mortgaged, redeemed, and changed in its property relations, with as much ease as any other article of merchandise. The advantage of such a system of vessel ownership, to a maritime people, is analogous to that of the joint-stock system of railroad ownership to the capitalists of Wall Street. Not only is it easy to deal in vessel property, but every subject in the kingdom is encouraged to invest in property so guarded by the government. Even foreigners are admitted to share in the patriotic work of building up the commercial and nautical interests of her Majesty's realm. This is done through letters of denization, becoming a "partner in a house actually carrying on business in the United Kingdom, or in some other place within her Majesty's dominions," and by taking an oath of allegiance. A natural-born subject, naturalized and resident in the United States, by retaking an oath of allegiance to her Majesty and becoming a partner in a house, as above, may own either British or American vessels. It is believed there are both British and American citizens owning shares in vessels under both flags at the same time. Of late years it has become common to form joint-stock

companies for the ownership of single vessels, both of sail and steam. This arrangement is even better than the partnership method, both for managers and investors.

It is thus that the statesmen of Great Britain endeavor to attract, facilitate, combine, and direct every interest in navigation and commerce, and study the means of harmonizing all business making for the national advancement. It is needless to note that such a study has never been taken up in the United States, in regard to shipping. Our ruined marine declares that.

The Society of Lloyd's Register. Of the many means, peculiarly British, that have been applied to gain control of commerce, the first importance attaches to the Lloyd's of London. As an institution honoring its founders, it is unique. The following tributes from English authors bear this testimony. Mr. Moorsom's "Review of the Laws of Tonnage," 1853, is thus dedicated: —

"To the Society of Lloyd's Register of British and Foreign Shipping, to whose excellent Rules and Regulations for the Building and Repairing of Ships the present efficient state of the Merchant Navy of this Country, as regards practical construction and seaworthiness, is universally acknowledged to be due, the following pages are respectfully inscribed by the Author."

This is couched in moderate terms compared with John Scott Russell's declaration in 1865, to wit: —

"This extraordinary, but eminently English, association has, for more than thirty years, governed the shipowning and shipbuilding community; by wise and practical rules, administered with even-handed justice and impartiality, this important society has striven to assist the shipbuilders and shipowners of this country to improve the merchant shipping of Great Britain and her colonies, and they are reaping a well-merited reward in the general improvement of the structure of ships, and in the increasing confidence reposed in them by all parties interested in shipping, and they have never, at any time, had so many vessels building in conformity to their rules, under the special supervision of their surveyors, as at the present moment."

E. J. Reed, C. B., Vice-President of the Institution of

Naval Architects, Chief Constructor of the British Navy, wrote thus in his work on "Shipbuilding in Iron and Steel," 1869: —

"If this volume were of an historical, and not of a practical nature, we should here trace with pleasure the extent to which this comparatively modern art (shipbuilding in iron and steel) has been fostered by these regulations, and more especially by the enlightened exertions of Lloyd's Committee, and of Messrs. Martin and Ritchie, its chief shipbuilding officers."

Such studied encomiums are not inscribed without an object; the writers, no doubt, conceive them for the encouragement of Lloyd's Committee in doing braver battle against the common enemy, which is not more bad British, than good "foreign" shipping. In less than a year after Reed's laudation "foreign" ships were degraded in classification and virtually cast out of Lloyd's Register. At that time the great "Liberal," the "Right Honorable George J. Goschen, Member of Parliament," was "Chairman of the Committee of Lloyd's." This stroke was a great blow to American shipping in the foreign trade, as will elsewhere be shown.

Lloyd's Inspection Policy. Lloyd's rules are spoken of as having all the force of an act of Parliament; and it is a matter of national exultation that they have worked beneficially for British, but hurtfully for "foreign" shipping. The best-built American ships never received the rating that equitably belonged to them, nor could they under the rules, which were so contrived as to exalt the character of British-built vessels and to discount the class of foreign-built. Lloyd's rules have been changed from time to time. They are not so bad now for "foreign-built" ships as they have been, but they are highly protective, even now, of British interest. To the present day surveyors for wooden vessels building have not been sent to the United States, while they have been located in every other shipbuilding country. The significance of this is, that no vessel can be given a full class that has not been inspected while building. To the present hour British white oak timber is rated for twelve years, while American oak, much of it of better quality, is rated for eight years only.

Twenty years ago, if an American or British builder had imported the iron materials and machinery for a steamer, and

had brought British workmen to build and complete the ship on American soil, which, if she had been constructed from the same materials, by the same workmen, on the soil of the United Kingdom, would have classed on the highest letter, he would have found, upon application to the Lloyds for a class in their Register, that his vessel, having been "not built under survey," would be obliged to take a second instead of a first class, and that to run from year to year for six years only. England had a start of many years in iron shipbuilding before Lloyd's surveyors were sent to foreign countries to inspect iron ships, though wooden ones had long had this favor. This policy virtually compelled foreigners to go to Britain for iron tonnage.

In the case of wooden vessels, one might be built, even by a colonial builder, and receive a rating of twelve years A 1. An American builder, whose yard might be in sight of the other, a river only intervening, might build a ship by the same moulds, with timber practically from the same forest, by the same, or better rules, and the owner would find, on inspection, either for hull insurance in England, or to carry freights insured there, that his vessel would be rated for *eight* or, at most, *nine* years only, A 1, subject, moreover, to more frequent, and even "special" and expensive surveys to keep this inferior class. If he sold her, the price would be discounted twenty to thirty per cent. Thus, the Lloyds have always endeavored to handicap the different nations that entered into relations of maritime reciprocity with Great Britain. With ship inspection unfair and discriminative, and British underwriting so extensive as it has been, "free shipping" or reciprocal freighting, in any practical sense, is simply a coinage of words, — a delusion and a fraud. This will appear from a view of another policy which has grown out of discriminative inspection.

The British Underwriting Policy. Of the different inducements which control the choice of vessels for charter, few have more influence than insurance rates. If these are higher for cargoes in old vessels than in new ones; in vessels of the second and third than in those of the first class; in vessels of wood than iron; and in sailing vessels than steamers, then, other things being equal, the new, or the first-class, or the iron, or the steamer is preferred.

It follows that the old, the second and third class, the wood and the sailing vessel must offer for a lower rate of freight, or go idle. Taking advantage of these principles of insurance, the Lloyds have enforced a policy of insuring cargoes in iron ships cheaper than in wood, for all voyages; and in steamers cheaper than in sailing vessels, except in the longer voyages. The object of the policy is, manifestly, the protection and fostering of iron and steam tonnage, hitherto the product, chiefly, of British industry. Of this policy for the protection of British shipping and the ruin of American, the commerce of the Pacific coast now affords a good example. The following table of discriminative insurance, vessels rating A 2 and higher, is compiled from the published rates of 1890: —

TABLE OF DISCRIMINATIVE INSURANCE.

Voyages from and to San Francisco.	Sail above Steam.	Wood above Iron.
	Per cent.	Per cent.
Sitka	50	—
For Islands direct	33	—
Fuca	150	—
Nanaimo, coal	50	—
Portland, Oregon, goods	66	—
Seattle, coal	66	—
Sandwich Islands, goods	50	—
Sandwich Islands, treasure	33	—
Acapulco, goods	66	—
Acapulco, treasure	50	—
Ports south of Acapulco, goods	50	—
Ports south of Acapulco, treasure	33	—
Valparaiso, Chile	50	—
Navigator's Islands	33	—
Fiji	66	—
Sydney or Aukland	133	—
Melbourne, Adelaide, and Geelong	100	—
Sydney, coal; vessels over 15 years old	—	66.00
Hong Kong, goods	33	—
Hong Kong, treasure	150	—
Manilla to Hong Kong	30	—
Manilla, all sail to San Francisco	66	—
Any Atlantic port *via* Cape Horn	—	16.66
Any port in Great Britain	—	16.66
Any port, Pacific coast, coal or iron from Great Britain	—	33.33

Thus, the discrimination on Pacific voyages is in favor of steamers, except in the Sydney coal trade, where the favored tonnage is iron, as it is on the voyages around Cape Horn,

going or coming. And it is noteworthy, that insurance favors are strongest marked in the voyages desirable for British trade, as in the carriage of coal from Sydney, Australia, and from ports in Great Britain. As these cargoes have been insufficient for both American and British fleets, the latter bring the loads, and the former come in ballast. Steamers are given no advantage over iron sailers around Cape Horn, but in crossing the Atlantic from the United States, steam cargoes are covered for half the rates of sail. The policy seeming to be, the use of steamers to drive our sail from the shorter ocean routes, and the use of iron sailers to effect the same purpose on the longer voyages around the Capes. The better to do the latter work, there is a peculiar discrimination at the grain ports of the Pacific coast. In selling cargoes to British merchants by iron or steel ships, "sea damage and other conditions" are considered at "purchaser's risk." But where cargoes by wooden ships are sold before arrival, as most are disposed of, "sea damage, weights, etc.," are accounted at "seller's risk." The owners of such cargoes, for their own safety, are compelled to insure, "covering particular average of 3 per cent. damage," which otherwise they might have to pay themselves. Such are the refinements of British underwriting policy. Elsewhere it will be shown that only British insured cargoes of grain or flour are salable on the Liverpool Corn Exchange, before arrival out.[1]

The Bane of British Underwriting Rule. The society of Lloyd's Register, the Association of Lloyds, and the Marine Insurance Corporations of Great Britain, with the Chambers of Commerce and Exchanges of Trade, and the shipowning societies and clubs, working together, constitute an enormous power that is always active in the protection of the British marine. The machinery of government itself would not be more forcible. There is a policy in everything that is devised or carried out by any of these constituents of naval strength. By joint and harmonious effort, by any and every means, and through governmental aid, is foreign trade acquired, won, or captured, and then managed so that British business is done by British ships. With such elements in opposition, and such a policy enforced successfully, it should not surprise the Amer-

[1] Chapter XV.

ican people that Britannia rules the sea for the advantage of her marine.

American vessels venturing to compete for the carriage of British-owned cargoes, even out of our own ports, are treated with contempt, turned aside, delayed, and as much as possible excluded from the trade. This has been the course for years. We are completely driven out of the Atlantic trade with Great Britain, and soon will be out of the Pacific trade, and mainly from a studied bias of inspection and disparagement of materials and workmanship of American ships. By underrating and refusal of just classification, insurance on cargoes are overcharged and often refused. This policy prevents equal and fair competition for freights, and completely nullifies the "maritime reciprocity" and "free-shipping" laws and treaties supposed to govern our commercial relations with Great Britain.

To theorists or superficial observers it may seem that our ships could secure loads at any time by competition, — by bidding for freights so low as to make sure of engagements. But this course will not win. It has been often tried in vain. It has been too long the aim of British commercial power to vanquish "foreign" competition and put down its rule. The Lloyds method is this: They divide tonnage into two classes, "British" and "foreign." These are subdivided into two grades, "iron" or "steel" and "wood." There are also different systems of classification for iron or steel, and for wooden vessels. These distinctions, based on the materials of ships, not only imply, but affirm superiority and inferiority, as between British and foreign ships, and vessels of metal and wood. Foreign ships have been classed as such, and by the rules refused equal benefits with British ships in survey, classification, and registration, while metal ships are made standard in insurance rates. Thus, by an unequal footing artificially made, the whole system of imposition on American vessels has been supported and upheld.

The Lloyds discrimination in rates of insurance on cargoes is fixed arbitrarily, and varies from 10 to 25 per cent. and upwards, with the object, it would seem, of making advantages (protection) to insure the regular employment of British vessels. As a consequence of this policy, wood and iron ves-

sels compete only in their respective classes. The iron has only to follow the wood down the scale of rates to secure its own final selection, and the consequent rejection and idleness of wood. A decline in asking rates for wood will not necessarily lower the rates for iron, as these depend, first, on the high price of wheat in England; and second, upon its low price in Oregon and California, unless iron tonnage is not in sufficient previous engagement and in excessive "spot" supply, or there are losses on "prior charters" to be recovered, or a fall in the price of grain to be met abroad.

The Two Freight Markets. There are two freight markets, as there are two kinds of tonnage. The market for "iron" is in England, where the cargoes and ships to bring them are mostly owned. There, prices of the one and rates for the other are fixed and adjusted. Often the larger portion of the iron tonnage employed is chartered, some of it months before arrival out. What is thus not engaged gets the benefit of "going rates."

The market for wooden tonnage (American mostly) is in the ports where it may modestly hope to be employed. This market is called the "spot." There, our ships offer for such rates as they may expect to get, if they are lucky, and compete with one another at prices more or less lower than iron ships are given.

The helplessness of our fleets, under the effects of Lloyds' joint policies has often had positive proof. An instance may be given. In 1884 twelve wheat cargoes were cleared from San Francisco during the first twenty-five days of the year, all in British ships; and the tonnage in that port under charter for grain, February 1,[1] was "flying foreign flags," although the harbor was "full of American ships offering at lower rates than ever before known, with no business resulting," iron "spot" tonnage being quoted at twenty-five shillings, but only twenty shillings offered for "wood."

At Portland, Oregon, the history of the season was thus reviewed by the "Oregonian:"—

"Of the present season's fleet, a large portion of the tonnage was engaged ahead at rates ranging from 60*s.* to 66*s.* 3*d.*, with something less than 64*s.*, as the average per ton [of wheat]. But one vessel

[1] Disengaged vessels in port, 155,000 tons.

received over 65*s.*, while many took 62*s.* 6*d.* and a few 60*s.* [Now observe], 'spot' vessels did not do as well, and the balance [of trade], while largely against shippers [and operators in England], is reduced by spot rates."

American Ship Discount Chartering. That is to say, British wheat speculators paid too much for the tonnage of their flag and lost money on the year's business; but this loss was considerably lessened in the aggregate by chartering such American ships as happened at hand at discount rates. The following extracts from Portland market reports will show how our ships were "worked" for contributions in reduction of adverse balances: —

"January 12. — The wooden ship Indiana, 1,488 tons, was closed yesterday to Sibson, Church & Co. for wheat to Cork, U. K. or A. for 32*s.* 6*d.*; if to direct port in U. K., 1*s.* 3*d.* less. This is said to be the lowest rate ever paid for like freight from this port. The Indiana has lain here since April [nine months]. Some of the wooden in port declare they would not accept a like rate, but there is no saying what a firm offer would result in. The British iron bark Berwickshire arrived to-day under prior charter.

"January 16. — Market entirely without interest. Attempts to work a wooden ship appear unsuccessful at last rate paid.

"January 17. — Charters for the week have been the Beemah, 954 tons, iron, at 41*s.* 3*d.*, and Indiana, 1,488 tons, wood, at 32*s.* 6*d.*, both for U. K. for orders [and both for same shippers].

"January 18. — The wooden ship Sea King, 1,492 tons, was closed to-day to C. Cæsar & Co., for wheat to Cork, U. K. H. or A., at 32*s.* 6*d.* Negotiations have been pending some days.

"January 19. — There is an entire absence of any disposition to take up wood at over 32*s.* 6*d.*, and this figure is deemed too low by waiting ships.

"January 29. — The iron bark Henry James, 908 tons, arrived to-day, consigned to Sibson, Church & Co., and chartered for grain prior to arrival. The spot market develops nothing new.

"January 31. — For wood, 32*s.* 6*d.* is considered possible, while iron for the moment is in less request.

"February 2. — All the fleet chartered ahead at the high rates have put in an appearance. There is little prospect of any spot business."

It will be noted that the Beemah, chartered after the Indiana, was given a rate 27 per cent. higher, although several wooden (American) ships were offering at rates much lower.

The Indiana carries 2,282 tons, — nearly half more, — yet her freight-money only exceeded by about one tenth what the Beemah received. Lloyds discrimination in cargo insurance was 11 per cent.; being in 1884, $2\frac{1}{4}$ per cent. in iron, and $2\frac{1}{4}$ per cent in wooden ships. With the price of wheat at 41*s.* 6*d.* per quarter in Liverpool, the handicap amounted to about 5 pence per ton of cargo. Allowing this excision, the Indiana carrying 2,282 tons, contributed or paid an assessment of 8*s.* 4*d.* per ton, or a gross sum of $4,950 (which about equaled 6 per cent. of her value), towards counterbalancing the losses of her charterers from undue patronage of British tonnage.

In the second example, it was deemed best to put off loading the Berwickshire, chartered "prior" at 60*s.*, and charter and load the Sea King at 32*s.* 6*d.* If the object was to even accounts, it was a good one, for the Sea King's charter would save about $5,000, and recover considerable of an adverse balance. The Sea King loaded and sailed with a "prior charter" bark, the Banca, as did the Indiana with the Beemah, so we had this inglorious spectacle: Two first-class American ships chartered at the very lowest rate, and two old rusty British barks, inferior in all respects, one engaged at 27, and the other at 45 per cent. higher rates, sailing for Europe on the same day, as per report in the "Oregonian" as follows: —

"*Clearances.* Tuesday, February 5. — Ship Sea King, for Antwerp with 45,096 centals wheat, valued at $73,100; shipped by Cæsar & Co. British bark Banca, for Queenstown, with 34,527 centals wheat, valued at $62.148; shipped by Meyer, Wilson & Co. Ship Indiana, for Queenstown, with 45,653 centals wheat, valued at $77,609; shipped by Sibson, Church & Co. British bark Beemah, for Queenstown, with 16,409 pounds of flour, valued at $82,045; shipped by Sibson, Church & Co."

The reader may now feel interested to learn some particulars of the "eminent English Association," the Lloyds of London, whose capital and craft can so well protect the British flag, — and so utterly humble our own.

Origin and Progress of Lloyds. A Lloyd's Register of British shipping had existed from 1760, when the "Underwriters' Book" was first established. The "Red Book," in opposition, was started by merchants and shipowners in 1799, and both continued until 1834, when a provisional committee,

consisting of shipowners, merchants, and underwriters of London, was "appointed to draw up the rules and regulations to establish a new society for the purpose of obtaining a faithful and accurate classification of the mercantile marine of the United Kingdom, and of foreign vessels trading thereto." This committee, with the assistance of the Committee of the Shipowners' Society, drew up the first rules and regulations, expressing their opinion: —

"That when these rules have been applied to the classification of ships, the result will be, that instead of the uncertain standard of the port of building and the uncontrolled decision of surveyors, which has hitherto determined the quality and character of ships, a book of reference will be compiled, which may be referred to with confidence, as not only containing the report of qualified surveyors, but exhibiting that report corrected and substantiated by the committee of this society."

This arrangement for a supervising committee, with a member of Parliament as its chairman, was apparently designed to connect the society with the government; and while the work of the surveyors might be inspection, the direction of the committee would secure protection.

Having laid down the rules, in conformity therewith the committee elected eight merchants, and the committee for the management of Lloyd's elected eight underwriters, and the General Committee of the Shipowners' Society elected eight shipowners; these, with the chairman at Lloyds, constituted the first General Committee of the "Lloyd's Register of British and Foreign Shipping." In 1863 twelve additional members, chosen by shipowners and underwriters, were added. Since the union with the Liverpool branch, in 1885, the affairs of the society have been superintended by a committee of merchants, shipowners, and underwriters; twenty-four elected in London, and thirty-one at the principal outports, together with the chairmen of the Corporation of Lloyds and of the General Shipowners' Society for the time being. Six of the members elected in London and four in Liverpool retire annually, but are generally reëlected. Twenty-seven of the outport members hold office four years. The committee appoints a subcommittee of classification so regulated that each member of the General Committee, in rotation, takes his turn of duty

therein throughout the year. While the shipowning strength and underwriting power is nominally equal in the management, the former interest has generally preponderated; hence the protective policy enforced.

The surveyors consist of two classes, one the "exclusive officers of the society," the other, those serving it on occasion, and for the most part stationed in foreign countries.

The first General Committee reclassified the vessels of the United Kingdom in 1834. The new rules were adopted in the construction of new vessels, and in the repair and restoration of old ones. A distinguished member of the first school of Naval Architecture, Mr. A. F. B. Creuze, was appointed Surveyor-in-chief, to visit all outports, and advise with the owners and builders and instruct the surveyors.

Since 1834 a large volume has been published to subscribers yearly, giving the character, class, and grade of such British and other vessels as pay for inspection. Of late years this volume contains the names of all vessels in the world, with many particulars, but gives the class of those only that have paid for insertions. This volume is known as "Lloyd's Register." While it contained only the names of vessels inspected by Lloyd's surveyors, English writers proudly dubbed it "the Blue-book of the aristocracy of ships." The only rival it had for forty years was the "Bureau Veritas" or "French Lloyds" Register, established in 1828, and this work is its only equal to-day. The value of ships for purchase or sale, as well as for the hire of transport, depends materially on the rank they bear in Lloyd's Register. British underwriters do, probably, three fourths of the marine insurance of the world, and possibly a greater share for the United States. To a great extent, their business is done or refused on the character which each ship holds at Lloyd's. In an English underwriter's view no register is so reliable as Lloyd's. Ships standing on other books may be good risks, but if they take them, premiums should be higher. From this it may be judged what benefit was done to British, and what injury to "foreign" ships, from 1870 to 1876 inclusive, while the latter were virtually cast out of Lloyd's Register, to give advantage to British iron tonnage. The American shipping, so badly treated then, sought classification with the "French Lloyds," where the portion engaged

in foreign trade has chosen to remain. A single wooden, and a few iron vessels are all under our flag that are now on class at Lloyd's. While we have a register of our own, the "Record of American and Foreign Shipping," it lacks the age, prestige, and standing of Lloyd's or the Veritas, in England France, and other foreign countries. The seven or eight marine registers now existing have all been called for by the course of Lloyd's.

Lloyd's rules for building have had many changes, some for the better and others for the worse. They were never generally followed in the United States, because they were never ahead of the art here. To have followed them blindly would have prevented progress. Many a good idea, in shipbuilding, found its way into Lloyd's rules from the best practice in America. Of late years, Lloyd's have entertained the idea of equivalence in workmanship, and provided, that "all ships which shall show in their structure and in their materials greater strength, security, and durability" shall receive a classification proportioned to their intrinsicality.

Prior to 1854 there were no rules for the building and classification of iron ships, although in 1838 the committee of Lloyd's had classed the first iron vessel ever pronounced "fit for the safe conveyance of dry and perishable cargoes." This was a small bark of 271 tons. She was classed as "built of iron," with no letter; and thus were classed all iron vessels until 1844. In that year the committee improved the classification by rating such iron vessels as were worthy of registration, "six years A 1." Even this advance helped iron craft amazingly. They grew in favor, and fortunate conditions prevailed. By 1854 it was found that the iron workers of Great Britain were building many vessels, at nearly as cheap rates as wooden ones could be afforded in that country, while American wooden ships could not get a full and fair class at Lloyd's; that steam propulsion was fast taking the place of sail, while machinery in England was cheaper than elsewhere; and that a wise economy demanded, and national safety required, British ships to be home-built, while iron was the only material for these essentials. In view of all the circumstances, of which there were many of importance to Great Britain, the government and Lloyd's readily agreed with the iron interests of the

kingdom, that a higher classification, based on proper rules, would produce a new and national marine, and prove the best protective measure, all-around, that could be adopted.

Lloyd's accepted the task; the iron shipbuilders soon had a guide; and a great boom followed. A craze for iron ships prevailed in England, and soon had the effect to check considerably both shipbuilding and shipowning in the United States. This was not on account of the merits of iron tonnage, but because of the extraordinary and patriotic exertions of Englishmen everywhere to help their country's cause. We did nothing to help ours.

The rules for iron shipbuilding, framed in 1854, were well characterized by John Scott Russell as "celebrated." They were prescribed for ships of six, nine, and twelve years' rating A 1, and raised iron to an equality with wood, with like periodical surveys. These rules were amended in 1857, by widening the frame spaces, but increasing the plating thickness. In 1861 the rules and tables were limited to ordinary dimensions, length of hulls not exceeding seven breadths, or ten depths of hold. To get speed and capacity, iron vessels were being built dangerously long. Provisions were made for more material in vessels of extraordinary proportions. In 1863 further improvements in the rules were made. These were arrived at by heeding the suggestions of practical shipbuilders. Rating in years was abolished, as it was found impracticable to determine beforehand, as in the case of wood, how long iron vessels might endure with credit to their inspection. Many of the first class had proved no more lasting than some of the third class. Monograms were invented to distinguish the different grades, Aa, Ab, Ac, all having the letter A to indicate first class. In 1870 a further change was made, which stands good at the present time. Iron vessels are now graded by numbers, 100 A, 95 A, 90 A, 85 A, 80 A, and 75 A, according to the tables of scantling from which they are built.

The strictness found necessary in surveying iron vessels for Lloyd's Register soon begat opposition on the part of certain builders and owners, and in 1862 the Liverpool Underwriters' Association established a "Red Book," in which great latitude was given to the surveyors. The "committee" of this register professed to class ships "on their merits," though

they had rules for a guide. Their system was, briefly, to class in *red*, for periods varying from ten to twenty years A 1, all vessels built under their inspection. All vessels not so built were classed in black, for periods acording to their "merits," from ten to twenty years; but while the blacks were subject to special survey once in two years, the reds were privileged to run three, and even four years. The object of these discriminations was to compel all iron shipping to be built under inspection, — for revenue only, it appeared, for the more inspection the more money, and the stronger the competition to get business from Lloyds, the farther into the ground the trade of iron shipbuilding was run. By the time this book had absorbed the greater part of the iron tonnage of the kingdom, its character had fallen to a low state. Twenty-year ships in numbers were sent to sea, and never heard from afterward. Lloyds attempted to compete with the Red Book, reduced their requirements for strength, and the opposition followed suit, until the consequences of this deteriorating rivalry attracted the attention of the world. The evils thus induced gave wooden shipping a breathing spell. At length measures were taken to prevent competitive iron-ship inspection, and in 1885 the Red Book was incorporated with Lloyd's. Although the situation is much improved by the changes made since in the rules, there is yet a great stride to the turning out, generally, of a perfect iron ship in Great Britain. Cheapness, and not perfection, still rules the trade there.

The Postal Subsidy Policy. The rise and progress of the British postal policy is second in interest to no other chapter in her commercial history. The first contract for subsidized postal service was made by the Postmaster-General in 1833. It provided for semi-weekly trips of 140-ton steamers, from Liverpool to the Isle of Man, at $4,250 per annum. That memorable contract with the Mona Isle Steam Company, on the same terms, continuing to the present time, is a good example of the constancy of British purpose in fostering navigation.

In 1834 the second subsidiary contract was made. It appropriated $85,000 per annum to the General Steam Navigation Company, for semi-weekly service from London to Rotterdam and Hamburg, renewed in 1849 and continued till 1853.

In 1837 the third steam line, but really the first open ocean service, was established. The route was between Falmouth and ports in Spain and Gibraltar, for which the subsidy paid was $145,000 annually. That contract was transferred in 1843 to the Peninsular and Oriental Steam Navigation Company, Southampton substituted for Falmouth, the trips changed to three a month, and the support reduced to $102,500, and so it has remained.

The steam service to Spain soon encouraged hopes that the new navigation could succeed on the wide Atlantic. The British government and people had long submitted to American supremacy in postal service, by sailing packet-ships, and if steamers under the British flag could be substituted for sail under the American, almost any subsidy would be gladly paid. As an experiment, the auxiliary steam-powered American bark Savannah had crossed the ocean to Liverpool in 1819, using steam fourteen days of the twenty-two on the voyage. This side-wheel vessel was small, a mere model of 350 tons with engines of 90 horse-power. British steamers were put on between Holyhead and Dublin the same year. We were therefore ahead; and if our government had been as protective as the British, then or later, the Savannah would have been followed by larger steamers, ocean steam navigation developed on American lines of trade, and our naval power asserted, as it should have been, before a British steamer saw an Atlantic wave. Our opportunity came, but we turned it away.

In 1838 the Sirius arrived in New York, having been dispatched by the Cork Steamship Company. Her success led the Great Western Steamship Company to propose, to the British government, to carry the mails from Liverpool or Bristol to Halifax and Boston, twice a month, for $225,000 per annum, the service to begin in eighteen to twenty-four months. But such was the anxiety of the British government to be first on the course with a line of steamers, that it would not allow more time than one year in which to build and fit the vessels out, whereupon Edward Cunard, of Halifax, stepped in and closed a contract on the 4th of July, 1839, for a semi-monthly service, receiving therefor the heavy subsidy of $425,000 per annum. Thus, on our anniversary day, Great Britain began her financial warfare for the acquisition of our

trade and transportation, and perhaps the eventual resumption of her old relations of master and servant in business life. The Cunard line soon began a service to New York, and its subsidy was raised to $550,000. American competition began in 1850, and the subsidy was raised then to $735,000. Larger vessels were employed in 1852, and again the subsidy was increased to the amount of $850,000, with orders from the British government to run without freight, "if necessary to beat the American line" having less support.

Actuated by this high spirit of control, Great Britain spent millions yearly, for a quarter of a century, to unite her ports with the markets of the world. Her expenditure for commerce would build all the steamers which she has now employed in the postal service. She now commands the trade, and does most of the transportation of the world, perhaps more on account of her subsidy policy than any other agency with one exception, and that is the non-protective course of the United States, which she had a goodly share in instigating. Britain is great, because active in making opportunities and conditions for business success.

The Abolition of Privateering. This was another proposition in the interest of our rival. It is known as a "Declaration concerning Maritime Law," which was adopted by England, France, and other powers in 1856, after the Crimean war, inspired, it seems, by the British government, with the view of persuading the United States to go into the next naval war with our hands tied behind our back. Had this stratagem succeeded, it would have swept away an important defense, and added a vital one to the British lines.

A few wise strokes from the pen of William L. Marcy balked the scheme. Would that he had directed the correspondence of our government from 1815 to 1830, while "Maritime Reciprocity" was entangling the wits of our statesmen. The Secretary of State replied: —

"It certainly ought not excite the least surprise that strong naval powers should be willing to forego the practice, comparatively useless to them, of employing privateers upon condition that weaker powers agree to part with their most effective means of defending their maritime rights. It is, in the opinion of this government, to be seriously apprehended, that if the use

of privateers be abandoned, the dominion over the seas will be surrendered to those powers which adopt the policy and have the means of keeping up large navies. The one which has a decided naval superiority would be, potentially, the mistress of the ocean, and by the abolition of privateering that domination would be more firmly secured. Such a power engaged in a war with a nation inferior in naval strength would have nothing to do for the security and protection of its commerce but to look after the ships of the regular navy of its enemy. These might be held in check by one half, or less, of its naval force, and the other might sweep the commerce of its enemy from the ocean. Nor would the injurious effects of a vast naval superiority to weaker states be much diminished if that superiority was shared among three or four great powers. It is unquestionably the interest of such weaker states to discountenance and resist a measure which fosters the growth of regular naval establishments. . . .

"Those who may have, at any time, a control on the ocean, will be strongly tempted to regulate its use in a manner to subserve their own interests and ambitious projects. The ocean is the common property of all nations, and instead of yielding to a measure which will be likely to secure to a few — possibly to one — an ascendency over it, each should pertinaciously retain all the means it possesses to defend the common heritage. A predominant power upon the ocean is more menacing to the well-being of others than such a power on land, and all are alike interested in resisting a measure calculated to facilitate the permanent establishment of such a domination, whether it be wielded by one power or shared by a few others."

The advantage sought and gained by England in the abolition of privateering has an illustration in an incident which has lately happened in the German Reichstag. Germany is one of the powers that have agreed to the Declaration against privateers. She must, therefore, maintain a larger naval establishment on this account. The naval committee, having under consideration the annual bill, had struck out a provision for five regular cruisers, but Chancellor von Caprivi demanded that the clause be reinserted. He insisted that the ships were necessary, in order to make attacks upon an enemy's commerce

in the event of war. Germany, he declared, had no intention of conducting a war with privateers. It would be impossible to do without cruisers.

The Naval Subvention Policy. The latest protection to the British marine is the subvention of merchant steamers for prospective naval service. This policy, initiated in 1885, is intended to create and maintain lines of transportation of the largest and swiftest steamers, in the interest of British trade and power.

Subvention tonnage held at the disposition of the Admiralty for purchase or hire is of two classes: (1) special vessels, fitted to be armed and equipped as cruisers in time of war, and (2) additional vessels of the same owners, or of the lines receiving postal subsidy, to be used as transports, armed or otherwise. The first class is paid fifteen shillings per gross ton annually while carrying the mails, but twenty shillings per ton if sailing without them, payable half yearly. The second class receives no reward unless it renders services, or is taken in purchase under the contracts for retention, which are of a liberal character. The vessels of either class cannot be sold at any time without permission of the Admiralty; and if any are sold to a British shipowner, the privileges of the agreement go with the ship.

The Admiralty, in a letter to the Treasury, February 2, 1887, has set forth the subvention policy as follows: —

"My lords would desire to state that the experience derived from the events of 1885 has led them to believe that true economy and real efficiency would be best promoted by securing the use to the Admiralty in times of peace of the fastest and most serviceable mercantile vessels. It will be remembered that in 1885 a sum approximating to £600,000 was expended in retaining the services of several fast merchant steamers so as to prevent their being available for the service of any power inimical to the interests of the United Kingdom. Had arrangements existed similar to those now contemplated, their lordships believe that a very considerable portion of this expenditure would have been averted, and a degree of confidence felt by the nation on which it is very difficult to place a money value."

In the experience referred to, sixteen first-class steamers were taken from their peaceful use, and armed and equipped as cruisers. Other steamers, to the number of 121, were hired

and used as transports. The expenditure on the mercantile marine for military preparation on this large scale was $9,494,-018. The war so much expected proved only a scare. The hire of merchant steamers, used in the small Egyptian campaign of the year before, was $1,390,357. Such history proves the usefulness and illustrates well the solid advantages reaped by the British nation from its steam marine, which has cost it so much money. The letter goes on: —

"Their lordships consider that subventions, or annual payments for preëmption in the use or purchase of these steamers, should only be made with those vessels already existing which have an exceptionally high sea-going speed, or for vessels which may be built possessing great speed and adaptable in their construction as armed cruisers."

In the British view, all superior shipping has a warlike utility, and should, therefore, be encouraged in building. It was an observation of Daniel Webster, in 1824, that "it seemed to be announced as the sentiment of the government of England, and undoubtedly it was the real sentiment, that the first of all manufactures is the manufacture of ships." The letter continues: —

"As to the standard of speed, the Admiralty consider that no vessel of less than 17 to 18 knots at sea would fully meet the object they have in view. They would add further, that existing vessels, even with this speed, but which have not been built specially to Admiralty designs, would not be so valuable to the country as vessels which meet these requirements. The trades which can, from a mercantile aspect, support vessels of the type and character that their lordships desire to see included in the 'reserve fleet of the navy' are very limited. Such steamers are only likely to find a profitable mercantile employment in the passenger and mail service, and particularly *in the service to America.* Vessels constructed to meet the views of the Admiralty would be at a disadvantage in respect to their cargo-carrying powers, and therefore it would be a distinct advantage to the country if every reasonable encouragement were given to shipowners to build and maintain this description of steamer in the trades that may be expected to support them. The retention of a fleet of 'royal naval reserved cruisers' would be obviously of great national advantage. In a pecuniary sense they would serve to limit the necessity felt by their lordships for the construction of fast war vessels to protect the commerce of the country. Not only would the nation be a pecuniary gainer in respect to the first cost of such vessels, but their annual maintenance, which

amounts to a large sum, would be saved were such vessels maintained, while not required for Admiralty purposes, in mercantile trading."

It is here distinctly set forth that the "reserve fleet" — the commerce destroyers of the British navy — is the military harvest of the postal subsidy policy. It is also made apparent what a priceless service was done for British power, when our Congress, in 1858, put an end to an American policy of rivaling and surpassing England in the building and running of great and swift mail and passenger steamers on the transatlantic course. It is clear, also, that our own *passive* commerce has become a source of danger, and given to foreign nations who actively carry it on the instruments and weapons that may yet decide our destiny as a conquered people and vanquished power. Not England alone has availed herself of the Atlantic passenger trade to create a naval reserve. Germany and France have alike profited by it. The Hamburg-American Packet Company, subsidized under the German flag, established in 1847, — the year when our first steamers ran to Europe, — now has a fleet of forty-five large steamships (four of them mammoth twin-screw express steamers, of 10,000 to 12,000 tons, and 13,000 to 16,000 horse-power), measuring gross 138,000 tons, all running in American trade. The French ship-protection system has put into our trade some of the largest and swiftest steamers on the sea, while certain of our own people have been denying its influence and quickening power. The letter concludes: —

"Their lordships have not formed a definite view as to the number of vessels that should be retained in the manner indicated, but, as such steamers are not likely to be constructed in any considerable numbers, it is thought that probably ten would be the maximum number at all likely to be placed at the disposition of the Admiralty within the next five years, at a maximum annual charge of £50,000."

Here the idea is plainly expressed that all British steamers hereafter built of size and speed suitable for the "reserve fleet" are to be retained — subventioned — by the government. At this writing the number is ten, measuring 82,402 tons gross, costing annually at the minimum rate, $299,119 ("so long as holding the American mail contract"), or, at the maximum rate, $398,825 ("if the mail contract be withdrawn").

Six or more of these vessels are commanded by officers of the royal naval reserve, and half the crews consist of men belonging to the same body of volunteers.

The steamers of the "reserve fleet," largely commanded by officers of the corps, under contract as "additional vessels" for transport service, number forty, and measure 160,000 tons gross. Thus, in the total, there are fifty steamers aggregating 242,000 tons — the cream of the British steam fleet — organized and ready at very short notice to coöperate in military operations with the monstrous navy maintained by Great Britain, as the ultimate and crowning protection of her ocean commerce.

CHAPTER VII.

THE EARLY SHIPPING POLICY OF THE UNITED STATES.

1789 to 1830. The shipping question is not new to the present time, but existed at the adoption of the Constitution. After the institution of the government an active commerce in our own vessels became immediately a leading object of legislation. The reason for this course was well stated in a memorial from Baltimore to the first Congress, as follows: —

"Among the advantages looked for from the national government is the increase of the shipping and maritime strength of the United States of America, by laws similar in their nature and operation to the British navigation acts, or laws differing only from these where a difference in the circumstances of the two countries may render any deviation necessary. Your petitioners, on whichever side they may turn their eyes, see reason to believe that the United States may soon become as powerful in shipping as any nation in the world. . . . Permit us to add, that for want of national protection and encouragement, our shipping, that great source of strength and riches, has fallen into decay and involved thousands in the utmost distress."

Ship-Protection by the Tariff, 1789. In the brief time of sixty-one days from the date of this petition our patriotic Congress responded with the first measure for ship-protection. This was the original tariff act, which provided for lower rates of duties on all goods imported in vessels of our own. The first paragraph of this discrimination related to the importation of teas *direct* from China or India, in preference to indirect shipments from Europe, and decidedly encouraged an East Indian trade in American vessels. This protection soon induced a commerce such as our merchants, with their small capital and inferior vessels, never could have won, without it, from the merchants of London and the flag of Britain. The

following table illustrates the origination and support of our early East Indian commerce and carrying-trade: —

DUTIES ON DIFFERENT KINDS OF TEA (PER POUND).

Manner of Importation.	Bohea.	Souchong.	Hyson.	Other Green.
	Cents.	Cents.	Cents.	Cents.
From China or India in American ships	6	10	10	12
From Europe in American vessels .	8	13	26	16
In any other way than as above . .	15	22	45	27

The duties on East India goods other than teas, if brought by foreign vessels, were 12.5 per cent. *ad valorem*, a rate nearly double that by American vessels.

As a general protection to vessels of our own flag, in other trades than the Chinese and East Indian, a rebate of *ten* per cent. was made on all import duties. At the time of this legislation it was the rule in foreign commerce for merchants to own the shipping which carried their goods. In all such cases protection to ships constituted protection to merchants. But our merchants, whether owners or not of vessels, were protected directly by a credit system for the payment of duties above fifty dollars in amount, as follows: On articles of West India produce, four months; on Madeira wines, twelve months; on teas, two years; on all other goods, six months.

Thus it was that the very first act of Congress gave protection to merchants as well as to shipowners and manufacturers. This was a means of protecting the nation at large and securing its independence of Great Britain. It induced many enterprising and wealthy foreign merchants to cast in their lot with our own, and so we grew in strength and influence in the trade of the world.

Ship-Protection by Tonnage Duties, 1789. By the second act of Congress, approved only sixteen days after the first was passed, a further protection was given to our marine by discriminating tonnage dues, payable on each entry at a custom-house, as follows: —

TONNAGE DUTIES, 1789.

On all vessels American-built, owned by citizens, or foreign-built, owned by citizens the 29th of May, 1789, and while owned by citizens, per ton . . .	6 cents.
On all vessels hereafter built in the United States, partly or wholly owned by foreigners, per ton . .	30 cents.
On all other ships or vessels, at the rate of, per ton .	50 cents.

In addition to this protection, all vessels American built and owned, employed in fishing or coasting, were to pay duties once only in each year; and every vessel employed in coastwise transportation of American products, except she was both American built and owned, was to pay on every arrival fifty cents. Thus, the coasting-trade was specially protected, at the first, and has had the good fortune to keep this advantage over the marine in the foreign trade down to the present time.

While the first act of Congress was strongly protective of shipbuilding, the second decidedly increased its shield, and went so far as to practically exclude foreign tonnage from our domestic trade. The Americanism of this legislation has never been exceeded in our history. It was sound in economy and wise in patriotism. At that time, both our domestic and foreign trades were principally carried on by foreigners, chiefly the British. The first two acts of Congress induced many of the aliens in our commerce and navigation to become citizens, and the policy adopted resulted in our shipowning and shipbuilding trades acquiring a large share of capital, enterprise, and skill from foreign countries. It will be instructive to follow the chain of our shipping legislation from the first Congress to the last, and to examine the workings of the different acts which have been passed.

Ship-Protection by Tariff, 1794. In 1794 a change was made in the general mode of discrimination against foreign shipping. Instead of making a rebate of 10 per cent. of duties on goods brought by our own vessels, it was enacted that *ten* per cent. should be added to the duties on goods imported by foreign vessels. This was in effect an increase of the tariff, which had received its first augmentation of 2.5 per cent. in rates, in the second session of the First Congress, 1790. This augmentation was continued, and the final section provided: —

"That an addition of 10 per cent. shall be made to the several rates of duties, above specified and imposed, in respect to all goods, wares, and merchandise, which, after the said last day of June instant, shall be imported in ships or vessels *not* of the United States."

Thus a third act of Congress, five years after the first and second, confirmed that policy of protection for our navigation which had already Americanized it, given our commerce stability, increased the proportion of our carriage in the foreign trade to seven eighths of the whole volume of business, also quadrupled the number of our shipwrights and seamen, and secured their steady employment; while at the same time there was developed and demonstrated the naval power so essential to our continued independence as a nation. Our sea-power alone, first tested by the Algerine pirates in 1792–93, was destined to spread our country's name and fame, as well as its trade, throughout the world. The progress made in commerce and navigation during the first six years of our national life was simply astonishing. There is nothing like it in history, as will appear from the following table: —

NAUTICAL PROGRESS UNDER PROTECTION.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1789	123,893	3.64	—	17.5	30.0
1790	346,254	9.75	12.17	41.0	40.0
1791	363,110	9.81	13.03	58.0	52.0
1792	411,438	10.55	13.39	67.0	61.0
1793	367,734	8.96	13.95	82.0	77.0
1794	438,863	10.32	15.91	91.0	86.0
1795	529,471	12.03	26.76	92.0	88.0
Average . . .	370,109	10.72	15.87	64.07	62.0

In this table the essential elements are given of a full analysis of the growth and thrift, advance or decline, of the marine in foreign trade. Any considerable change of condition will be found indicated in one or another of the columns. Besides the acts of protection, the chief events affecting our commercial and nautical advancement during the period under consid-

eration were these: The continued war between England and France; a British order in Council, November 6, 1793, forbidding commerce with French colonies; an embargo of sixty days following this order, 1794; the Algerine piracy of our vessels; and the raising of the tariff duties. The falling off of tonnage in 1793 was clearly in consequence of the trouble with Algiers, yet that did not hinder the steady increase of traffic in American vessels, because this was secured by our protective duties. In the six years there was a constant rise in our proportion of carriage, from 17.5 to 92 per cent. of imports; and from 30 to 88 per cent. of exports. Tonnage fell off 10.6 per cent., and shipping per capita 14.3 per cent., in 1793; but recovered next year, when the piratical war ceased. Commerce per capita gained from year to year, and in exact proportion to our prosperity and without reference to tariff rates. The average annual gain of tonnage was 67,596,[1] equal to 54 per cent. upon the amount in 1789. The gain of shipping per capita was 230 per cent., and of commerce per capita, 376 per cent.

Continued Ship-Protection. In all the changes of the tariff made from 1795 to 1828 there was one provision unaltered, and apparently fixed, in our policy. This was the clause providing that the standard rates of duty were for goods "imported into the United States in ships or vessels of the United States." In the following table is shown the growth of our marine and the state of commercial business for the second period of five years: —

PROGRESS FROM 1796 TO 1800.

YEAR.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1796	576,733	12.53	32.28	94	90
1797	597,777	12.45	27.54	92	88
1798	603,376	12.06	26.01	91	87
1799	657,142	12.63	30.33	90	87
1800	667,107	12.33	30.04	91	87
Average. .	620,426	12.40	29.24	91.6	87.8

[1] Our average loss of tonnage in the foreign trade for 12 years past has been 82 per cent. of this amount.

From this table it appears that in the preceding period of six short years we had reached the limits of our facility and capacity for foreign trade and transportation. That this success was due to the "protection" which was provided in our tariff and navigation laws cannot be successfully disputed. We were six years without this protection, 1783 to 1789, constantly losing our hold of the foreign, and even of the domestic trade; but *with* this protection for six years, 1789 to 1795, the advantage resulted in foreign nations, but particularly England, letting go their grasp of American commerce, while our own people were encouraged and enabled to seize and secure their rights, to the profit and safety of the young Republic.

During the five years tabulated above, the French and British war continued, and France began to capture such of our vessels as traded to England. This misconduct led to a short war with France, which did most damage to our trade in 1798. But for this adversity, and the failure of all the banks of England in 1797, the showing of the period would have been much better under all the headings. It was in this period that naval protection to a merchant marine was found an indispensable branch of our polity; accordingly, the United States navy dates from this short struggle with France.

Further Protection to Shipping. It became necessary in 1804 to use naval protection against the Barbary powers. To defray the expenses of our fleets, the tariff duties were increased 2.5 per cent., and again it was provided that: —

"An addition of 10 per cent. shall be made to the said additional duty in respect to all goods imported in ships or vessels not of the United States."

At the same session of Congress it was proposed to cede the rights and trade the benefits of our prosperous marine, to give up its protection by discriminative duties and turn it out to free trade, if, in consideration therefor, certain nations in Europe would reduce the duties on tobacco. The proposition failed. (Perhaps President Jefferson frowned upon it.) Instead of removing the protection to our marine, Congress added to it a "light-money" tax of fifty cents a ton, payable to all alien vessels, excepting only French and Spanish when trading to the port of New Orleans.

CONTENDING WITH DIFFICULTIES, 1801 TO 1805.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1801	630,558	11.26	36.06	91	87
1802	557,760	9.74	26.04	88	85
1803	585,910	9.84	20.33	86	83
1804	660,514	10.82	26.67	91	86
1805	744,224	11.81	24.31	93	89
Average . .	635,793	10.69	28.68	89.8	86

Various difficulties in our foreign relations checked advancement and started decline in the period from 1800 to 1805. The trouble with the Barbary States resulted in war, 1801–03. The warfare between France and England grew more and more rancorous, and the British began to board our vessels and impress our seamen. Under the stress of the times, it was wonderful that our shipping held its own so well as it did. And a worse time was coming, for England had made up her mind to force a naval war upon the United States, in the hope of terminating our nautical and commercial career, if she could not reconquer our allegiance. Nevertheless, we gained in tonnage and in our share of carriage, though our commerce per capita fell off largely. In this declension England herself must have suffered.

PROGRESS FROM 1806 TO 1810.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1806	798,507	12.28	35.53	93	89
1807	810,163	12.54	36.84	94	90
1808	765,252	11.09	11.51	93	88
1809	906,855	12.77	15.71	93	84
1810	981,019	13.43	20.84	93	90
Average . .	852,359	12.42	24.08	92.5	88.5

During this period the searching of our ships for seamen, by British cruisers, became increasingly annoying, and at length outrageous. England was not so much in want of men as determined in breaking up American voyages, and contracting our constantly widening commerce and navigation. If these interests had had no protection from our tariff and tonnage laws, she would have had a grand success. Her blockade declaration of May, 1806; Napoleon's Berlin decree of October following; her order in Council of November, 1807; and Napoleon's Milan decree of December following, made it dangerous to trade with either the English or French by sea. As, however, our ships had protection in their own ports, and foreign vessels could gain no advantage there, our people endeavored to keep the sea, and continued to trade with both of the belligerents, notwithstanding they kept up an active interference, each to prevent trading with the other. For five years this rival warfare went on, under what seemed like unsympathetic, if not unfriendly administration of our government, before effective measures were taken for the naval protection of our shipping. President Jefferson had reversed the naval policy of his predecessor, Adams, and wished to get along without a navy and to protect the marine, if possible, without using force at sea.

The Embargo and Non-Intercourse Acts. It will be seen that commerce fell off 66 per cent. in 1808, and there was considerable decline in tonnage and carriage, due, no doubt, to the embargo act, passed December 22, 1807, forbidding our vessels to go to sea. Congress seemed to think this was all that could be done, without a navy, for the protection of our commerce. And without a naval policy, the government drifted along, submitting year after year to the insolence of France and the tyranny of Great Britain. The embargo, and the non-intercourse act which followed it, May, 1809, did no good whatever, but harm only to our marine, as more damage resulted from vessels rotting at moorings and decaying on the stocks than if they had been captured in numbers by our enemies. It was virtual submission, and not defense of our rights, thus to resign the sea. Some New England vessels disregarded the embargo, and ran clandestinely in the West Indian and other trades.

All connected with navigation grew restive under the course of the government, and claimed full and equal protection with other citizens. Finally, the House of Representatives voted that: —

"The United States ought not to delay beyond a period of six months to repeal the embargo laws, and resume, maintain, and defend the navigation of the high seas against any nation or nations having in force edicts, orders, or decrees violating the lawful commerce of the United States."

The 4th of March, 1809, was fixed as the time for a change of policy from submission to defense. This action of Congress had the effect to renew the courage of our shipping interest; and we find trade soon recovered, and tonnage increased. The year 1810 is marked as the first culmination of our tonnage in the foreign trade.

War with England. Meanwhile, on one pretext or another, the aggressions of England continued. The change in our policy was spitefully resented. It was determined our flag must, if possible, be driven from the ocean. In 1811 this purpose became so plain that much of our tonnage was laid up voluntarily by owners, to avoid capture and confiscation. At length a movement for a declaration of war, with a view to the conquest of Canada, found ambitious leaders in John C. Calhoun and Henry Clay. By some means a discovery was made that "the honor of the country" was involved in resenting the insults and spoliation of Great Britain.

Accordingly, in defense of the national honor, rather than the protection of shipping and commerce, the call to arms was sounded by the ruling party. Sectional differences immediately appeared. The "commercial States," so called, wished to see a navy and privateers employed against the enemy, but the "agricultural States" contended for the invasion of Canada. Finally, we attacked the foe by land and sea, but beat him best on his "oceanic domain." That we were able to do so was a striking proof of the wisdom of our protective shipping policy.

RETROGRESSION FROM 1811 TO 1815.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1811	763,607	10.18	15.29	90	86
1812	758,636	9.78	14.91	85	80
1813	672,700	8.40	6.23	71	65
1814	674,633	8.17	2.41	58	51
1815	854,295	10.05	19.47	77	71
Average. .	744,774	9.31	11.66	76.2	70.6

During the war our shipping and commerce per capita fell to the lowest point occupied since the Revolution. In the last year (1814) the British blockade was so complete that very little merchandise was imported or exported, but our own vessels managed to do more than half the carrying. When the war closed, our people were quick to resume their traffic, but the amount of tonnage in 1810 was not reached again until thirty-six years afterward; nor was the figure to which we recovered in 1815 regained until thirty-one years afterward; for in 1815 Congress began the stripping off of ship-protection. The new policy had an unfriendly source.

There were several sequences of the war of 1812, which contributed to the decline of our tonnage in foreign trade. For one thing, peace became general, and all the nations resumed as much of their trade and transportation as they could well recover. But allowing for this change in the situation, it is clear that it cannot account for the different decadences that invariably followed each *act* and *treaty*, giving away the advantages and stripping off the protection of our marine. From 1815 to 1828 — thirteen years — our government was busied changing the policy of the fathers, from encouragement and protection to discouragement and free-carrying. The new policy was sugared over with a glittering coat of verbal sweetness. It was free trade, loftily styled "the reciprocal liberty of commerce." Since the inception of this plan should be credited to

the British ministry of that day, it is not easy to see why the "national honor" should have permitted its adoption by our government, after waging a bloody war for "free trade and sailors' rights." England had brought on and fought the war to break down our commercial power, and if we had truly fought to preserve it, our victories deserved a better sequence than they had. As it was, England got her object in a train for accomplishment, not by whipping our ships and seamen at sea, but by bold and skillful diplomatic fencing with some of our pliant and easily managed statesmen. In this success she was aided greatly by sectional and party differences.

The Hartford Convention. Unfortunately, the naval victories which we won in the war, and which should have satisfied all our citizens, as they clearly showed the defensive advantage of shipping of our own and proved the need of a navy for freedom and independence, only confirmed the foolish and unpatriotic prejudices against what were then termed "the commercial States." An assembly known in history as the "Hartford Convention" passed two resolutions, as follows: —

"Congress shall not have power to lay an embargo on the ships or vessels of the citizens of the United States, in the ports or harbors thereof, for more than sixty days; and shall not have power, without the concurrence of two thirds of both houses, to interdict the commercial intercourse between the United States and any foreign nation, or the dependencies thereof."

This action at Hartford, as it severely arraigned the administration and the party in power for years past, was very offensive to the government and all its friends. The doctrines declared were not only foolish, but subversive of the national unity. The occasion was most untimely, and the shipping interest has suffered ever since for the treason then committed in its name. The work of this convention, and the resentment which followed it, were windfalls right into the hands of the Tory government of Great Britain.

The First Act Abandoning Ship-Protection, 1815. The Hartford Convention met in January, 1815. On the 3d of March following, Congress passed a law stripping the outer garment of protection from the marine, in preparation for a treaty with Britain, which should begin the removal of all bar-

riers which that nation could complain of in her future competition with the shipping of the States; thus would be avoided British aggressions, congressional embargoes, wars, and future accusing conventions.

The act of 1815 provided: —

"That so much of the several acts imposing duties on the tonnage of ships and vessels, and on goods, wares, merchandise imported into the United States, as imposes a discriminating duty on tonnage between foreign vessels and vessels of the United States, and between goods imported into the United States in foreign vessels and vessels of the United States, be, and the same are hereby repealed; such repeal to take effect in favor of foreign nations whenever the President of the United States shall be satisfied that the discriminating or countervailing duties of such foreign nation, so far as they operate to the disadvantage of the United States, have been abolished."

The assumption in this act, that the discriminating duties of foreign nations "operated to the disadvantage of the United States," was unsound and absurd.

This phrase diplomatically disguised the purpose, which was to throw open to foreign nations, but particularly the British, a large share of our foreign trade. If this was not the purpose, why did England, in the discussions of the forthcoming treaty of peace, urge this provision? The act was passed to prepare our statutes for the terms of that treaty, as we shall soon perceive; but it did not suit the administration to admit that fact, hence the effort of its friends to mislead the country. In the debates upon the passage of this measure, as in similar acts afterward, it was dwelt upon that foreign nations collected more taxes from American vessels than we did from foreign vessels, the ratio being as *nine to one*, because our own vessels did nine tenths of the carrying in our foreign trade. This tax was claimed to be a burden laid altogether upon our export business. It had grown up in consequence of our discriminating dues and duties; because without these we should have had no tonnage for foreign nations to tax. It followed that the removal of our duties, in exchange for the foreign, would bring relief. But what would become of our shipping without *protection?* That question was not seriously considered, though it was sought to make the "commercial States" believe

that a mutual removal of duties would result favorably. "Free trade" was highly extolled. For shipping in the foreign trade, there could be nothing like it. "Liberality" would take the place of protection. Under the benign principle of "generosity," it would not be long until American shipping would displace the European, and the whole commerce of the world be ours. Such arguments were simply imposture, and the act itself, prompted as it was by a foreign government, was a shameful abuse of legislative power.

It has been represented by some of our historians, that this act of 1815 was really meant for the benefit of our marine, and that the reference to "countervailing duties" operating "to the disadvantage" of the "United States" meant to the disadvantage of the shipping interest. This view is manifestly incorrect. The experience of twenty-six years had proved that our discriminative duties were highly protective, and, therefore, to our shipping highly advantageous, operating as they did to secure the employment of our own, in preference to foreign vessels, in foreign ports, for cargoes homeward. *On this security of employment abroad rested the whole force of argument for discriminative protection.* Every one of the illustrative tables of carriage in the foreign trade will show that imports exceeded exports, in American bottoms. Protection upon imports prevented coming home in ballast, insured freight both ways, and conduced to minimum rates. Certain it was, that the so-called "countervailing duties" of foreign nations cut no figure at all in preventing the employment of our shipping abroad, where cargoes were to be brought home. Our discriminative system brought our vessels into demand, in foreign ports, while it was the same with foreigners in our ports. The simple truth of the matter is, that our ship-protection was a great success, and this was reason enough for England to desire a change.

The only advantage gained by the act was a treaty of peace with England. That is to say, our ship-protection was cast away as the price of pacification of Great Britain. We fought bravely in resistance to the "right of search," but made peace ingloriously by yielding the right of protection, with the right of search unmentioned. This shows, only too plainly, who were the victors in diplomacy after the war.

"*Reciprocal Liberty of Commerce*," *1815*. The convention to regulate the commerce between the territories of the United States and his Britannic Majesty, dated July 3, 1815, four months after the act above criticised, provided as follows: —

First: Reciprocal liberty of commerce between the territories of the United States and the British territories in Europe, but not in America.

Second: No higher or other duties on productions of each country than on those of other foreign countries.

Third: Equality of duties on American and British vessels in Great Britain and the United States.

Fourth: No discriminative duties on importations, whether by American or British vessels, in either Great Britain or the United States.

Fifth: Equality of duties, bounties, and drawbacks, and whether in British or American vessels.

Sixth: Intercourse with the West Indies not to be affected by this convention.

Seventh: Vessels of the United States permitted to trade direct to and from the principal British dominions in the East Indies in articles not prohibited in time of war, and not to pay more duties or charges than vessels of the most favored nation, either on vessel or cargo.

The provisions of this treaty, obligatory for four years only, by acts and proclamations since have become the rule of commercial intercourse between the United States and Great Britain, though when it was made that nation did not do as we did, grant full "reciprocal liberty of commerce." She kept us out of her West India ports for fifteen years, and out of her North American possessions for thirty-five years afterward. And this was the beginning of our present system of unprotection, in the foreign trade.

THE FIRST EFFECT OF UNPROTECTION, — OUR TONNAGE FALLING OFF, 1816 TO 1820.

YEAR.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1816	800,760	9.12	26.10	73	68
1817	804,851	8.94	20.76	79	74
1818	589,954	6.39	23.31	85	80
1819	581,230	6.08	16.55	87	82
1820	583,657	5.95	14.70	90	89
Average . .	672,090	7.29	20.28	82.8	78.6

The first effect of free-carrying with England, under the treaty of July 3, in accordance with the act of March 3, was a falling off in our share of transportation for the year 1816, in which importations were very large, British goods in British ships rushing in like the waves of the sea. The losses for one year were of tonnage, exceeding 6 per cent.; of imports carried, 4 per cent.; of exports carried, 3 per cent.; of shipping per capita, nearly 1 per cent. This single year's experience proved the value of the protection arising from discriminating duties. The extra rush of goods had been patriotically shipped by their owners in British vessels. The regular importations of American merchants came by American vessels, many of them being owned by our merchants. In the previous year, 1815, we had made great gains. In the following year, 1817, we gained slightly in tonnage, and recovered 6 per cent. of lost carriage, though there was a large falling off in commerce, and a small decline in shipping per capita. In point of fact, we have never had since 1817 as great an extent of shipping per capita as in that year. The decline of commerce was due to a tariff check in importations, and the increase in carriage to the consequent withdrawal of British ships, together with the strenuous efforts of our shipowners to regain the share of carrying enjoyed before the war.

The Black Ball line of sail packet-ships, between New York and Liverpool, started in 1816, got fairly to running in 1817,

and that year, as we have seen, there was a small gain in tonnage and carriage. For thirty years following, our merchants engaged in forming different packet lines, and this helped very much in counteracting the bad influence of what was called "reciprocity" legislation.

In September, 1816, our government made a treaty with Sweden, substantially on the same basis as the one in 1815 with Great Britain. As our Swedish trade was insignificant, but little loss resulted from this treaty for several years afterward. But this treaty has been valuable to Sweden, — indeed, a veritable protection, such as that nation could not have given its vessels except by bounties, for engaging in our trade. For the past fifteen years, the shipping of the United Kingdom of Sweden and Norway has entered our ports at an average rate of 1,529 arrivals of 821,221 tons, against an average of American vessels from Sweden and Norway of two only in number aggregating 970 tons. For each ton of ours engaged in carrying for this kingdom, there have been 854 tons of its vessels carrying for us. The value of the commerce with Sweden and Norway is less than three tenths of one per cent. of our total foreign commerce. Thus, the results of the legislation of 1815 and following years, on the line of free-carrying for the world's shipping, have been good for foreign nations, but bad for our own.

A second act of "liberality" soon followed the first, which was found not immediately ruinous, nor so tempting to foreign nations as it might be made.

The shipowners of Europe hesitated a while to put their shipping into American *direct* trade, which in time of peace had averaged 90 per cent. in the hands of American merchants and carriers. Most foreign fleets were not quite ready to accept the invitation to contend, even on improved footing, with the men and ships of our commercial States ; to bring our imports here and to carry our exports away; to cut our merchants out and tie our carriers up, and to change the national ensign for foreign colors in all our ports. However, the way had been found to bring all this about in the fullness of time.

The Second Act of Reciprocity, 1817. In 1817 the free-freighting policy was revised and strengthened, the object

being, not as might be supposed, to fortify the shipping interest, but to double the inducements already offered to the maritime nations to throng our ports with tonnage in search of employment, which naturally belonged to, and had formerly been enjoyed by, our own people, to the great advantage of the States. It is true that the coasting navigation, as it should be, and as, in fact, it had been, was wholly reserved for our own vessels (by section 4), but the first section of the act relating to foreign trade not only invited, but constrained the carrying competition of foreign nations. Its terms seemed to confess the failure of the act of 1815, which was addressed to the producing nations, and which, so far, had been accepted only by Great Britain, Sweden, and Algiers. The act of 1817 was addressed to the *non-producing* but carrying nations, and opened our transportation to all, without regard to reciprocal benefits; in fact, this idea is not contained in it. Its central thought is the abolition of ship-protection by all the nations, but particularly the forcing of all into the carrying-trade of the United States. By the new law the door was opened wide to flags whose direct and legitimate trade was never of any special value, and never worth reciprocation; with no other object, that can be seen, than the liberal purpose of giving to them, equally with the greater nations, the opportunity of becoming the prosperous carriers of all the ocean commerce of the United States, and of letting our own carriers go idle, if they could not command employment. The inferior nations were the very first to enter into so-called "reciprocity" treaties; and gradually most of them have made a grand success of the act of 1817. The pretension of certain writers, that the good of the American marine was the object of this act, is simply absurd. Its authors had no love for that interest; and for such interests as they had affection, they maintained protection.

The following is the text of the act discussed: —

"Section 1. That after the 30th day of September next, no goods, wares, or merchandise shall be imported into the United States from any foreign port or place, except in vessels of the United States, or in such foreign vessels as truly and wholly belong to citizens or subjects of that country of which the goods are the growth, production, or manufacture, or from which such goods, wares, or merchandise can be, or most usually are, first shipped for transportation:

"Provided, nevertheless, That this regulation shall not extend to vessels of any foreign nation which has not adopted, and which shall not adopt, a similar regulation."[1]

Had this section been without a proviso, it would have been strongly protective, as, in fact, it was for a few years, and until foreign nations acted on it; then the proviso took all the goodness out of it. It was interpreted as adverse by the shipping interests, and accordingly our tonnage in the foreign trade fell off —

From 1817 to 1818	26 per cent.
From 1815 to 1818 we lost	31 per cent.

It was twenty-seven years of time until we had more tonnage in the foreign trade than in 1817; and we have never had equal tonnage per capita since.

Lesser Laws. In 1817 there were several minor enactments increasing tonnage dues on foreign vessels from ports at which our ships were not permitted to trade. This was protection in so mild a form that it did neither good nor harm for American shipping. Prohibition for prohibition would have better met the case; yet we are told the government did brave things in thus increasing duties, which, after all, on cargoes inward, our own people paid, while many of our vessels laid up idle. In 1818 discriminating duties against produce from the Netherlands, Prussia, Hamburg, and Bremen were repealed. Also our ports were closed against British vessels from a certain colony of that nation, with which our vessels were not permitted to traffic.

Here was prohibition for prohibition, — an experiment probably. In 1819 a treaty concluded with Spain allowed Spanish vessels to enter ports of Florida on payment of same dues as our own vessels, for twelve years. In 1820 a prohibitive duty of eighteen dollars a ton was levied on all French ships. These

[1] "Section 4. That no goods, wares, or merchandise shall be imported, under penalty of forfeiture thereof, from one port of the United States to another port thereof, in a vessel belonging wholly or in part to a subject of any foreign power; but this clause shall not be construed to prohibit the sailing of any foreign vessel from one to another part of the United States, provided no goods, wares, or merchandise, other than those imported in such vessel from such foreign port, and which shall not be unladen, shall be carried from one port or place to another in the United States."

different acts all showed the wish of Congress to substitute free trade for protection, as a regulation of the international carrying-trade, whether it was or was not advantageous to our own people engaged in that trade.

By 1820 our shipping per capita had declined to a point lower than it had occupied for thirty years, while commerce per capita had fallen to a point below any hitherto held in any year of peace for twenty-six years. But our merchants largely owned their own shipping, were enterprising, and our vessels with their crews, on the average, had neither equals nor superiors on the sea, — the result of years of protection. In consequence of our commerce being in the hands of our own merchants, the proportion of carriage given to our own vessels steadily advanced all through the period of 1816–20.

Tonnage Gaining Again. For twenty years after the enactment of 1817, the average amount of tonnage in the foreign trade was only 656,759 tons. Contrast this with the four years of John Adams's administration, which, under full protection when we were young and growing, had averaged nearly as much, 639,545 tons. As it took time to get treaties made, for foreign nations to build vessels fit to compete with ours, and foreign merchants to get hold of our trade, our people held their own, or gained in carriage with reduced tonnage and, after a few years even made gains in it.

THE SUMMIT IN SIGHT, 1821 TO 1825.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1821	593,825	5.88	12.63	92.7	84.9
1822	582,701	5.63	14.05	92.4	84.1
1823	600,003	5.63	14.03	92.1	87.4
1824	636,807	5.79	14.23	93.4	88.7
1825	665,409	5.88	17.33	95.2	89.2
Average . .	615,749	5.76	14.45	93.16	86.86

Some of the principal events contributing to the improvement of business during this period were: In 1819, the resump-

tion of the Bank of England; in 1820, the resumption of specie payments in the United States; in 1821–22, the inauguration of a second line of American sail-packets between New York and Liverpool; in 1822–23, the initiation and running of an American line of sail-packets to London and Havre; in 1823, the opening for two years of the ports of Canada and British West Indies; in 1824, the tariff increased, our banks expanding, and commercial treaties with France, Russia, and the Republic of Colombia; and, finally, the improvements everywhere adopted in the modeling and building of American vessels.

Aside from the attitude of our own government on the question of continued protection to ocean shipping, and the legislation of Congress in 1824, which we will examine presently, there were no adverse circumstances of a serious nature. During this period the amount of tonnage in the domestic or coasting trade became equal to that in the foreign trade, and the two fleets differed but little from 1820 to 1835. In the next five years was reached and passed the summit of our proportionate carrying.

Another Stripping of Protection, 1824. Another stripping of protection took place in this term, by act of January 7, 1824.[1] This act was not general, but related only to the Netherlands, Prussia, the cities of Hamburg, Lubeck, and Bremen, Oldenburg, Norway, Sardinia, and Russia, — nations and municipalities which preferred not to reciprocate under the act of 1817, but to obtain the same privileges as Great Britain and Sweden had, under the act of 1815. To do this, however, the act of 1817 had to be modified. This was done for the countries named by the special act of 1824, which provided as follows: —

First: For the reciprocal suspension of discriminative or protective duties on tonnage.

Second: For the reciprocal suspension of discriminative or protective duties as respects the produce or manufactures of said nations, if imported in vessels truly and wholly belonging to them.

Third: These suspensions to continue so long as the ships

[1] At the instance mainly of Prussia, the British Parliament in the same year passed reciprocity acts to be applied to the trade with the Continental nations.

and cargoes of the United States shall be exempt from like discriminative duties in ports of said nations.

Fourth: The President to make proclamation, on evidence, of any of these nations abolishing their duties.

Some of the nations concerned in this act did not qualify for its benefits for several years after its passage, and therefore its evil influence on our trade was not immediately felt. The disposition of our government to rid itself of responsibility for the protection of our marine, so plainly manifested in this legislation, was not calculated to help the efforts of our merchants and shipowners, but they kept on doing their best to succeed. Some even imagined that free trade might help more than it hindered, and all were successful in holding adversity in check a few years longer.

The ocean carrying-trade is a *cash employment*. Foreign commerce induces the circulation of money. Our commerce and navigation, being nearly all our own, furnished life-blood to the country; but we had statesmen then, as now, who could not see it. The "planting States," with little or no shipping of their own in the foreign trade, and, consequently, having only a passive commerce by the vessels of other States or foreign countries, complained of "hard times." It was imagined that the "commercial States," which had nothing to complain of, had too good a thing in a protected marine, and that the "agricultural States" could be made more prosperous by a blow at shipping. England, too, was firmly of the opinion that too much protection still clung to the American ship, and she, too, was sighing for more prosperity. The American tariff of 1824, and the American merchant, with his superior ship, stood right in the way of her commercial and nautical success. In 1827, when American merchants and owners of vessels were making no lament, these memorable words were uttered by the London "Times:" —

"It is not our habit to sound the tocsin on light occasions, but we conceive it to be impossible to view the existing state of things in this country without more than apprehension. Twelve years of peace, and what is the situation of Great Britain? The shipping interest, the cradle of our navy, is half ruined, our commercial monopoly exists no longer. We have closed the West India Islands against America from

feelings of commercial rivalry. Its active seamen have already engrossed an important branch of our trade to the East Indies. Her starred flag is now conspicuous on every sea, and will soon defy our thunder."

Final Act of Reciprocity, 1828. We had already done much for England since the war, in the way of giving the mother country a chance. She had greatly the advantage in the treaty of July 3, 1815. For twelve years after that time we had been losing in tonnage per capita, and in 1827 had 18 per cent. less tonnage than in 1815, much of our loss being gained by England. It is true that with our loss in tonnage we had gained in the proportion of carrying, and England had failed in this respect, especially as a carrier of our imports, and this for the reason that our own merchants and splendid packet-ships yet controlled this trade. It looked to the British, in 1827, more than ever like a tough job to run our merchants and mariners out of business in a time of peace, with anything like equal footing for competition. Hence the tears of the "Times."

But our statesmen had pity for England, and a bill for her relief passed Congress, and was approved May 24, 1828. This opened to her ships the *indirect* trade, if she chose to qualify for its possession, and could gain its monopoly.[1] She already

[1] Extract from the speech of Senator Woodbury on the passage of the reciprocity law of 1828: "Under the laws of 1815 and 1824, before mentioned, and certain commercial conventions, since completed with foreign nations, the following changes as to duties on foreign vessels have occurred since March 3, 1815. British vessels, by the convention of December 22, 1815, pay only the same duty as American ones, unless coming from places where American vessels are prohibited; but when coming from these places they pay $2 per ton, by our act of March 3, 1817. I say nothing now as to the laws about colonial intercourse with the British West Indies. French vessels, by the convention of June 24, 1822, and by our act of March 3, 1823, pay only $1 per ton on the ship, and $3.75 per ton on the cargo, diminishing one fourth annually, after September, 1824. Swedish vessels, by the convention of 1816, are placed on the terms of the act of March, 1815, so that the discriminating duties now exist, as to England and France, only to the extent above named; but as to Sweden, Denmark, Norway, Russia, Prussia, Sardinia, the Hanse-towns, the Dukedom of Oldenburg, and Guatemala, they do not exist at all as to their vessels and cargoes, when bringing cargoes of their own produce or growth, nor in the most of them when cargoes not of their produce, if usually first shipped at their ports. But with the exceptions hereafter to be named, discriminations still exist as

enjoyed all she could acquire of the direct trade, and the new act would allow her to carry to and from the United States, and from and to all the world. In short, this act was the very thing wanted by Great Britain for the preceding thirty-nine years, but there was this difficulty about the matter, she wished to give no consideration for it. Hoping for her own terms, she waited twenty-one years longer before she legislated for its acceptance.

Text of the Act of 1828. "That upon satisfactory evidence being given to the President of the United States by the government of any foreign nation that no discriminating duties of tonnage or impost are imposed or levied in the ports of said nation upon vessels wholly belonging to citizens of the United States, or upon the produce, manufactures, or merchandise imported in the same from the United States, or from any foreign country, the President is hereby authorized to issue his proclamation declaring that the foreign discriminating duties of tonnage and imposts within the United States are, and shall be, suspended and discontinued so far as respects the vessels of the said foreign nation, and the produce, manufactures, and merchandise imported into the United States in the same from the said foreign nation, or from any other foreign country; the said suspension to take effect from the time of such notification being given to the President of the United States, and to continue so long as the reciprocal exemption of vessels belonging to citizens of the United States and their cargoes, as aforesaid, shall be continued, and no longer."

The Arguments for the Act. These were of all sorts, none were sound, some were specious, others plausible. The measure was recommended by the President in 1825, and the principal discussion was in the Senate in 1828. The origin and

to all other nations; and as to those places before enumerated, with two or three exceptions, discriminations still exist on all vessels with cargoes not of their growth or produce, 'nor usually first shipped' at their ports.

"The present act proposes to do away with the whole of these remaining discriminations. It removes, whenever a reciprocal rule may prevail, all extra duties on tonnage in all cases, whether the last be the produce and manufacture of the nation owning the vessel, or usually first shipping there, though not her product and manufacture, or whether it be produce and manufacture however frequently reshipped, or coming from nations however remote."

object of the act were wholly political. The shipping interest did not call for it. On the contrary, the chambers of commerce, beginning with New York, in 1803, so far as known, always opposed the removal of our discriminative and protective duties. The merchants and shipowners of Portsmouth, N. H., the State of the senator who engineered the act, had passed resolutions approving our "navigation acts" as having been "highly favorable," "deprecating their repeal," and asking for maintenance of the "present protection," in February, 1822. But Senator Woodbury argued for the principles involved in the bill, that, —

"These principles embraced the great paramount one of all liberal governments, that trade shall be *free;* that all shackles on commerce should be stricken off; and in accordance with the lights and spirit of the present age, that everything in navigation, as in all other kinds of business, should be left to the fair competition of industry, enterprise, and skill. That in a country which justly boasts of the freedom and superiority of its institutions nothing is to be feared from a rivalship on this subject, free as air and extensive as the widest range of civilization."

The main principle of the bill being "free trade," the other elements harmonized, and error ruled the reasoning. Here is an example from Senator Woodbury: —

"We are known to possess a skill and economy in building vessels, a cheapness in fitting them out, an activity in sailing them, which, without discrimination (protection), would give us an advantage in coping with any commercial power in existence. Such are the accurate calculations of our merchants, the youth and agility of our seamen, and the intelligence of our shipmasters, that American vessels can, on an average, make three trips to Europe while a foreign vessel is making two. It must be manifest to all that circumstances like these, rather than any discriminating duty, must always give and maintain to us a superiority and protection which leave nothing to be feared from the fullest competition."

Our grim and inglorious ship-experience since this foolish and deceptive utterance painfully contradicts its truth and conclusiveness. Portsmouth, N. H. that in 1828 had 40,000 tons of sail in the foreign trade, has now only 5,000 tons regis-

tered, and other ports of the country have had a like experience. But here is the final appeal, to pass the bill: —

An "Olive Branch." "By this bill we now hold out the olive branch to all. If our terms are accepted, we may obtain most of the transportation now enjoyed by foreigners in the eight or ten hundredths of our foreign tonnage; as they are now enabled to compete with us to that extent, chiefly, by the discrimination they enjoy at home. But, whether accepted or not by nations other than those who already have adopted the basis of this bill, we shall, at all events, by its passage act in conformity to the boasted principles of our free government."

This last consideration should have been ridiculous to the identical body of legislators who shortly afterward passed the highest protective tariff ever enacted. And that idea of offering an "olive branch" to Great Britain was servile and abject in a painful degree. At that time American produce for British West Indian markets had to find its way by land to Montreal or Quebec, and be taken on by British vessels; or, if shipped by an American vessel, it must be landed at a Swedish West Indian port, and be reshipped thence by British vessels to its destination. But the senator's position was wholly undermined by his own statement of the virtue in protection, to wit, that the "discrimination" enjoyed by foreign nations "at home" enabled *them* to compete with us to the extent of the 8 or 10 per cent. of the carriage which they had in our trade. Why could he not as well see, or did he think his brother senators and the American people could not see, the opposite of his proposition, to wit, that the discrimination enjoyed by American vessels "at home" enabled *them* to hold 90 or 92 per cent. of carriage in the foreign trade? But his statement was an exaggeration anyway, for Great Britain, France, and eight or ten other countries had abolished discriminative duties upon certain kinds of traffic, and done this by treaty with us, as he had explained in the beginning of his speech. We were already enjoying the supposed advantages of free-carrying, as to a large part of our traffic; and from 1815, when this policy began, down to 1827, when the senator might have had the latest information of its operation, we had lost 41.58 per cent. of per capita shipping, and 17.88 per cent. of tonnage in our foreign trade. To these facts Senator Woodbury seemed oblivious.

At this point a better view of the free-trade reasoning, on which was founded the stripping of protection from our marine, may be obtained from the message of President John Quincy Adams, 1825.

His remarks were as follows: —

John Quincy Adams's View. "The policy of the United States in their commercial intercourse with all nations has always been of the most liberal character. In the mutual exchange of their respective productions, they have abstained altogether from prohibitions; they have interdicted themselves the power of laying taxes upon exports, and whenever they have favored their own shipping, by special preferences, or exclusive privileges in their own ports, it has been only with a view to countervail similar favors and exclusions granted by the nations with whom we have been engaged in traffic, to their own people or shipping, and to the disadvantage of ours. (1)

"Immediately after the close of the last war, a proposal was fairly made by the act of Congress of the 3d of March, 1815, to all the maritime nations, to lay aside the system of retaliating restrictions, and to place the shipping of both parties to the common trade on a footing of equality, in respect of duties of tonnage and impost. (2) This offer was partially and successively accepted by Great Britain, Sweden, Netherlands, the Hanseatic cities, Prussia, Sardinia, the Duke of Oldenburg, and Russia. It was also adopted, under certain modifications, in our late commercial convention with France. And, by the act of Congress of the 8th of January, 1824, it has received a new confirmation with all the nations who had acceded to it, and has been offered again to all those who are, or may hereafter be, willing to abide in reciprocity by it. But all these regulations, whether established by treaty, or by municipal enactments, are still subject to one important restriction.

"The removal of discriminating duties of tonnage and of impost is limited to articles of the growth, produce, or manufacture of the country to which the vessel belongs, or to such articles as are most usually first shipped from her ports. It will deserve the serious consideration of Congress, whether even this remnant of restriction may not be safely abandoned, and whether the general tender of equal competition, made in

the act of 8th January, 1824, may not be extended to include all articles of merchandise, not prohibited, of what country soever they may be the product or manufacture. (3) Propositions to this effect have been made to us by more than one European government, and it is probable that, if once established by legislation or compact with any distinguished maritime State, it would recommend itself, by the experience of its advantages, to the general accession of all." (4)

Remarks on Mr. Adams's View. (1) As said in another place, this theory of our legislation for ship-protection was incorrect. According to it, if there had been no protection of shipping by any of the nations, when our government began, then there would have been no need of protection for our marine at that time. This perfect free-trade doctrine is most inconsistent in John Quincy Adams, for he signed the "high tariff" bill of 1828, that so offended South Carolina that she thought seriously of secession.

The object of Congress in the protective policy was to make a condition that would induce or facilitate the employment of our ships in *foreign* ports, not to give tit for tat in taxes. Let us ask, Were the high duties laid in 1828 on bolt iron, copper, canvas, hemp rope, and other articles of importation then indispensable in building, rigging, and outfitting vessels, put on to "countervail" the duties of foreign nations, or to protect their production in the United States? Protection was stripped from shipowners, while it was given generously to miners, manufacturers, planters, and farmers. If free trade was good enough for ships, why was it too bad for other interests? The cost of ships was largely increased by the tariff of 1828, and this without the slightest compensation to the shipping interest. Besides this injustice, the framers of that tariff, and the President who signed it, had the inconsistency to tell posterity that free trade was better than protection for the American ship; but that protection was indispensable for sugar-planting, rice-cropping, wool-growing, hemp-raising, metal-mining, iron-making, and manufacturing generally. It was stultifying for the protectionists of 1828 to have framed sophistical arguments for making fish of the interests related to the sea, and meat of the industries belonging to the land. Yet this is what they did, and their work stands.

(2) This "footing of equality" phrase was illusive and deceitful. It said one thing, but seemed to, and did mean, another. In mathematics, if equals be taken from equals, equals will remain. But the science of ship-protection by tariff duties was not one of numbers; hence, what seemed to be "countervailing duties" were not such in the sense supposed by Mr. Adams. They were not enacted with that view, but were intended to, and did, induce the freighting of American ships abroad. When duties are truly and only "countervailing," in a mathematical sense, as far as protection is concerned they may as well be mutually removed. But this was not the case at all with our discriminating duties. While these duties continued, they induced, not only our own, but foreign merchants, *to freight our ships in the import trade.* The free-trade object was to remove that inducement, and not merely to deduct equals from equals, to secure "equality." In this consisted the error and the deception that were practiced. Thus, the injury that was done, not only to the marine, but to the country, stands not upon statesmanship, but folly. The acts of 1815, 1817, 1824, and 1828 being passed, and reciprocal laws enacted by foreign countries, the advantages of American ships abroad were greatly curtailed. It was detrimental, and sometimes disastrous to them, that foreign merchants, and even our own, needed no longer to offer them employment; and that they should be compelled to sail home in ballast, while ships of foreign flags got their freight to carry, and with it the control of their former trade. Foreign tonnage taxes were saved, but our carriage was lost!

(3) In the expression, "the general tender of equal competition," Mr. Adams misled his readers. For equal competition to have resulted from a stripping of protection, the former competition must have been unequal *with* protection, which was absurd, the theory of protection being to equalize the advantages of nations, some requiring more and others less to even up the conditions of competition in different trades. At least that was the theory of the tariff of 1828; and, as said before, it was signed by Mr. Adams.

(4) In the acknowledgment that foreign nations were prompting this free-ship legislation, Mr. Adams gives away the secret of the whole matter, and lets out the truth. Great

Britain had her share in the suggestions made from time to time, and so had other European powers. There was no movement at home, except from free-trade politicians, mainly residents in the cotton States. The merchants, the shipowners, the shipbuilders, the master-mariners, and other classes of American citizens, to whom the country was indebted for the name and fame of our ships, *were not consulted.* No name of any citizen, entitled to speak for the American ship, was ever put to a petition for the stripping of protection from our marine; but its divestment was the bad work of politicians, some of them with bees in their bonnets, and none giving evidence of rightly understanding or properly appreciating the different interests to be affected, perhaps ruined, by the adverse acts which were passed.

England the Great Beneficiary. While the free-freighting act of 1828 has been of advantage to foreign nations ever since its passage, from 1849 it has been turned to most account by Great Britain, especially in the "indirect" trades. And while the change of policy, from protection to non-protection, of the maritime nations has doubtless injured or hindered a few nations in their pursuits of the sea, it has ruined the trade of none but the United States; first, because we have longest and most faithfully adhered to it; second, because the social conditions of our people are higher than those of other nations; third, the most of them have some time since returned to some kind of protection, — subsidies, bounties, or other discriminations. One purpose it has well fulfilled. It has brought all nations into the ocean-carrying of our crippled country. Another object, as promised, it has not effected. It has completely failed to gain us a single business advantage against the shipping of any nation. It was said the act of 1828 was intended as an "olive branch." If the change from protection to free trade, in shipping, was not wholly an "olive branch" to the British government, then all signs fail to indicate what it was. Ostensibly, we made a feast for all mankind, but plainly put the plums in the pudding for the mother country. The temptation to favoritism in 1828 was the opening of the British West India trade. It was hoped the waving of an "olive branch" would secure that result, and no doubt it made a step towards it.

THE CLIMAX PERIOD, 1826 TO 1830.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1826	696,221	6.00	14.01	95.0	89.6
1827	701,515	5.87	13.54	94.3	87.5
1828	757,998	6.18	13.12	91.4	84.5
1829	592,859	4.70	11.65	93.0	86.0
1830	537,563	4.15	11.14	93.6	86.3
Average . .	657,231	5.38	12.69	93.46	86.78

This period marks the last of the flood, and the first of the ebb tide in our carriage of foreign trade.

Commerce.	Carried in 1825.	Carried in 1826.
Imports	95.2	95.0
Exports	89.2	89.6

This proportion of value carried in American vessels never has been equaled since, and perhaps was never before exceeded. It was accomplished before foreign bottoms were admitted to our *indirect* trade. In his report to Congress, December 22, 1825, Richard Rush, Secretary of the Treasury, remarked as follows: —

Richard Rush on Trade and Transportation. "The public revenue is derived in an amount so preponderating from foreign commerce that the state of the latter is always to be chiefly looked to in every prospective view of the income. As the internal business of the country has worn a character of activity and increase during the present year (1825), so has also its foreign trade, by that close connection which subsists between them. The exports for the year ending on the 30th of September last have exceeded $92,000,000. The imports have exceeded $91,000,000. Of the exports, upwards of $66,000,000 were of domestic, and the remainder of foreign productions.

"Of the imports, upwards of $86,000,000 were in American vessels. Of the exports, upwards of $81,000,000. Considering that the vessels of those foreign nations with which the United States have the most extensive commercial intercourse are now placed upon a footing of equality, *as to duties* and charges of whatever kind in our ports, with the vessels of the United States, this heavy excess of American tonnage is a signal proof of the flourishing state of our navigation. It may serve to show that the efficient protection extended to it by the laws of Congress succeeded in establishing it in a manner to meet and overcome all competition. Before the era of those laws, it is known how this great interest languished; how little able it proved, before the auxiliary hand of government was stretched out, to support itself against the established superiority and overwhelming competition which it had to face in the world."

After 1826 foreign, and especially British, vessels began to get headway in their competition for American freight, at home and here. In 1829, the year following the final stripping of protection, our tonnage in the foreign trade fell off about 22 per cent., and a further decline, in 1830, increased our losses to nearly 30 per cent. Shipping per capita fell off in 1829 nearly 24 per cent. and this loss was increased to more than 32 per cent., in 1830. It was 1840 before we could replace this tonnage; and 1850 before we could recover ground in shipping per capita, and then could hold it only twelve years. The commerce per capita lost in this period was in great part due to the adverse shipping legislation, because the latter injured the prosperity of our merchants, largely concerned as they were in the ownership of vessels. In the effort to hold their trade they must have laid up or sold much tonnage.[1] Shipbuilding for foreign trade ceased entirely. Times became hard. Foreign competition reduced freights in 1829, but that did not pay our country for the idleness of labor dependent upon the building and sailing of vessels. The outlook at the close of this period did not support the prediction of Senator Woodbury, that American carriage and tonnage would increase.

[1] From 1826 to 1831 inclusive our vessels "sold abroad" aggregated 81,617 tons.

Here it may be of interest to compare the condition of our foreign commerce and navigation under the Presidency of John Adams, the father, with that of John Quincy Adams, the son, twenty-eight years afterward. The elder Adams believed in protection for shipping, the younger statesman put his trust in free trade.

COMPARISON OF ADMINISTRATIONS.

Administrative Periods.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
Averages, term of John Adams	620,426	12.40	29.24	91.60	87.80
Averages, term of John Q. Adams . . .	657,231	5.58	12.69	93.46	86.78

From this comparison we see that commerce, and shipping per capita, in the term of the younger Adams was only 43.4 per cent. of the standard in the term of the elder Adams, and that the ratio of decline was almost exactly the same. The amount of tonnage and proportion of carriage in the two periods were also nearly the same. In the earlier period commerce and navigation flourished. In the later time, it is evident they had met misfortune, and experienced a loss of friends.

CHAPTER VIII.

DECLENSION UNDER RECIPROCITY POLICY.

1830 to 1860. We are now at the point in history, as carriers of our own commerce, where our rise ended, and our fall began. From this point onward, dependence on foreign shipping grows constantly, with now and then a check, down to the period of the war. While we had a spurt of shipbuilding and gains of tonnage in the fifties, our prospect of recovering our place, then partially lost as "our own merchants and carriers," had only a seeming reality, which the war converted into romance.

Opening British West India Trade, Act of 1830. For many years our shipping merchants had worried about the exclusion of our vessels from the British West India ports. It was expected that the act of 1828 would be the means of opening a direct trade, but England was not yet ready to accept our "olive branch." Its terms were thought to be too sweeping. It became necessary to pass a special act, which was done May 29, 1830. This act provided: —

"That whenever the President of the United States shall receive satisfactory evidence that the government of Great Britain will open the ports in its colonial possessions in the West Indies, on the continent of South America, the Bahama Islands, the Caicos, and the Bermuda or Somer Islands, to the vessels of the United States, for an indefinite or for a limited term; that the vessels of the United States and their cargoes on entering the colonial ports aforesaid shall not be subject to other or higher duties of tonnage or impost, or charges of any other description, than would be imposed on British vessels or their cargoes arriving in said colonial possessions from the United States; that the vessels of the United States may import into the said colonial possessions from the United States any article or articles which could be imported in a British

vessel into the said possessions from the United States; and that the vessels of the United States may export from the British colonies aforementioned, to any country whatever other than the dominions or possessions of Great Britain, any article or articles that can be exported therefrom in a British vessel to any country other than the British dominions or possessions, as aforesaid, leaving the commercial intercourse of the United States with all other parts of the British dominions or possessions on a footing not less favorable to the United States than it now is, and that then, and in such case, the President of the United States shall be, and is hereby, authorized at any time before the next session of Congress to issue his proclamation, declaring that he has received such evidence; and, thereupon, from the date of such proclamation, the ports of the United States shall be opened indefinitely or for a term fixed, as the case may be, to British vessels coming from the said British colonial possessions, and their cargoes, subject to no other or higher duty of tonnage or impost, or charge of any description whatever, than would be levied on the vessels of the United States, or their cargoes, arriving from the said British possessions, and it shall be lawful for the said British vessels to import into the United States and to export therefrom any article or articles which may be imported or exported in vessels of the United States."

(Then follows repeal of our acts of April 18, 1818, May 15, 1820, and March 1, 1823.)

"Section 2. That whenever the ports of the United States have been opened under the authority given in the first section of this act, British vessels and their cargoes shall be admitted to an entry in the ports of the United States, from the islands, provinces, or colonies of Great Britain, on or near the North American continent, and north or east of the United States."

On the 5th of October following, President Jackson issued his proclamation opening the ports of the United States in pursuance of this act. For want of skill on our part, it was open to the British Parliament to burden the new trade with heavy duties on goods imported, which of course was done forthwith, much to our detriment.

Inequality of Free Freighting with England. The conditions of *equitable* reciprocity of freighting, or free-carrying,

between the United States and Great Britain have never existed.

In 1828–30 our merchants commanded scanty capital; interest was double the rate in Europe; our government had from the first to give credit on the payment of duties; we had no capitalists with surplus wealth; about all the real advantage we had was 10 per cent. in customs tariff, enterprising merchants, resolute seamen, and the superior shipping induced by protected shipbuilding.

Great Britain was then, as now, the best naturally protected maritime nation known on earth. She had long made claim to "sovereignty of the seas." She then had the largest navy and most merchants fleets. She had the oldest and the strongest shipping houses, and the richest bankers, merchants, and corporations in the world. London long had been the centre of international exchange. The marine insurance written at Lloyds exceeded what was done in all other marts of trade. The great merchants, shipowners, and underwriters of England had long known each other, and were used to active coöperation. Their habit of commercial duty towards one another had acquired the force of centuries. Such were some of the inequalities of the situation when West India free-freighting competition began in 1830.

A New British Protection: "*Lloyds.*" Finding themselves under a new rule of trade, British shipowners, merchants, and underwriters soon devised a plan for discrimination, or protection, against foreign tonnage and alien commerce. The shield of club and society rules soon took the place of parliamentary law. The reorganization of the London Lloyd's Register Association, in 1834, created the agency and supplied the means of a most efficient protective system, namely, the opportunity and the power of underrating the qualities of foreign ships, and overcharging for insurance on their cargoes. Thus, it was sought to induce the merchants of other nations than the British to prefer for employment the British ship.

The measure of importance which attaches to the British Lloyd's Register Association, as an institution and a force for advancing the interests of British shipping, has been discussed in Chapter VI. The United States to this day is without an organization of any kind executing a similar function. Our

merchants and shipowners have never combined against their brethren of foreign nations, nor have our underwriters ever developed the power requisite to help materially in the defense of their country's shipping. "Free trade" in underwriting has been the order of the day. The different States have admitted foreign insurance companies, on "liberal" terms, in such numbers that foreign, and not American interests now dominate cargo underwriting in our principal shipping ports. In fact, American underwriting in our foreign trade seems doomed soon to pass away.

ON THE DOWN GRADE, 1831 TO 1835.

YEAR.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1831	538,136	4.04	13.80	91.0	80.6
1832	614,121	4.48	13.74	89.4	75.8
1833	648,869	4.63	14.11	90.7	75.5
1834	749,378	5.18	15.97	89.0	74.4
1835	788,173	5.32	18.35	90.2	77.3
Average . .	667,735	4.73	15.19	90.6	76.7

In this period we have indubitable evidence of the inability of our shipping interest to hold its own for any length of time with unequalized foreign competition. Other conditions were not unfavorable. We added a line of packet-ships to Havre in 1832. Spain and Portugal, and France and Algiers were at war. Discriminating duties on teas from ports east of the Cape of Good Hope helped our import carrying until 1834. Although the tariff was high, commerce per capita increased during the period, and there was a slight gain in tonnage per capita; but our proportion of carriage declined, in imports 5, and in exports 12 per cent., in the ten years from 1825 to 1835. The import carrying was most firmly rooted, being in the hands of American merchants owning their own vessels. The export business suffered first and most, as the opening of indirect trading and *triangular* voyages sent greater numbers of foreign ships here to purchase and load cargoes for Europe.

However, few nations besides England cut severely into our trade, which was now assuredly slipping away.

The Gains of England. Great Britain entered upon full reciprocity as to our foreign trade, first, direct, as to European traffic in 1815, and as to colonial trade in 1830 ; second, indirect, in 1849. In the year of Jackson's proclamation (1830) she had 78,947 tons of shipping entering our ports. For ten years previously her average number had been 76,518 tons. In the next year after reciprocity in the colonial trade, British entrances rose to 143,806 tons ; and for the first ten years thereafter the average number was 212,661 tons, or 63 per cent. of all the foreign arrivals. In this decade (1830–40), while our own tonnage gained but 40 per cent. in all the ports of the world, British tonnage increased nearly 400 per cent. in American ports alone.

It has been a common mistake to suppose that any advantages were gained by the acts of 1828 to 1830. It was seven years after 1828 before we had more tonnage than in that year, and two years after 1830 before we had more tonnage than then. Nor is it correct to think that our tonnage rose steadily after the peace of 1815. History shows that a generation passed away, and the country made an unexampled growth in population, before our tonnage recovered the figures of 1815.

NEARLY HOLDING OUR OWN, 1836 TO 1840.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1836	753,094	4.95	20.94	90.3	75.4
1837	683,205	4.38	16.56	86.5	77.6
1838	702,962	4.39	13.84	90.6	82.8
1839	702,400	4.25	17.13	88.7	78.3
1840	762,838	4.48	14.05	86.6	79.9
Average . .	720,889	4.49	16.50	88.54	78.8

In this period we suffered a loss in import freighting, but gained somewhat in export carriage, our packet-ship lines having increased their numbers in 1836. In the following year

occurred a severe panic, with bank suspensions, and our carriage fell off. Foreign merchants and their ships kept on at work, while ours had to slacken sail. In 1838 the banks partially resumed, only to fail again in 1839. In 1840 the New England and New York banks resumed specie payments, while those in States having no active commerce in shipping of their own took years afterward for recovery.

Another New British Protection: "Subsidy." In 1838 the first British steamers to cross the Atlantic appeared in our ports. Next year the Cunard line of steamers was announced to run regularly between Liverpool and New York. It was "subsidized" at $425,000 annually, by the British government. This sum proving insufficient, the pay was increased to $550,000 in 1840. Still failing to realize profits, Cunard had his subsidy raised to $735,000. He enlarged his steamers in 1852, and again his pay was raised, this time to $850,000, to give him enough protection to beat off Collins's American line, the British Premier advising Cunard, so it was said at the time, to run without freight if necessary, to kill off Collins. In 1858 Congress came to the aid of Cunard and his government, took off the subsidy protection under which Collins had started and run his ships, and then the victory was easy, and full freights might be carried. That action of Congress stood in the same relation to Cunard and his British line, as the march of Blücher to the support of Wellington at Waterloo.

Mail service, though the ostensible, was not the chief object of Great Britain. The paramount purpose was control of our trade and transportation. While that object may have been legitimate, as nations go, England had not the moral right, under the maxims of liberality and the principles of free trade then ruling her traffic with the United States, to resort to a protective policy for any such purpose. It was supposed by all our statesmen that England and the United States, with other nations, adopting "reciprocal liberty of commerce," had laid aside national effort and governmental interference with the men who went upon the sea in ships. It was at least imagined that all nations, having exchanged "olive branches," were forever bound to the *spirit*, as well as the letter, of fair play and free footing; and, at any rate, that the men of England would not be the first to retake the club of protection, and resume their old play of whacking the heads of their rivals.

The only protection applied to shipping had been discriminating tonnage dues and tariff duties, together with prohibitions. Bounties had been applied to fishermen only. When the dues, duties, and prohibitions were removed, it was not thought possible that new inventions in propulsion would ever revolutionize trade and transportation; or that any of the nations would contrive inventions in protection, for the avoidance of reciprocity acts or treaties and the reinstatement of an old policy under a new form, which should build up quickly an entirely *new marine run by steam.*

Yet this was done by England, and permitted by the United States. If our old protection had remained, we would have been the first nation to establish lines of ocean steamers. Or if we had resorted to it again, when the British Parliament voted Cunard his first subsidy, we would have quickly become the active rival of England in steamship navigation, and at least achieved the rank of second steam-power on the sea. Great Britain got the weather-gage, and has distanced us, because she went back to protective principles for the perfection of the steamship. We have only ourselves to blame for the situation in which we now find our marine, with few sailing ships and fewer steamers. Negligently we permitted England to safeguard with her treasury the running of steamers in our transatlantic trade, when their first work was to beat our sailing-packets out of business, cut our nation out of naval power, and reduce our maritime rank.

DECIDEDLY DECLINING, 1841 TO 1845.

YEAR.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1841	788,398	4.48	14.13	88.4	77.8
1842	823,746	4.53	11.23	88.5	76.3
1843	856,930	4.36	11.50	77.1	77.0
1844	900,471	4.66	11.38	86.7	70.5
1845	904,476	4.54	11.65	87.3	75.8
Average . .	854,804	4.59	11.97	85.6	75.48

In this period we see the first effect of British steamer competition for our import carriage, which fell off decidedly, not alone owing to quicker passages, but to lower insurance rates by British underwriters on goods by steam than by sail. Export carriage fell off most, showing that foreign sailing vessels were losing nothing by the running of foreign steamers.

Although we gained in amount of tonnage, the per capita test showed no increase in proportion to population for fifteen years past. Commerce itself was at the lowest average ever known in time of peace since the union of the States. The tariff of 1828 had been brought down by degrees to a low rate at the beginning of the period, but scarcely any increase of commerce had resulted. During the period there was a loss of commerce, not because of raising the tariff in 1842 (coming into force September 1, and affecting the year 1843, which had only nine months), but because the country had become poor by the commercial disasters of 1837; by the falling off in per capita shipping; and by competition with Great Britain in manufacturing under too low a tariff for protection to wage-workers. In 1841, also, there was a suspension of the banks for about a year, with the United States Treasury well-nigh bankrupt. By the tariff act of 1832, credit on import duties was much reduced, and the act of 1833 provided for its abolition in 1842; and by the tariff act of that year all duties were made payable in *cash*. These changes in the payment of duties stripped just so much protection from our merchants, and seriously checked their trade. But these changes favored foreign merchants, whose capital was ample, with rates of interest low, and they began in this period to send goods more freely for sale by agents, and to buy regularly return cargoes for their ships.

But there were a few favoring circumstances. From 1840 to 1843, the first British war with China took place. This increased insurance rates on British ships in Asiatic traffic, and led to the building of American clippers for the Chinese and Indian trades. The tariff of 1842, so far as it caused the employment of our idle labor, and thus increased prosperity, was helpful to the shipping interest and to shipbuilding.

TONNAGE RISING, CARRIAGE FALLING, 1846 TO 1850.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1846	943,307	4.60	11.48	87.1	76.2
1847	1,047,454	4.96	14.46	77.2	65.3
1848	1,168,707	5.38	14.24	82.9	71.1
1849	1,258,756	5.62	13.10	81.4	68.9
1850	1,439,694	6.23	14.28	77.8	65.5
Average . .	1,171,583	5.35	13.51	81.2	69.4

In this period we make quite an exhibit of gains in tonnage, but the average per capita is scarcely equal to that in 1826–30, which was less than half in periods of full protection. Commerce shows enlargement, but carriage the inevitable contraction. Foreign sail vessels under free freighting, and British steamers under subsidy protection, were getting the weather guage of us from period to period. In twenty years, the five years' average of import carriage had fallen from 93.46 to 81.2 per cent., and export carriage from 86.78 to 69.4, — a decline in the first case of 12.26 per cent., and in the second of 17.38 per cent. of the total transportation, in spite of the many circumstances which, in the course of that time, aided and partially protected our commercial efforts. And this happened in the days of *wood* and *sail*.

In 1846 we put on a packet-ship line to Bremen, war with Mexico began, and the Irish famine occurred. In 1847 and 1848 American steamers began transatlantic voyages, subsidized English fashion. Meantime, the Mexican war ended, with the acquisition of California, soon followed by the discovery of gold, and large emigration by ship around the Horn; in 1848–50 strife and wars in Europe took place; in 1849–50 Collins's line of steamships came out, beating the Cunard out of sight, and the clipper sailing-ship era fairly opened. All these events and circumstances, tending to increased vessel employment, played the part of protection to our marine.

On the other hand, in 1846 the tariff was reduced, and a

bonded warehouse act passed. Both these measures were damaging. This is seen in the great loss of carriage in American ships from 1846 to 1847. Foreign vessels more than doubled their work in the latter year. Our percentage of carrying fell off 10 per cent. in imports, and 11 per cent. in exports of the total transportation in this single year. Nearly all the increase of commerce due to lowering the tariff found its transport in foreign ships. And so it will be found in other instances of tariff lessening. In 1848 we recovered about half of the loss in the previous year, but our share of carriage in 1846, which was 87.1 for imports and 76.2 for exports, has not been attained since that time. Those two acts of Congress did more harm to our shipping than ten years of foreign competition.

Evils of the Bonded Warehouse System. This system, borrowed from England, is part of the free-trade revenue scheme of Robert J. Walker, proposed and adopted in 1846. In its operation, the government becomes, in effect, a party in interest with all the manufacturers, merchants, and shipowners of every country but our own. Foreigners, our rivals dwelling abroad, with no interests that are not adverse to our own, are admitted to full equality for protection with our own citizens, whom they are free to grind into powder by unfair competition. That this system is a protection and convenience to foreign manufacturers, merchants, and shipping is manifest from its provisions. It virtually gives credit for duties. Duties are a part of the expense of placing foreign goods in our markets. Such credit is, therefore, an assistance to merchants and jobbers and reëxporters in foreign goods ; and these, with the vessels employed, under the working of the system itself, have come to be mainly subjects of foreign countries. One of Walker's arguments for the measure was, that "it would greatly increase our revenue (under the low tariff which he advocated, and which passed) by augmenting our imports." But as "reexportation" was his chief argument, he forgot to show how the increase of revenue could take place, if his sophistry, by accident, proved sound, and the augmented imports were *reexported.*

The augmentation of imports and the increase of reëxportation of foreign goods have proved evil principles in our legislation. They have not facilitated the commerce and navigation

of our own citizens, but of foreigners. In the debate upon the passage of the bill, it was pointed out that the system was British, and would be protective of British interests in our foreign trade ; that one great object of any British commercial system is to accumulate power to depress the trade and shipping of other countries ; that, necessarily, the British warehouse system here would be maintained at the expense of American importers, who paid high interest on capital, state, and municipal taxes, and whose enterprise gave life and prosperity to our merchant marine ; that the proposed plan would change the whole business of importing, taking it out of the hands of American merchants, and putting it into the hands of foreign capitalists and speculators; that it would really transfer the control of American commerce from the United States to Europe; that all the great manufacturing establishments abroad would set up agencies in our cities, coastwise and inland, and they would ultimately absorb all the commerce of the country, both of importing and exporting; that already half the importations at New York were on foreign account, and proportionately alien in the other chief cities; that the effect of such change in our commerce had already induced great losses in our carrying-trade, for which the so-called reciprocity legislation and treaties were mainly to blame so far. That the tonnage of Great Britain engaged in commerce with foreign countries was even then increasing in a greater ratio than the tonnage of other nations in the same trade; that where the British merchant trades, thither sails his ship, and there her underwriter follows. In short, that the whole scheme was anti-American, subjecting, and ruinous in its prospect. Nevertheless, the bill passed; and it is to be noted, that it was put upon its passage nearly a month before the "low-tariff" bill of the same year, the better to insure the passage of both; because the vote on the tariff bill would be close, and if it should be tried first and fail, then the warehouse bill would also fail to pass. Of the two measures, the foreign importing interest preferred the warehouse law, as that would suit any kind of a tariff, high or low. Both acts took effect early in the year ending June 30, 1847. On that date, taken together, the two acts had been in force ten and a half months.

Losses and Gains for a Single Year. The following fig-

ures will show the losses and gains, respectively, of American and foreign carriage, in our foreign trade, for a single year, comparing 1846 with 1847: —

VALUE OF IMPORTS.

Carriage.	1846.	1847.
By American vessels	$106,008,173	$113,141,357
By foreign vessels	15,683,624	33,404,281
Percentage American	87.1	77.2
Percentage foreign	12.9	22.8

Thus, imports by foreign vessels increased about 113 per cent., while the increase by American vessels was less than 7 per cent., the usual annual rate for some years previous.

The advantage to foreigners, and disservice to Americans, of the two acts in question, will be seen from the following comparison of three-year periods, before and after their passage, to be nearly as great as in the single year from 1846 to 1847: —

VALUE OF IMPORTS FOR THREE-YEAR PERIODS.

Carriage.	Period of 1844–46.	Period of 1847–49.
By American vessels	$302,621,327	$362,170,741
By foreign vessels	44,760,069	87,231,264
Percentage American	87.1	80.5
Percentage foreign	12.9	19.5

Thus, imports in foreign vessels increased 95 per cent., but in American vessels only 19.5 per cent., in three years after the passage of these prejudicial and pernicious acts. So much for our import commerce.

The following table shows how it was with our export commerce and carriage, comparing 1846 with 1847: —

VALUE OF EXPORTS.

Carriage.	1846.	1847.
By American vessels	$86,550,175	$103,480,610
By foreign vessels	26,938,341	54,832,212
Percentage American	76.2	65.3
Percentage foreign	23.8	34.7

Here is seen the work of the alien merchant and the foreign ship, increasing 135 per cent. in ten and a half months. In American vessels the increase was only 19.5 per cent. in the same time. The "reëxport" trade cut no figure in these extensions of our commerce in 1847, but they were chiefly due to the famine in Ireland and an extraordinary demand for food supplies in Great Britain.

Taking periods of three years, as before, we have the following table showing foreign gains in carriage, after the passage of the warehouse and tariff acts of 1846: —

VALUE OF EXPORTS FOR THREE-YEAR PERIODS.

Carriage.	Period of 1844–46.	Period of 1847–49.
By American vessels	$251,943,146	$313,671,664
By foreign vessels	87,392,022	144,429,109
Percentage American	74.16	68.42
Percentage foreign	25.84	31.57

Again we see how disproportionately foreigners increased their carriage of values in the export, as in the import trade, gaining 65.26 per cent. in three years, while American vessels gained only 24.5 per cent. The foreign gain was greater in the import than the export trade by 45 per cent., proving beyond a doubt that the warehouse act was evil, and only evil for American shipping. Never since 1846 has American carriage, either for imports or exports, been so high as in that year. This is another proof of the ruin bound up in the legislation of 1846. And here is just the place to remind our statesmen that, in the time comprised of short periods before

and after this legislation, American merchants possessed fleets of better ships than belonged to the merchants of any foreign nation. The British had an advantage in the ownership of steamers, but there were then no iron sailing ships and no freighting propellers at all in our foreign trade. Nor was there then, as now, any prejudicial discrimination against American vessels on the part of foreign underwriters. Our merchants labored under no other disabilities than bad congressional acts.

Senator Dix, who engineered the warehouse bill through the Senate in 1846, solemnly assured the country that he "anticipated no increase of foreign tonnage in American trade;" that there was "no danger of our commerce going into the hands of foreigners;" and that "there need be no cause for uneasiness." In liberal sentiment, how wise he was! Of business principles, how much he had to learn!

Complete Reciprocity with England. In 1849 Great Britain made up her mind to take advantage of our general reciprocity act of 1828 to increase her trade and transportation out of our foreign traffic. Hitherto, the traffic of the two nations had been between American and British ports only; henceforth, England wished it to be between our own and the ports of the world, and the opposite way; while our government was willing, not because there was advantage in such reciprocity, for that had been disproved in the loss of 17 per cent. of our foreign carriage in the time of twenty years, but because ours is a "liberal government," that would fain find employment for the shipping of the world, even if it had to lay up all our own fleet in idleness to rot. Immediately after the passage of the British act of 1849, accepting our "olive branch" act of 1828, the Secretary of the Treasury, unmindful of the provisions of the act and heedless of its twenty-one years' effect upon our shipping prosperity, issued circular instructions to collectors and other officers of the customs as follows: —

Mr. Meredith's Circular. "First. In consequence of the alterations of the British navigation laws, British vessels, from British or other foreign ports, will (under our existing laws), after the 1st of January next, be allowed to enter our ports with cargoes of the growth, manufacture, or production of any part of the world.

"Second. Such vessels and their cargoes will be admitted from and after the date before mentioned on the same terms as to duties, imposts, and charges as vessels of the United States and their cargoes (October 15, 1849)."

It may be useless now to point it out, that this act of the Secretary of the Treasury was without authority. The act of 1828 authorized the President, not the Secretary of the Treasury, to issue his proclamation declaring that the foreign discriminating duties of tonnage and impost are suspended and discontinued, etc. The Secretary did not wait for the President to act, but went ahead on his own responsibility. In fact, *the legal proclamation has not been made down to the present time.* It is a strange incident in our administrative history. The act of 1828 should be repealed, and the circular of Mr. Meredith recalled at the earliest possible moment. The effect of the law so officiously invoked was soon felt, and may be shown as follows: —

THE ENGLISH VICTORY, 1849 TO 1853.

Year.	Imports in Vessels.		Carriage, per cent. American.	Exports in Vessels.		Carriage, per cent. American.
	American.	Foreign.		American.	Foreign.	
1849	$120,382,157	$27,475,287	81.4	$100,533,123	$45,222,697	68.9
1850	139,657,043	38,481,275	77.8	99,615,041	52,283,679	65.5
1851	163,650,543	52,574,389	75.6	152,456,689	65,931,322	69.8
1852	155,258,468	53,038,388	74.5	139,476,937	70,181,429	66.5
1853	191,688,225	76,290,322	71.5	155,028,802	75,947,355	67.1

In four years we lost of import carriage 10 per cent., and of export carriage 2 per cent. That so much more of import than of export carriage was lost came about by British vessels competing with our own in the ports of foreign countries, which they could not do before the Meredith circular was issued. In the period above, our shipping increased its business 59 per cent., but foreign vessels (mostly British) added to their traffic 177 per cent., exactly three times the gain of our own. British tonnage arrivals alone increased 70 per cent. In seven years' time, from 1846, our government gave away to foreigners 9.1 per cent. of export carriage, and 15.6 per cent. of im-

port carriage, to prove what, — its liberality, or its folly; its hardness towards citizens, or softness towards aliens?

British Lloyd's Action. In 1850 the British act of 1849, permitting the registry of foreign-built vessels, came into force. It has been generally supposed that the English began immediately the purchase of our superior ships, but they did not, owing to a simple misinterpretation by Lloyd's inspectors of a rule for fastening. They condemned locust wood for tree-nails in high-class ships, compelling any British owner who wished to avail himself of the "free-ship" act, by buying American-built vessels, to wholly *re-treenail* a ship with *English oak*, or submit to a low insurance class at Lloyds. This arbitrary and unfair inspection lasted until 1854, as may be seen from our statistics of "tonnage sold foreign," partly given in the table following.

We sold nearly as much tonnage in the four years before the British act of 1849 as during the four years after it. But we sold more from 1826 to 1829 than in the period from 1850 to 1853 inclusive. Manifestly the Lloyd's Society practically vetoed the act of Parliament.

TONNAGE SOLD FOREIGN.

Before "Free-ship" Act.		After "Free-ship" Act.		Period of 1826 to 1829.	
Year.	Tons.	Year.	Tons.	Year.	Tons.
1846 . . .	10,932	1850 . . .	13,468	1826 . . .	13,994
1847 . . .	16,969	1851 . . .	15,247	1827 . . .	19,043
1848 . . .	12,456	1852 . . .	17,921	1828 . . .	14,678
1849 . . .	12,621	1853 . . .	10,035	1829 . . .	14,093
In four years	52,978		56,671		61,808
Yearly average	132,44		14,167		15,452

This restraint of trade is cited to illustrate the working of the British Lloyd's inspection system as a protective medium. Its object was twofold: first, to benefit British shipping by classification in a register of special reference for a large majority of underwriters; second, to rate as inferior to British such foreign vessels as traded to British ports, grading the

latter as if built of bad or short-lived materials, with poor workmanship and defective fastenings; of course, to be avoided by shippers and underwriters everywhere, even in the United States. At the time this effective policy was set to work, the American ship in the foreign trade deserved and bore, among fair-minded men, the name of the best of any on the sea. British shipping, by honest English writers, was said to be the slowest and most unsafe of all the nations.[1] It was the work of Lloyd's to change this poor repute, to set up rules and claim character which should give British tonnage preference for employment; conjointly, to cast down a reputation by which alone American ships could possibly compete for the carriage of British cargoes, or hope to keep the sea in our own trade.

THE TIDE OF THE FIFTIES. TONNAGE STILL RISING, CARRIAGE FALLING, 1851 TO 1855.

YEAR.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1851	1,544,663	6.47	18.22	75.6	69.8
1852	1,705,650	6.93	17.18	74.5	66.5
1853	1,916,471	7.50	19.60	71.5	67.1
1854	2,151,918	8.18	22.16	71.4	69.3
1855	2,348,358	8.63	19.72	77.3	73.8
Average . .	1,932,212	7.54	19.37	74.06	69.3

We are now to consider the most interesting period in our shipping history. The commerce of the world, feeling the excitement of mining for gold in California and Australia, was rapidly increasing, and many events and circumstances favored the employment of American vessels rather than those of foreign nations. If the time was ever, since our shipping was stripped of protection, that it could be expected to prosper under free trade, then the period before us is the time. The advocates of "reciprocal liberty of commerce" promised that it

[1] A. F. B. Creuze, in his treatise on Naval Architecture, 1841. He was then the surveyor-general of Lloyd's, and had been from the beginning. He mentioned it as a "startling fact that one ship and a half is the average daily loss registered on the books of Lloyd's."

would lead to the extinction of foreign carriage in our commerce. In this prosperous period was the golden opportunity for the realization of their delusion. But what was the fact? The percentage of American carriage fell to a lower average point than it had ever touched before, even in the war period of 1811–15. Not only so, but in 1853 and 1854 our import carriage declined to the lowest mark occupied since the war of 1812, or the early days of 1792. In 1855 the decline was arrested, and the following year it was almost at a stand.

All through the period we were gaining moderately in tonnage and in per capita measurement, but increasing disproportionately in commerce. Foreign merchants and alien shipping made most profit from the growing trade; which, however, fell short of the *per capita* of the periods before the war of 1812. The increase of tonnage, fast as it was, averaging 7.5 per cent. annually, was too slow to keep up with our galloping commerce. Of course, foreigners took their opportunity, seized our trade, held it, and now think it theirs. Had we never thrown our fences down, then had we owned the ships, had the merchants, and gained the capital to have held our heritage ourselves. But our shipping was to reap as our statesmen had sown, — a vanishing crop.

Subsidy Protection. In accounting for the growth of our marine from 1850 to 1855, we should bear in mind we had then several lines of subsidized steamers performing the ocean postal service. But for this slim protection, foreign nations would have cut much faster into our carriage, particularly in import trade. The subsidy protection to American steamers, first authorized in 1845, but retracted in 1858, was beneficial while it lasted, — for about ten years, — though the sail-ship interest complained to Congress, and wanted it abolished at home and abroad.

Adventitious Aids. As employment is the object of protection, whatever secures work with fair pay affords preservation and safety. Adventitious aids may be quite as helpful as governmental acts, but in the shipping business the former are transitory and soon disappear. The following are some of the chance succors and supports of the period discussed: —

Under the stimulus of increasing trade, due to gold production, the several sailing transatlantic packet lines were increased in number.

Sailing "clipper-ships" were built for nearly every trade, the improved speed, increased size, and superior sea qualities insuring them preference for freighting and insurance, especially in the Californian, Australian, and East Indian commerce.

From 1853 to 1856 the Crimean war was waged between Russia and England, France, and Turkey, increasing insurance rates on the shipping of the belligerents, and requiring American, as well as their own, tonnage in the transport service, this being before the time of freighting steamers.

All through the period an unparalleled emigration took place from Europe to the United States, and from the eastern States and other parts of the world to California and Australia, making the passenger trade, in its extent by sailing ships, an historical wonder. The unfavorable events were few, chiefly the following: —

Active British Intervention. In 1852 the British government increased the subsidy of the Cunard line (New York to Liverpool) from $725,000 to $850,000 annually, enabling the Cunard Company to build and run larger postal steamers, and to start freighting steamships.

In 1854 the British Lloyd's Register Association raised the insurance rating of iron-built vessels to double its previous figure, namely, from six to *twelve* years A 1, if built by the rules then laid down. These rules provided for building A 1 iron ships of three grades: the first, to rate for *twelve*, the second, for *nine*, and the third, for *six* years; and have been lauded as "celebrated" by British writers. The object of this appreciation of the iron ship was to make her the standard bottom, and especially the British ship, of all future time.

Wooden ships, for the want of native timber, could not longer be produced in sufficiency for the marine, or safety to the maritime defense. England, with all her wealth, could not afford to buy her ships abroad, as her free-ship law of 1849 provided she might do; least of all, would she dare become dependent on her rivals for timber or for ships. Hence, as we have seen, the Lloyds vetoed the act of 1849; and, having a will, made a way to mine materials and build at home a truly British vessel. England was then, as now, the "iron country." The United States, par excellence, was the country for

wooden ships, of which we built the best in the world. It would never do for England, the ruler of one fourth the land and almost all the sea, to give up building vessels. Shipbuilding is a military art. The nation that would rank and rule the world *must* build her own ships.

Iron shipbuilding, for ocean navigation, began in 1838. The first sea-going iron bark, if existing in 1854, was aged but sixteen years then. Only a few vessels were twelve years old when the Lloyd's Association, without full experience, raised the rating to that term.

The Substitution of Iron for Wood. For British vessel-building, the substitution of iron for wood was a state necessity, rather than a mechanical preference. The relative merits of wood and iron scarcely cut any figure in the adoption of the policy to make metal the British ship material. No enactment was required, for the Lloyd's rules are boasted of in England as having "all the force of a law of Parliament." But the government provided for an iron navy, and saw to it that no more mail subsidy contracts were given to wooden steamers; which, under the free-ship act of 1849, might be built in the United States. The safety and the good of the nation demanding the change from wooden to iron ships, the Lloyds quickly settled the question of "substitution." Their fiat went forth. It would benefit Britain, and hurt the United States, most of any nation, to change its ship material. The Lloyds could and would, therefore, compel a change, or the payment of discriminating premium rates for insurance on both ships and cargoes. Soon this policy, first applied to aid the British steamers in running off our sailing packets, was put in action against our wooden vessels, to force them out of use and secure their work for British iron ships and steamers.

Thus came about the vaunted but miscalled "substitution of iron for wood." By the discrimination of the Lloyds, the building and running of wooden ships, in other words, the rivalry of the United States, was put in a way to be disposed of. On the other hand, the building and running of iron ships, otherwise the ascendency of England, could and would become assured. In all this strategy and craft, there was for our rival the best protection a nation's shipping ever had.

Having by their protective policy made sure that the pur-

chasing of foreign-built wooden ships would be temporary, the Lloyds admitted locust treenails, condemned in 1850, to an equality with "English oak," and British owners, in 1854, began buying American ships. Meanwhile, the wood builders of England changed trade, and, with the iron builders, went into the production of an iron marine.

Decline of the Fifties. Both the subsidy policy of the British government and the discriminative insurance practice of the Lloyds were means and deeds in contravention and violation of the principles of "reciprocal liberty of commerce," then, and now, erroneously supposed to govern the commercial intercourse of England and the United States. It is a just complaint, that their protective measures were and are unfair. They have robbed freedom of equality. Had our nation been the offending party, it would not have taken half a century for the world to learn that fact. Our government should have insisted on fair play, and the restoration of equated footing for our marine at least forty-five years ago. And it is a fact, that thirty-three years ago the shipowners of New York and Boston remonstrated before Congress in vain against the continued sufferance of the British subsidy system.

BRITISH STEAMERS WIN, 1856 TO 1860.

YEAR.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1856	2,302,190	8.19	22.83	78.1	70.9
1857	2,268,196	7.83	24.33	71.8	69.2
1858	2,301,148	7.72	20.27	72.0	75.0
1859	2,321,674	7.58	22.73	63.7	69.9
1860	2,379,396	7.58	24.27	63.0	69.7
Average . .	2,314,520	7.78	22.88	69.7	70.9

In this period remarkable events occurred. One was strange indeed, — the discontinuance by Congress of our subsidy protection to postal steamers, coupled with the taking of no measures at all for the desistance of Great Britain from her subsidizing course. By this act of desertion, Congress turned its back

on steam navigation under the American flag in the foreign trade. A bill was passed June 14, 1858, giving "the sea and inland postage," in lieu of the subsidies authorized in 1845, 1847, 1852, 1854, and 1855. This measure was first proposed in 1853. Its promoters finally succeeded; and in less than three years' time were living under a brand-new constitution, fighting valiantly for a new flag. This fact alone lights up the character of their legislation. Aiming ostensibly at "economy," they abandoned our steam navigation interest, which should now rival that of England, to the odds of the British treasury, and gave up to the British flag not only the carriage of our mails, passengers, and fine goods, but our opportunity at sea.

It had been proved, both before and after Collins's line started, that it would be impossible, without protection of some kind, to run American steamers in competition with foreign, supported by protection as the British lines were. Even on routes where opposition had not developed, it was impossible to find adequate support for lines destitute of government aid. Commodore Vanderbilt, the best steamship manager of the time, had tested transatlantic steam navigation without protection, and found it ruinous. After the passage of the act, he tested it for "sea and inland postage" pay, and satisfied himself that there was no money in the business. When he withdrew his vessels and quit the sea, his comment was, that "3 per cent. capital can always beat 6 per cent." A comment of this kind will apply to labor as well as capital.

But history has an earlier illustration of the working of subsidy protection to sustain a line and help beat off its competitors, which may well be given here.

Experience of the Steamer United States. The first American steamer attempting to rival the British on the route from New York to Liverpool was the United States, built in 1846–47, and owned chiefly by William H. Webb, then the foremost shipbuilder of New York. She made but one round trip, and then seemed to disappear.[1] The British were greatly pleased with Cunard's success in getting rid of a Yankee rival. Brit-

[1] On her return to New York, the steamer United States was sold for a good price to the Prussian government, just then in want of a steam frigate, into which she was converted by her builder.

ish writers, even of the present day, have expressed their pleasure that the "United States did not pay," and had to haul off beaten. This was what happened: —

While the United States was unloading, and before she was ready to receive return freight, the Cunard Company put down their rates 50 per cent., — from £8 to £4 per ton, — and notified the public that their steamers of the "Royal Mail Line" would accept freight at this reduced rate so long as the United States laid in port. Their subsidy from the British treasury enabled them to do this, of course, to the loss of the United States, — the nation as well as the ship. It was for this purpose the Cunard subsidy was sought and given. The fact was, the British government had determined on introducing transatlantic steam navigation, and they put forward Edward Cunard to run and maintain it with our country. The British government was really the principal, and Cunard the agent, in driving the steamer United States off the Liverpool route. But had there been then, as before 1815, the old system of protection by discriminating tonnage dues and tariff duties, the United States could have commanded living freights in Liverpool, and with other American steamers could have gone on the route, and stayed. As it was, none but subsidized steamers could go on, and stay long. Mail subsidy is a kind of protection. Cunard succeeded because he was protected, as Collins did also for the same reason, when he tried the route after Webb failed for want of protection. When Collins put on his line in 1850, as highly subsidized as Cunard's, the latter line seemed not so much in haste, as in the case of the United States, to reduce the rates of freight, but these soon declined 50 per cent. Thus, the subsidizing of Collins's line saved to American consumers *one half* of the freight on steamer imports paid formerly to enrich a foreign line. Besides this saving, there were the receipts from foreign mails. Really, the naval power, derived from our protected steam-marine, — what we had of it, — cost the country nothing. But its offense was not its cost; that was its existence.

Remarks on the Period of 1856 to 1860. Returning to the period of 1856–60, there were other acts of Congress than that of 1858 that were hurtful to our shipping interest. In 1857 laws were passed for tariff reduction, and for extension of

bonded warehouse *time* for the payment of duties, — two acts directly in the interest of foreign manufacturers, their agents, and their ships. So was the *panic* which followed their passage in a few months' time. In 1856, such was the success of our steam and clipper ship lines, there was a gain of nearly one per cent. in import carrying; but in 1857 there was a loss of 6.3 per cent., from the action of the laws above referred to, — the same as from similar acts in 1846, as already noted. In 1858 we held our own in import carrying, and gained 5 per cent. in export; but in 1859 there was a loss of 8.3 per cent., followed, in 1860, by a loss of seven tenths of one per cent., making in two years a total of 9, and in four years an aggregate of 15.1, per cent. of import carriage that has never been recovered. And this was while sailing ships did the greater part of the import trade, there being only a few cargo steamers and no "tramps" in existence; and, moreover, in a time of very low or scant tariff for revenue only.

The foreign competition was much severer in this than in the former period. The Crimean war was over. Many British steamers and clippers, released from transport service, entered our trade. Foreign merchants increased in number yearly, taking the places vacated by Americans, whose houses were broken up by the crisis and panic of 1857, and last, but not least, the discriminative insurance rates against wooden shipping.

The chief thing remarkable about the export carriage is the large increase of 5 per cent. in 1858. The cause for this was doubtless the fact that the British had a war with China from 1856 to 1861; and in 1858 a rebellion occurred in India, calling off clipper ships in the transport business around the Cape of Good Hope. In 1859, also, the Franco-Austrian war took place, increasing our commerce and employing our ships to some extent.

These events and circumstances gave an adventitious protection to our shipping in the export trade, the opposite of the exposure in the import traffic, and we lost but little of export carriage during the period. Many British sailing vessels were drawn off from competition with our own during the greater part of the time. Our own merchants, who had been fast losing the import trade, largely from the operation of the ware-

house act of 1846, still controlled the export traffic, preferring ships and underwriters of our own.

During the period we made a good average in commerce, having a glut of imports in 1857, and a sharp decline in 1858, which was only recovered in 1860. But neither in 1857, nor in 1860, did we reach the extent of commerce per capita enjoyed from 1795 to 1807 inclusive. We gained slightly in tonnage, in the absolute; but in shipping per capita, fell off 12.16 per cent. The culmination of a period of 38 years was 8.63 cubic feet per capita, in 1855; but then we were decidedly on the down grade in our share of carriage. Comparing the period of 1856–60 with that of 1826–30 we find in 30 years an average loss in import carriage of 23.76 per cent., in export carriage of 15.88 per cent., and no prospect of recovery, while the conditions brought about by free-trade legislation continued adverse, and changed betimes from bad to worse.

CHAPTER IX.

EFFECTS OF THE WAR AND FREE TRADE SINCE.

1861 to 1891. We now come upon the period of ruin. During the war for the Union, for the want of adequate *naval* protection, our shipowners sold abroad 800,000 tons of our best shipping, worth in the aggregate $40,000,000. In addition, we had sunk, burnt, and destroyed, by British-built Confederate cruisers, about 80,000 tons, mostly with cargoes, valued together at $10,000,000. Thus, 40 per cent. of the tonnage engaged in our foreign trade, and a capital of $50,000,000, were driven out of our shipping business or destroyed, for want of a proper navy. None of these vessels returned to our flag, as the owners of many of them desired, because Congress, controlled by inland members whose property could not be reached by cruisers, refused to permit this help to our stricken marine.

The war began in 1861 and closed in 1865. In these four years we lost an average of 38 per cent. of the total carriage. In the climax period (1826 to 1830), the proportion of American to foreign, in the foreign trade, averaged for imports, 93.46 per cent., for exports, 86.78 per cent. Comparing by this standard up to the war, and also to its close, we lost of total carriage as follows: —

LOSSES BEFORE THE WAR.

Import carriage	33.46 per cent.
Export carriage	14.68 per cent.

LOSSES DURING THE WAR.

Import carriage	30.1 per cent.
Export carriage	46.0 per cent.

The British rejoiced at the losses of their "kin beyond the sea," but it vexed their government to feel obliged, because the

Confederacy did not succeed, to pay for their amusement and its own bad faith $15,500,000. This trifling sum included no compensation at all for the injury sustained by our mercantile interest that was broken up and dispersed, nor to the national welfare that was undermined and assaulted, to the gain and advancement of the British nation. It did not make up the losses of ships and cargoes. The first ship destroyed —the Yorkshire, belonging to William H. Webb, of New York, misreported as the "Yorktown"—has not been paid for. She was sunk in the night, and all hands lost. The American insurance companies, some of them severely injured by efforts to protect our shipowners and merchants, have not been paid a cent, though equitably entitled to their claims. The "Alabama Claims Award" was only a nominal damage assessment. It was a great bargain for the mother country, and was submitted to because we had no (naval) power to enforce full satisfaction.

PERIOD OF THE WAR, 1861 TO 1865.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1861	2,494,894	7.76	18.19	60.0	72.1
1862	2,173,537	6.62	13.28	44.8	54.5
1863	1,926,886	5.75	17.46	43.3	40.0
1864	1,486,749	4.35	19.61	24.6	30.0
1865	1,518,350	4.36	17.36	29.9	26.1
Average . .	1,920,483	5.76	17.18	40.52	44.54

During the war the export trade passed rapidly into foreign hands and foreign steamers. Under the conditions existing then, many merchants sold their vessels, and quit the shipping business. With our southern ports blockaded, commerce necessarily fell off, but the loss of tonnage was much greater in proportion. The vacuity from this loss was mainly supplied by British iron screw steamers. A great impulse was given to the building of these "cargo" vessels by the discriminative rating and insurance of the Lloyds, as heretofore noted. But

in 1862 the "Underwriters' Association" (of Liverpool), now a branch of Lloyd's, increased the rating of iron ships to twenty years A 1. By this trick of classification, nearly all the tonnage in the "Red Book," as the iron ship register was called, would insure at the lowest rates, for hull and cargo, while the vessels floated, for few would last as long as twenty years. In view of such an exaggerated rating, a wooden ship, at ten years A 1, stood nowhere in comparison.

The Impulse of Peace. With the ending of the war, our merchants and shipowners remaining in trade set about redeeming their fortunes. Some of them desired to bring back under our flag the vessels which, for want of naval protection, they had sold abroad. An act of Congress prevented this return of tonnage. Others wished to build ships to replace their lost property. A law of Congress had added an internal revenue tax to the cost of the vessel. These were mistakes of Congress that hindered the work of restoration and reconstruction. It was unwise, thus to discourage our shipping interest. It had received no protection for years, in peace or war, while it had helped more than any other trade to preserve the Union. This great fact should have been considered. A true view of the relationship of shipping to military strength, and therefore of the duty of the government towards the marine, may be found in the following extract from a speech by Senator King, of New York, March 15, 1822: —

"Navigation and maritime industry, for a peculiar reason, call for national protection; for the art of navigation is an expedient of war as well as of commerce, and in this respect differs from every other branch of industry. Though it was doubted, doubt no longer exists, that a navy is the best defense of the United States. And this maxim is not more true than that a naval power never has existed, and never can exist, without a commercial marine; hence, the policy of encouraging and protecting the ships and seamen of the United States."

An Effort of Congress. The impulse of peace did but little for the shipping interest, and it did that little without thanks to Congress, for Congress undertook to do something, but did nothing.

THE STRUGGLE TO RISE, 1866 TO 1870.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1866	1,387,756*	3.91	28.47	25.1	37.7
1867	1,515,648	4.18	24.28	28.0	39.1
1868	1,494,389	4.06	23.02	33.0	36.6
1869	1,496,220	3.97	23.25	31.3	34.9
1870	1,448,846	3.76	25.76	33.1	37.7
Average . .	1,468,571	3.97	24.95	30.1	37.2

Late in the period a congressional committee was appointed to hear representatives of the shipping interest, to study the shipping question, and bring in a bill for its solution. This committee, headed by Mr. Lynch, of Maine, went through the seaboard cities investigating, what was then called by some, "the decadence of commerce." As the evils experienced were misunderstood, the inquiry of the committee was misdirected. The mistake was, we had an increasing commerce, but, as Mr. Jefferson once distinguished the sort that we had, it was passive, and not active, — carried in foreign and not American bottoms; in point of fact, our rivals and enemies seemed to have nearly full possession of our trade and transportation over the ocean.

Unfortunately the Lynch committee never caught sight of the true cause of our shipping decline. They thought it resulted wholly from the war. They took no note of the decline before the war. This was, for import carriage, 83 per cent., and for export carriage 45 per cent., of what was lost during the war. The committee seemed not to know that the "reciprocal liberty of commerce," with other liberal measures of Congress, had given our marine dose after dose of gall and wormwood and deadly bane, before the war broke out. It gave but little attention to the character of our commerce and carrying-trade, and too much to the state of shipbuilding and the *cost* of ships. Now it was not a problem of shipbuilding, or of cheaper ships, that faced our country in what is called

the "shipping question." If ships or steamers were given to American owners, they could not run them in fleets gainfully, against subsidized, bounty-paid, insurance-protected, cheaper-manned vessels of the European nations, except on equated footing or protection in getting employment.

It was a great misfortune that the Lynch committee mistook its work, and so mistaught the country. To the present time, many among us believe that cheaper building, or trashy ships bought abroad, would solve our shipping and sailing problems.

Cheapness cuts no figure in true shipping economy. It is *employment* that is wanted, and not a small investment. Cheapness is largely an index or expression of quality. Nobody prefers for employment a cheap ship. The chances for charter, as for insurance, are better for costly ships than for cheap ones. Here is the reason why protection, national, associational, or adventitious, is better than cheapness, and at the present time indispensable for an active commerce. Without protection, our shipowners, generally, cannot get or hold profitable employment. With foreign merchants doing our trade, competition with foreign shipping arouses national prejudice, and fails to make engagements.

Of this fact, the history of our marine for sixty years past is one continued illustration. Here is a case plainly in point, showing the adverse power of the British Lloyds over the employment of American ships: in 1865, the year in which the war closed, our percentage of export carriage was down to 26.1; in 1866 it bounded up to 37.7 per cent., and for the period of 1866–70 held an average of 37.2 per cent. The year 1865 had an import carriage of 29.9. This fell to 25.1 in 1866, but in following years recovered, and the period of 1866–70 averaged 30.1 per cent.

Apparently, we were recovering lost ground, and through the wisdom of the Lynch committee and the aid of Congress, possibly, we were destined soon to see our marine restored, and for future time protected.

The Lloyds Degrade our Ships. There had been a great increase of commerce — about 31 per cent. — over the preceding period. The greater part of the gain was in exports, and English shipowners thought too many cargoes were carried by our wooden sailing ships. From 1854 to 1870 these had

been admitted to classification, with a disparaged rating, in British Lloyd's Register. They were subject to discriminative insurance rates, both on hulls and cargoes, and obliged to carry freights at the lowest rates, or when too low to pay, to lie up idle. In 1870 the Lloyds refused to class and register "foreign ships," except for a single year at a time. This new discrimination, intended to stop the British purchasing and chartering of wooden ships, was aimed especially at American shipping business, then as now, asking Congress for the recognition of its rights. For the six years following 1870 our vessels were shut out practically from the British Lloyd's Register, depreciated, disparaged, degraded, and decried, for English, or even American business. In 1864 our average proportion of carriage in the freighting trade had fallen to 27.5 per cent. In 1870 it had risen to 35.6 per cent., a gain of more than 8 per cent. in seven years. The object of Lloyd's action, dictated by British owners, was to interrupt this little thrift, to hinder future growth, to stamp out our hope of better times, and force our people to "give up the ship and quit the sea." British merchants were not to freight our ships except at the lowest rates. British underwriters were not to insure their cargoes except at the highest rates. It was a part of the scheme, by the help of active agents in the United States, to prevent the revival of our shipbuilding through the passage of a "free-ship" bill, then, and ever since pending, or threatened in the House or Senate. In short, its object was to drive our wooden ships — the best sailing vessels ever built — out of the transatlantic grain and cotton trades, and ultimately to work extinction of our flag in the British ports.

The table below shows how well the Lloyds attacked. In three years our export carriage fell off 12 per cent., and in five years 14 per cent., in consequence largely of their well directed assault. Import carriage was likewise affected, falling off 4 per cent. in five years. Meanwhile commerce per capita increased from an average of $24.95 to one of $30.16, a gain of more than 20 per cent. in the period. Tonnage in foreign trade fell off.

Other adverse circumstances were these: the opening of the Suez Canal, in 1870, enabled British tramp steamers to grasp our China trade, hitherto conducted by sailing ships *via* Cape

Horn; bank expansion in 1871–72, and panic following contraction in 1873, in which year Congress discontinued the ocean mail subsidy given at the close of the war to the Pacific Mail Steamship Company and other foreign-going lines.

EXPORT EMPLOYMENT BEATEN, 1871 TO 1875.

YEAR.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1871	1,363,652	3.45	28.70	31.0	32.6
1872	1,359,040	3.37	30.80	26.8	29.8
1873	1,378,533	3.33	32.42	27.0	25.7
1874	1,389,815	3.27	30.88	30.2	24.6
1875	1,515,598	3.48	28.00	29.2	23.7
Average . .	1,401,327	3.38	30.16	28.8	27.3

Favorable events were few indeed. The principal were the building of a line of iron steamers to run from Philadelphia to Liverpool, which, for want of protection, never grew or prospered, and finally had to cease running as an American line. The building of coastwise lines of iron steamers, of which we now have the best in the world, offers a signal contrast to this defeat. The coasting steam lines all live and thrive, because they are protected from foreign competition, and only compete with one another and with railway lines.

Continued Shipping Decline. The continued decline of our ocean freighting cannot be better illustrated than by a comparison with the carriage of our conquering rival. In 1855 the British shipping in our trade, sailing from the United Kingdom, constituted 18 per cent. of the whole tonnage so engaged. American shipping constituted 79 per cent.; the balance belonged to other nations. In the statement following, the British gains and American losses clearly appear: —

Tonnage in American Trade.	1855.	1865.	1875.	1885.
British percentage	18	65	70	84
American percentage	79	26	9	10

The boast of the London "Times," that "the ground lost by the shipping of the United States has been occupied mainly by shipping of our own," is all too true. The following table shows the slow but sure

RETROGRESSION FROM 1876 TO 1880.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1876	1,553,705	3.46	25.51	30.8	25.4
1877	1,570,600	3.41	25.95	31.5	23.7
1878	1,589,348	3.36	25.59	32.2	22.6
1879	1,451,505	3.00	24.60	31.6	17.6
1880	1,314,402	2.62	32.21	22.0	13.7
Average. .	1,495,912	3.17	26.77	29.62	20.6

The only redeeming feature of this period is a gain of import carriage of .75 of one per cent., owing, no doubt, to the action of the free sugar treaty with the Sandwich Islands. Against this gain we suffered an average loss of 6.68 per cent. of export carriage, largely in consequence of British insurance discriminations against wooden (American) ships. In 1879–80 the resumption of specie payments took place, but seems to have done no good for our marine, like the several little "relief" acts passed from time to time in the last twenty years.

In the single year of 1880 we lost: —

Of export carriage . . . . . 3.9 per cent.
Of import carriage . . . . . 9.6 per cent.

In four years we lost: —

Of import carriage . . . . . 8.8 per cent.
Of export carriage . . . . . 11.7 per cent.

And in five years, shipping per capita fell off nearly 25 per cent. Our British rivals, controlling the shipment and underwriting of grain, provisions, and cotton in the transatlantic trade, had drawn the lines closely by 1880. Scarcely a cargo could be obtained by an American vessel for a British port,

while a single British ship awaited charter. Competition did not compete, simply because British ships had the preference, from the British merchants and underwriters who ruled the traffic.

Pacific Coast Trade. The principal stay to the utter collapse of our carriage in the foreign trade has been the development of our Pacific coast commerce. The grain and lumber trades have done splendidly; and the business between the Atlantic and the Pacific, around Cape Horn, has continued sustaining for our large vessels. In the period following, commerce per capita shows the principal falling off. We actually recovered some of our lost import trade, and nearly held our own in export. Tonnage also held on remarkably, but was idle much of the time.

SLACKING OF THE TIDE, 1881 TO 1885.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1881	1,297,035	2.51	32.52	19.9	13.3
1882	1,259,492	2.38	29.59	19.2	12.8
1883	1,269,681	2.33	29.51	20.7	13.4
1884	1,276,972	2.28	27.06	22.4	14.4
1885	1,262,814	2.20	24.48	21.3	13.7
Average . .	1,273,198	2.34	28.63	20.7	13.52

In 1881 a great crop of grain was produced in California, and the markets of Europe stood in need of it all at good prices. Our sailing ships were well employed, and for a few years did fairly for their owners. In 1881–82 many of our wooden ships at San Francisco received higher rates than British iron vessels sent out from England. From an investigation of sailing-ship performance, in the California and European trade, covering a four-year period,[1] it appears that the average difference in rates of freight in favor of British iron, and against American wood, ships was: —

[1] See Chapter XVI.

Year.	Per cent.
1881–82	4.75
1882–83	13.0
1883–84	17.1
1884–85	14.9

In proportion as the California grain trade has enlarged, the merchant shipowners of Great Britain have managed to engross the carriage of it. The rates of freighting and price of cargo insurance are such as British merchants and underwriters agree to make. In both of these transactions a severe discrimination has been applied for the purpose of handicapping our vessels. The year of 1883–84 opened in July with an average freight discrimination of 23.84 per cent. In August it was 19.66; in September, 12.06; in October, 19.80; in November, 37.70; and in December, 45.5 per cent. in favor of British iron tonnage. For more than two months following, not a single American ship effected an engagement. In the next and following years the same course was taken to freeze out our shipping.

Nearing Low-Water Mark. Lest it be supposed there are other reasons than the protection of British shipping for the institution and maintenance of the Lloyds' policy, let us look to the practice of American underwriters. As a rule, the insurance companies of the United States, from the first, have not set up distinctions in favor of risks on iron vessels, nor any discrimination to bias the choice of wood or metal for ships. As to rates on hulls, our most experienced insurance manager declares: —

"First-class wooden ships, steamships as well as sailing vessels, are insured with us at as low rates of premium by the year as iron ships and steamships."

In our foreign commerce alone does the British rule of discrimination prevail. This is one thing in the Atlantic and another in the Pacific trade. At the present, and for some years past, sail-vessels of iron and wood, if "approved," have had cargoes covered on the Atlantic at about equal rates. If any difference, it is small, and applies to the older vessels of wood. But there is a discrimination of 50 per cent. in favor of steam vessels. On the other hand, in the California grain trade, the iron steamer is given no discriminative favor, but rates on cargoes by steamers to Europe are the same as for iron

sailers. The meaning of this is that the British policy is shaped to drive our wooden sailing ships out of short voyages with iron steamers, and out of long voyages with iron sailers.

THE EBB TIDE STILL RUNNING, 1886 TO 1890.

Year.	Tonnage in the Foreign Trade.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.	
				Imports.	Exports.
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.
1886	1,088,041	1.81	23.80	20.0	13.6
1887	989,412	1.63	24.89	18.6	12.2
1888	919,302	1.48	24.60	18.5	11.7
1889	999,619	1.57	22.37	17.08	11.62
1890	928,062	1.45	25.73	16.60	9.03
Average . .	984,887	1.58	24.28	18.15	11.63

We have now neared the end. Except a slight gain of tonnage in 1889, there is no sign of life in the table above, but a preponderance of proof that recovery is unlikely under the conditions prevailing. The gain in tonnage is more seeming than real. It chanced that in 1889 more than the usual number of vessels were temporarily employed in the foreign trade. The following table will explain the fact, that our figures for tonnage in foreign trade do not stand for the amount constantly employed. What that is cannot be given with accuracy.

The following statements show the permanent, temporary, and equivalent to permanent tonnage in the foreign trade, for the years named, whaling vessels excluded: —

STATEMENT OF SAIL AND STEAM TOGETHER.

Year.	Total permanent and temporary.	Constantly employed, or permanent.	Briefly employed, or temporary.	Equivalent to permanent.
	Tons.	Tons.	Tons.	Tons.
1884	1,276,971	934,262	342,709	991,402
1885	1,262,814	909,520	353,294	963,381
1886	1,088,040	793,065	294,945	842,252
1887	989,411	724,169	265,242	768,376
1888	919,301	659,600	259,701	702,883
1889	999,619	685,877	313,742	738,167
1890	928,062	669,751	276,944	715,908

The loss of tonnage permanently employed has been 27.32 per cent. in six years. The loss of tonnage equivalent to permanently employed has been 27.78 per cent. The average loss has been 27.52 per cent., or at a rate of 142 tons daily, 1,000 tons weekly, and 52,033 tons annually. In 1889 the small gain of 3.4 per cent. came mostly from tonnage in coasting trade temporarily employed in the foreign trade. The time this tonnage is employed in the foreign trade is closely estimated as an average of two months in each year.

A part of the gain in 1889, mostly lost in 1890, was from an increase in steam tonnage, in which there has been a variable gain for the past twelve years; but not sufficient to compensate the losses for a previous term of twelve years, as will be seen from the following table: —

REGISTERED STEAM VESSELS.

Year.	Tons.	Year.	Tons.
1868	221,939	1880	146,604
1869	213,252	1881	152,769
1870	192,544	1882	154,570
1871	180,914	1883	171,905
1872	177,666	1884	184,188
1873	193,423	1885	186,406
1874	195,245	1886	176,633
1875	191,689	1887	173,571
1876	198,227	1888	183,398
1877	190,133	1889	194,471
1878	170,838	1890	197,630
1879	156,323	1891	239,994

The registered steam tonnage reckoned as permanently in the foreign trade,[1] and the sail tonnage computed as equivalent to permanently employed, are as follows: —

Class.	1884.	1885.	1886.	1887.	1888.	1889.	1890.	1891.
Steam	184,187	186,405	176,633	173,570	183,397	194,471	197,630	239,994
Sail	807,194	781,998	665,619	594,806	519,486	543,696	522,802	486,751

From this comparison it appears that the loss of sailing ton-

[1] Probably 10 per cent. of registered steam tonnage is in domestic trade.

nage employed in the foreign trade has been 35.23 per cent. in the past six years. As might be expected, this waste of 6 per cent. annually has fallen mostly on the long-voyage trades to distant ports. These are the trades requiring the best vessels. To maintain fleets of them, it is necessary to build new tonnage of the first class every year. This has not been done, for want of protection to their employment. In a few years more, unless we apply a remedy for the decay so plainly apparent, we shall have only a very few sailing ships fit for a voyage around the world. One or two only are in building now.

Decay of American Carriage in California Trade. The proportion of American to foreign ships engaged in the wheat trade of San Francisco each year for the past nineteen years is shown in the following table: —

Year.	American.	Foreign.	Total.	American percentage.	Year.	American.	Foreign.	Total.	American percentage.
1872–73 . .	136	203	339	40.11	1882–83 . .	169	202	371	45.55
1873–74 . .	91	156	247	36.84	1883–84 . .	81	210	291	27.83
1874–75 . .	62	203	265	23.39	1884–85 . .	116	255	371	31.26
1875–76 . .	82	92	174	47.12	1885–86 . .	88	161	249	35.34
1876–77 . .	94	213	307	30.61	1886–87 . .	55	227	282	19.54
1877–78 . .	50	59	109	45.87	1887–88 . .	33	165	198	16.66
1878–79 . .	83	186	269	30.55	1888–89 . .	60	229	289	20.76
1879–80 . .	113	160	273	41.39	1889–90 . .	55	229	284	19.36
1880–81 . .	132	224	356	37.07	1890–91 . .	52	213	265	19.62
1881–82 . .	154	405	559	27.54	1891–92 . .	39	234	273	14.24

In the six months ending January 1, 1889, but nine American vessels sailed in this trade, and they carried their cargoes at an average rate of 22 per cent. less freight money than was paid to 108 British ships that sailed in the same time. Such is the killing result of competition under the handicapping which protects British shipping. That we submit to it, tamely lie down under it, and do nothing to restore fair footing and secure fair play, is not flattering to our national pride. It is positively disgraceful.

Review of Losses from Unfortunate Legislation. It is in order now to epitomize and bring into one view the losses following the legislation which is known to have been hurtful to

our shipping in the foreign trade. The table below supplies this information. It should properly begin with the act of March 3, 1815; but, for the sake of comparison, the acts of Congress during our difficulties with Great Britain for eight years prior are included.

LOSSES EXPERIENCED.

Date of Act and Time of its Effect.	Proportion of Loss in Shipping per Capita.	Proportion of Loss in Carriage of Imports.	Proportion of Loss in Carriage of Exports.
	Per cent.	Per cent.	Per cent.
Embargo act, Dec. 22, 1807, one year	11.56	1.00	2.00
Non-intercourse act, May 30, 1809, one year	—	—	4.00
Declaration of war, 1812, two years	16.46	31.76	36.25
"Reciprocal Commerce" with England, March 3, 1815 (first act), two years	11.04	—	—
Second "Reciprocity" act, 1817, four years	37.02	—	—
Final "Reciprocity" act, 1828, two years	32.84	—	—
West India opening act, 1830, two years	—	4.48	12.16
Computing from 1826, 10 years (1836)	17.50	4.94	15.84
do. 20 years (1846)	23.33	8.31	14.95
Tariff and warehouse acts, 1846, one year	—	11.36	14.30
Treasury Circular, 1849, enforcing act of 1828 with England, one year	—	4.42	4.93
do. three years	—	12.16	2.61
Anti-subsidy act, 1858, two years	0.18	12.50	7.06
Losses by stripping off protection from 1826 to 1861, 35 years	—	36.84	19.73
do. from 1815 to 1861, 46 years	22.78	—	—
Losses by the war, four years	43.81	50.16	63.80
Losses by non-protection since the war, 1865–90	66.74	44.48	65.40
Losses by non-protection since 1815, 75 years	85.57	—	—
do. since 1826, 64 years	—	82.52	89.92

This statement of facts should arrest the attention of every patriot and statesman in our land. It sets forth, in unmistakable terms, what it has cost our nation for "reciprocal liberty of commerce," for "liberal shipping laws," and for "free competition with the world" in nautical pursuits. It puts the finger of science upon the follies of Congress, in connection with ships, and makes no mistake in pointing out the causes of our shipping decline.

CHAPTER X.

THE QUESTION OF TARIFF LEGISLATION.

THE marine in our domestic trade has prospered from the beginning of the government. It has always been protected; at the first, by high discriminating tonnage dues, and afterward by prohibition of foreign vessels. To what else than un-protection can be ascribed the decay of our shipping in the foreign trade, begun and continued from the stripping off of protection?

Because this un-protection of ours has greatly conduced to the prosperity of foreign nations proves nothing at all in favor of its principle, but everything against its practice as a policy of the United States. It may be good for other nations, but is bad for us, says the evidence before us; but the believers in free trade attribute all our shipping difficulties, first, to the tariff, and second, to the protection still afforded shipbuilding.

If the "protective tariff" has reduced our shipping per capita, or cut down our proportion of carriage, either of imports or exports, it should be easy to point out the time, and give the figures in each case of its enactment or augmentation. We will, therefore, go over the tariff ground, beginning with the act of 1816.

Examination of Tariff Influence. From 1816 to 1817 there was a loss of shipping per capita of 1.97 per cent., but a decline had been set up by the first maritime reciprocity act in 1815, so that this loss was not due to the tariff. On the other hand, there was a gain of carriage from 1816 to 1817, for imports of 8.22 per cent., and for exports of 8.89 per cent. In fact, proportionate carriage gained right along until 1826. In 1824 another and higher tariff act was passed, but this did not check prosperity in navigation.

From 1824 to 1825 shipping per capita gained 1.53 per cent., and carriage of imports 1.89, and of exports .56 per

cent. Also, there were gains in shipping and in carriage in 1826. Thus the tariff of 1824 is disposed of. The next is the "high tariff of 1828," in which year, also, the final "reciprocity" act was passed.

From 1828 to 1829 there was a loss in per capita shipping, but a gain in carriage, just as there was from 1815 to 1816, and from 1817 to 1818, on the passage of the first and second reciprocity acts. In other words, the first bad effects of these three "liberal" acts were the cutting down of tonnage, and tonnage per capita, in each case. Their ill effects upon carriage followed at a later period. If "tariff" had any effect at all, it should be seen in the figures of carriage. From 1828 to 1829 there was a gain of 1.72 per cent. in import, and of 1.74 in export, carriage; and there was a slight gain in the proportionate carriage of the following year. Thus, if anything is proved, it is that the tariff acts mentioned helped, rather than hindered, the employment of our marine. And the employment of vessels is the main thing for shipowning. It is a fact, however, that the tariff of 1828 bore hardly upon the interest of shipping, as it increased for a while the cost of vessels. The statistics of shipbuilding disclose a sensible check to that industry for about two years' time, but that was chiefly, if not wholly, owing to the discouragement contained in the "reciprocity" act, and not to that in the tariff act of 1828. This is evinced by large sales of ships to foreigners in 1829 and 1830. But for this tariff, we might never have discovered the superiority of American over British iron for ship fastenings. The British material imported and used prior to 1828 was weak, hard, and brittle, every bolt requiring to be heated at both ends, headed and pointed in the blacksmith-shop before driving, or the heads would fly off and points refuse to clinch. It cost more, then, for a blacksmith to prepare bolts of English iron for driving than to buy in a few years afterward the superior American iron, that would drive and clinch much better without going into the blacksmith's fire at all. We had a similar experience with canvas. The foreign imported article was made of flax. The fabric was stiff and heavy, requiring many seamen to handle sails made from it. The tariff on imported canvas enabled American inventors to fabricate a better material for sails out of cotton than had been

known to the world from flax; lighter, closer in texture, more lasting, and capable of handling by fewer men. So it was that the tariff conduced to excellence in shipbuilding and facility in navigation, — very good things in a practical point of view, after shipping protection had been removed.

We come now to the tariff passed in 1832, reducing the rates of 1828, and taking effect by degrees in 1833, 1835, 1837, 1839, and 1841, in successive reductions of 10 per cent. According to the "liberal" theory, there should be great advantage, and much gain to American tonnage and carriage, resulting from this legislation. Here is what we find: —

From 1833 to 1834 there was a gain in tonnage per capita of 10.61 per cent., and by 1835 a gain in the two years of 12.97 per cent. This looks well, but from 1835 to 1839 there was lost 20.11 per cent. of tonnage per capita; and from 1833 to 1843, when the Whig tariff displaced the Compromise, there was a loss of .58 per cent. So nothing was gained to tonnage per capita from the several ten per cent. tariff reductions of that period. Then as to carriage, which is most important: —

From 1833 to 1834 there was a loss of import carriage of 1.87 per cent. From 1835 to 1836 there was a gain in import carriage of .11 per cent.; but from 1835 to 1837 there was a loss in the two years of 4.10 per cent., and from 1833 to 1843, when the tariff of that year superseded the one in force the former year, there was a loss of import carriage of 14.99 per cent. So much for import business.

From 1833 to 1834 there was a loss of export carriage of 1.45 per cent. From 1835 to 1836 there was a loss of 2.33 per cent. From 1837 to 1838 there was a gain of 6.27 per cent. From 1839 to 1840 a gain of 2 per cent.; but from 1841 to 1842 there was a loss of 1.92 per cent. And from 1833 to 1843, during the enforcement of the tariff passed in the former year, there was a gain of 1.94 per cent. So we may sum up as follows: —

LOSSES.

Of per capita tonnage, 10 years . . .	0.58 per cent.
Of import carriage, 10 years . . .	14.99 per cent.

GAIN.

Of export carriage, 10 years	1.94 per cent.

If these facts show anything for or against tariff reductions, it is that they are beneficial for foreign shipping, but not worth making for American.

We come now to the tariff of 1842. At the time of its passage the country was poor; so poor, in fact, that our commerce per capita was only $11.23. It had been $11.14 in 1830, and $14.11 in 1833, so there was a loss of commerce per capita of 21.04 per cent. in ten years' time, from the very measure that, theoretically, was to increase our trade. It disappointed its patriotic advocates, since it hurt manufactures, run down commerce, lessened the use of American, and increased the employment of foreign shipping. The tariff of 1842 raised the rates on imports only moderately, but greatly reduced the free list. Its rates were below those of duties by the tariff of 1824. Taking effect in 1843, it lasted four years, in which period the gains and losses were as follows: —

GAINS.

Of commerce per capita	2.19 per cent.
Of shipping per capita	1.52 per cent.

LOSSES.

Of import carriage	1.58 per cent.
Of export carriage	0.13 per cent.

This shows improvement upon the effects of lowering the tariff in the previous period. In fact, it shows a check to our shipping decline, whatever it was that gave it. And mark this fact, not since the repeal of the tariff legislation of 1842 has our proportion of carriage in the foreign trade been so *high* as it was at the time of that repeal. The figures then stood 87.1 per cent. for imports, and 76.2 per cent. for exports. In 1843 the decline of the decade ending then had been down to 77.1 for imports; and in 1844 our carriage had risen to 86.7, and stood at 70.5 for imports and exports, respectively; so that there was much improvement in the last two of the four years that the "Whig tariff" prevailed.

In 1846 the Walker "tariff-for-revenue" bill was enacted. It reduced duties considerably; consequently it increased importations and enlarged the work of ships. But, just what might be expected, foreign shipping, and not our own, reaped

the harvest sown by Congress. In the first year we had a loss of import carriage amounting to 11.36 per cent., and of export carriage of 14.30 per cent. (from the proportion of carriage in 1846). In four years' time we fairly recovered these losses, but in the succeeding seven years even greater than these were suffered. By 1857, when another reduction of tariff took place, we had come down in proportion of carriage from 87.1 to 71.8 per cent. for imports; and from 76.2 to 69.2 per cent. for exports; showing losses, respectively, of 17.56 and 9.18 per cent.

From 1857 to 1858 there was a gain of .27 per cent. in imports, and 7.73 in export carriage, the panic of that year forcing out cargoes in American vessels; but this export gain was nearly all lost next year, and import carriage dropped 11.52 per cent. The export carriage of 1858 was never again equaled. In four years of the tariff of 1857 our loss of carriage for imports was 16.43 per cent., but for exports there was a gain of 4.02 per cent., caused mainly by our merchants in the southern trade forcing out cargoes, principally of cotton, in preparation for the war which followed. So this gain of export carriage was not due to "tariff," but was an incident of the war, just as the like gain in 1857 was an incident of the panic of that year.

It has been remarked that shipping per capita increased largely during the period of the tariff of 1846, and free-trade advocates have claimed that this fact proved their theory. As this seems to be the only fact, out of many, that bears in their favor, we will examine it. In 1846 we had a per capita shipping of 4.6 cubic feet (100 cubic feet making a ton). This figure had been 6 in 1826, had fallen to 4.04 in 1831, had risen to 5.32 in 1835, had fallen to 4.25 in 1839, had risen to 4.53 in 1842, had sunk to 4.36 in 1843, and had risen again to 4.6 (the average for fifteen years past) in 1846. Then shipping per capita rose steadily and evenly for nine years, until 1855; then it sunk as gradually for four years, steadied in the fifth, and recovered a little in the sixth, when the war broke out, after which, of course, it rapidly fell, evidently not owing to the "Morrill tariff," but to the incidents and casualties of the war itself.

Let us now compare the ratios of this rise and fall. During

the nine years' rise there was an average annual gain of 5.18 per cent. During the four years' fall there was an average annual loss of 3.04 per cent., and during the six years' fall an average annual loss of 1.68 per cent. During the period from 1846 to 1861 there was only an average annual shipping per capita gain of 2.71 per cent., and in this time, as shown above, there were of losses of import carriage an annual average of 2.07 per cent., and of export carriage of .36 per cent., which more than offset the gain in tonnage. This will plainly appear, if we consider a moment what is implied by a loss of carriage, and, especially, such great losses as have been pointed out in this discussion. What does carriage represent? *Employment.* What does tonnage represent? Not necessarily employment, for it may be *idleness.* A loss of carriage means employment of foreign vessels, and idleness of our own. A gain of carriage denotes prosperity to the marine making it, whether our own, or foreign. A loss of tonnage, or of shipping per capita, means a loss of tools to do business with. A gain of tonnage represents a gain in tools, an increase of shipbuilding. When we have the tools in abundance, and fail to get work, then there is something wrong, — something that the rate of tariff cannot right. That was the case exactly in our experience from 1854 to 1858. There was a fever then for building "clippers." We increased our tools until the docks of our large seaports were full of idle vessels built for sale. We sold abroad as follows: —

	Tons.
In 1854 (sales brisk)	60,033
In 1855 (prices fair)	65,887
In 1856 (prices falling)	42,168
In 1857 (prices low)	52,649
In 1858 (sales difficult)	26,305
In 1859 (prices lower)	30,850
In 1860 (no market)	17,418
In 1861 ("cheap ships" at forced sales)	26,849
Total	321,959

All this tonnage is counted in our statistics of each respective year, the same as if unsold. In 1853 we sold foreign only 10,035 tons, and that year our per capita figure was 7.5 cubic

feet. Deducting the tonnage sold abroad in subsequent years, to the time of the war, our average shipping per capita scarcely rose above the mark of 1854, — 8.18 cubic feet. So the improvement in transportation supposed to lie in the increase of tonnage from 1853 to 1860 is subject to a heavy discount. There was really no prosperity in it; and could not be, while our proportionate carriage was passing into the hands of our rivals, never to be recovered by any rate of duty that is not discriminating, and consequently protective.

We have now traced the ups and downs of tariff legislation from 1816 to 1861, — forty-five years, twenty of these being more or less "protective," and twenty-five more or less for "revenue only." In the time mentioned there have been seven different principal acts passed; four of them aiming at a protective policy, and three shooting the opposite way. We began to lose carriage in the foreign trade while a protective tariff was in operation, but we kept on losing, all the same, after a revenue tariff took its place, and our worst losses have happened under the lowest tariffs. Nevertheless, I cannot see that the tariff of itself, aside from the consequence of reductions, has had any special effect upon our shipping. There have been other agencies so much more effective for evil that it seems idle to speculate upon the influence of the tariff, whether high or low. A full examination of the subject will leave no ground for doubt, that the capital and controlling cause of our decline in tonnage, and decay in carriage in the foreign trade, *is the unequal and unfair conditions for international competition*, which were invited, and have been permitted, and are even now acquiesced in, by our government. These conditions began existence in 1815, took root and branched out in 1817, blossomed in 1824, and bore fruit in 1828 and 1830. It is to the shipping legislation of those years, with the foreign acts and treaties which followed, that we should look mainly for the sources of our losses in ocean carriage, and for the reasons why gains made now and then in tonnage, owing to adventitious aids, have been temporary and unavailing under every rate of tariff. Manifestly, if we could not make gains in carriage, and hold on to them, during the extraordinary experience of the country, from 1846 to 1861, under the low tariff of that period; when famine in Ireland

and short crops in Europe stimulated traffic; when the government was spending millions in a war with Mexico; when California, and soon afterward Australia, became gold fields, and emigration immense; when steamship and clipper-ship building and running were wonderfully stimulated by the government mail subsidy policy, and the latter by the needs of a new commerce; when Congress cut off subsidies and reduced that source of taxation (?); and when still other influences were at work in our favor, and against our rivals, then the charge that all our ills marine are due to a protective tariff lacks discernment, is devoid of reason, without inspiration, and quite absurd.

The Tariff and Volume of Trade. But it is contended that the tariff since the war has been so high that it has restricted commerce, and thus cut down our transportation. As to this, statistics show that since the war, under the "high tariff" complained of, our volume of foreign commerce exceeds the bulk before the war, under the so-called revenue tariffs. Attention is invited to the following comparison: —

COMMERCE PER CAPITA UNDER LOW AND HIGH TARIFF.

Low Tariff Periods.	Average Rate.	High Tariff Periods.	Average Rate.
1846–50	$13.51	1866–70	$24.95
1851–55	19.37	1871–75	30.16
1856–60	22.88	1876–80	26.77
		1881–85	28.63
		1886–90	24.28
1846–60	$18.58	1866–90	$26.96

From this it appears that we have had fully 30 per cent. more commerce per capita with foreign nations since, than before the war. And the difficulty with our marine seems to be that the more commerce we have the less carriage it can obtain. In other words, it does not seem to be *our* commerce, but to belong to foreign flags. It is what the sage of Monticello characterized as a passive, in contradistinction to an active commerce, which latter must needs be carried in American bottoms. From a passive policy, active results never flow.

And it does not appear that the "war tariff" has prevented gains in carriage on occasion. From 1866 to 1868 there was

a gain in import carriage of 31.47 per cent. Part of this was lost in 1869, but was more than recovered in 1870. The import carriage of the period, 1871–75, fell off from the mark of four years preceding only 8 per cent.; and in the period of 1876–80 following there was a gain of 2.7 per cent. In 1866, the year after the war closed, our share of import carriage was 25.1 per cent. It was thirteen years afterward before it sunk below this figure. That was holding on better than we did for import carriage for the same time, under the low tariff of 1846–57. We held our export carriage firmly for five years after the war, then rapidly lost it as explained elsewhere, by Lloyds' hostile change of inspection rules and underwriting discriminations against wooden ships, made and applied for the end that was accomplished, our government being indifferent about it.

Right here it may be instructive to take a glance at the volume of commerce in the early time, before the war of 1812 and following events reduced it to inferior dimensions, and while shipping was the best protected industry of the country.

COMMERCE UNDER EARLY POLICY.

Periods.	Average rate per capita.
1790–1795	$15.87
1796–1800	29.24
1801–1805	28.68
1806–1810	24.08
Average for 21 years (of above time)	$24.47
Average for 15 years (of above time)	26.33
Average from 1866 to 1890	26.96

From this table, it appears that the two greater volumes of foreign commerce in our history have not resulted from free trade, but protection; the first from protection of shipping in the early time; and the second from protection of landed industries in the later period.

Finally, it may be observed, that no argument worthy of notice can be made for giving more free trade to our marine than it has had for sixty years past. Its ruin has resulted from what it has had in that time. Logically, it is inconsistent for an anti-protectionist to propose any remedy at all for indus-

trial evils, for the essence of his belief is, to do nothing for anything. Protection in the tariff is a remedy for something. That is enough to call down his censure. To charge tariff protection with killing off our foreign-trade marine may be intended to accomplish two objects: first, to make the tariff unpopular; second, to hide the fact that free trade, and not protection, has the ruin of our shipping trade to answer for. But fairness never guides an ardent theorizer. From the tariff stumbling-block he may turn to "free ships." We will, therefore, see what can be said on this subject in another chapter.

CHAPTER XI.

THE FREE IMPORTATION OF SHIPS.

It is economic dogmatism that the cheap expels the dear, though why it should, and if exceptions exist, is never taught. Nor does economy, scientific as its votaries think it is, ever teach what makes cheapness or constitutes dearness. To do so might turn the purpose of the school, which seems to be the favoring of British factory power, with its yoke on the necks of the working poor. It is an Englishman's faith, that in his country, and his alone, cheapness has its home. This idea, in great volume, is exported to the United States; and while some of it is warehoused in our colleges, the greater part goes into present consumption through the press.

It is this idea of cheapness that leads some people at first thought to favor the remedy of "free ships," when it is seriously proposed as a cure for our ills marine. That it is only a foreign trade-cry never receives consideration. Nothing was heard of it before the British became the builders of iron shipping and desired our market for their novel craft. Nor was the cry put in general circulation here until the late war was over, and measures for the restoration of our shipping power came to be discussed a few years afterward. This discussion was not long under way before there was a foreign interference with our marine, apparently to give an object lesson in aid of free-ship argumentation.

Foreign Coöperation. In 1870, as elsewhere stated, the British Lloyds degraded wooden ships "foreign-built," refused longer to class them the same as if British-built, but gave them instead special grades only, for a year at a time, after submitting to expensive "special surveys" in a dry dock. The grades allowed were distinguished as 1 F, 2 F, and 3 F, meaning first, second, and third class foreign; and therefore not to be patronized by British merchants or shippers, or covered by British

underwriters any more than trade necessitated. This change of rules practically cast our superior sailing ships out of the British Lloyd's Register, and deprived many of them of paying employment as competitors of British ships, since the war had thrown our commerce largely into the hands of British merchants and their allied commission houses. This act continuing for six years checked our shipping recovery and effected the substitution of British iron for American wooden sailing ships in the grain, provision, and cotton trades across the Atlantic. It also convinced certain of our shipping people that the days of the proscribed craft were numbered, not for any fault in the one case, or merit in the other, but in consequence of the dominance of the British shipping interest and the will of Lloyds to protect it. There were others, however, who saw only that iron ships were in demand for cargoes, and wooden vessels were neglected. These began to think that iron shipping must be built or bought, and, in short, that the logic of the situation ran for free ships. The attack of Lloyds, if noticed, was not resented by our government; our free-trade advocates appreciated the chance to lie down under it, and called loudly for relief in the shape of foreign ship dependence. Whether such a cry for rescue from an imposition comported fairly with the character of the American people may well be doubted. At any rate, the mistaken effort to help our navigation has not yet led to the abrogation of our navigation laws.

The Sources of Free-Ship Machination. It is therefore in response to movements of alien forces that foreign metal ships are now advocated as a remedy for our marine marasmus. We are to buy these vessels, first, because they are cheaper than we can build; second, because the Lloyds have waged war on wooden shipping in the interest of iron; and third, because the ship which they favor is British-built. And it is also provided, substantially, by a bill reported for passage in the Fifty-second Congress, that, whether we can build cheaper or dearer than the British, either in wood or metal, we shall swell our marine with shipping built by them. Our ship market, now closed to foreign nations, is to be opened widely to all, which means mainly to Great Britain and Canada. This the British well comprehend, while our own people

should not be ignorant of it. To continue protection to American shipbuilding will preserve it, at least so long as the coasting-trade is protected, but the policy of the pure free trader looks not to preserving the one, or continuing the other, for a single day. He will tell you gravely, "England has liberated trade and transportation, in accordance with the spirit of our enlightened age." "If England builds the cheapest iron ship, then we should use none other." So, if England can get all our trade and transportation into her forceful and grasping hand, then she is the power, by survival of the fittest, to whom these great industries belong.

Objections to American Shipbuilding. Really, foreign objection lies to any American shipbuilding at all, while free-trade disapproval falls upon the protection which would build it up and watch over it. The antagonism of the one and the opposition of the other tend to the same result, and consequently serve the same cause, — the breaking of the bones in the right arm of American power at sea. The existence of American shipbuilding, as a protected industry, is a continual challenge of England's strength, not alone in launching ships upon the sea, but in owning and running them, since building is a strong, even an indispensable auxiliary of owning. The logic of protected shipbuilding is protected shipowning. England wants no American interest protected, and least of all shipowning. The effort to give back protection to owners is answered by the tug to take it away from builders. If we must have ships to play with, then England wants to build them. To protect shipowning and building, and to have the skill and practice the power of building and running our own ships, mean, by contrast, the loss of British prestige, since the consequence of our maritime independence will be to furnish and equip yards and shops, and supply the country with shipwrights, engineers, and seamen, with a navy, too, for defense. Each ship launched will reduce British dominance, and enlarge American influence everywhere. An American-built marine, sufficient in tonnage for the commercial needs of the United States, means another *Republican* naval power. Such an evolution is not in British interest, and, just as truly, cannot be a product of free-trade policy, because the former is to rule the sea, and the latter is not adapted to promote

rivalry or to challenge that rule. So far as known, *Rule America* is not a free-trade maxim.

The "Free-Ship" Notion an Importation. The free-ship remedy, so called, is a foreign panacea. Two Americans, from across the sea, have claimed the honor of being the first to bring it over. One came from London and the other from Glasgow. Both wrote for the press, and one, if not both, had in view, not the healing of our ship disease, as might be supposed, but the sale of British iron shipping in the American market, — as soon as Congress could be induced to "reform" the navigation laws. Their object cannot be mistaken, as the time of their arrival out was two or three years before the war, when our marine, as a whole, was not seriously complaining. But the money in their enterprise has not yet been made, and this has disappointed many on both sides of the sea. On this side, American shipbuilders, almost the only men who have stuck to shipowning in the foreign trade, have been maligned and their ships run down. Our navigation laws, but for which we would never have had shipbuilding of any repute, have been assailed and their history falsified. The press, without the technical or historical knowledge necessary to adjudge the case, has been surfeited with flimsy arguments and mistaken judgments. Party spirit has been invoked, and political machinery applied to down the American cause, but so far in vain. Our shipyards still exist, and will not launch their last while the coasting, lake, and river navigation remains protected. It will take a sweeping bill to knock away the last support. The bill in Congress undertakes this work, notwithstanding there is nothing the matter with our shipping in domestic trade. This shows the hollowness of calling it a remedy for any ailment in the foreign trade. It is simply *free-trade policy*, kill or cure.

Our domestic marine, fully protected, has consequently flourished; while our foreign-trade shipping, stripped of protection, has necessarily perished. To say the least, the proposed stripping of protection from shipbuilding for the domestic trade indicates indifference to its survival. From these facts it is plain enough that those who have excited the free-ship "reform" care just nothing at all about the "rehabilitation" of the American marine. They are unfriendly to it. They know very well that we cannot buy ships "cheap" and

build them *dear* at the same time. If we are to buy, we are *not* to build. A free-ship act would therefore prove, what it is apparently intended to be, a deadly blow to shipbuilding in the United States. It is certain that such a blow to shipbuilding here is just the one that would be acceptable in England. Is it the least uncertain that our misguided politicians mean to give this blow?

Value of our Present Shipbuilding Industry. It may be inquired, What will it cost to lose this trade? In other words, Is its value so much that it is worth retaining by protection? During the fiscal year of 1891 the vessels built and documented were as follows: —

SHIPBUILDING IN 1891.

Class.	Number.	Tonnage.	Value.
Sailing vessels	733	144,290	$7,935,950
Steam vessels	488	185,037	20,354,070
Barges	106	32,916	1,316,640
Canal boats	57	7,059	176,475
Total	1,384	369,302	$29,783,135

Thus it appears the value of shipyard production is nearly $30,000,000 annually. Under a free-ship act, about three fourths of this output could be imported, and that the costliest part of it. Our present production might be cut down soon to less than $5,000,000, annually; and, erelong, to less and less, as foreigners worked into our trade.

What shall we Exchange for Tonnage? Suppose it settled, that we shall import annually twenty-five millions in value of tonnage, shall we pay for it with goods, or gold?

	Per cent.
If with gold, it will take of product	76
If with silver, it will take of product	35
If with tobacco, it will take of product	58
If with buckwheat and rye, both crops when good	–
If with value of mining products exported	112
If with value of forest products exported	87
If with value of tobacco products exported	99
If with value of lard products exported	74

If with value of bacon products exported	69
If with value of beef (canned and fresh) exported . .	101
If with value of leather products exported . . .	200
If with value of iron and steel manufactures exported .	86
If with value of cotton manufactures exported . . .	200
If with value of wheat exported	49
If with value of flour exported	45

It would seem from the way gold went abroad in 1891, there being $86,362,654 exported, and but $18,232,567 imported, that it is a foolish proposal, from a financial point of view, to quit building our own vessels and go to importing them, no matter in what commodity pay may be made. We are not now building half the tonnage that we should use ourselves upon the sea. Already, the best part of shipbuilding for our trade is in the hands of rivals, and we are paying annually a heavy tribute for our privation. We lost this building by staking it upon the application and fair working of a one-sided "free-trade" principle, and now the proposition is to repeat that disastrous experience as to all our output of tonnage. The consequence of such a measure may be easily shown.

Foreign Possession of our Domestic Trade. The surrender of our coasting and lake trades is the inevitable result of a successful free-ship bill. With a foreign building will come a foreign owning of the vessels in our domestic as well as foreign trade. The way is easy and natural. It is the shipbuilding interest, quite as much as the shipowning, that puts tonnage afloat and pushes it into employment. Shipowning goes with shipbuilding. British shipowning is under every flag where it wants to follow sales of British tonnage. It flourishes in France under the protection of the bounty system, from the circumstance that foreign-built ships were admitted to its benefits, contrary to prudence. It is even now in our own country under various guises. There are corporations with American officers, whose entire stock, nearly, belongs to British corporations, our law allowing the president and secretary of an American corporation, if citizens, to register vessels. This corporate ownership and registry may be extended to sail as well as steam vessels, and to fleets as well as single craft. Many single vessels are owned in Great Britain by corporations. Other means of fraud on our registry laws exist. Our

registry laws are too lax. It is morally certain, there are vessels now in our domestic trade that are owned more or less by aliens, sailing under papers taken out by relatives or business partners of native or naturalized citizenship. Now, the restriction of registry to American-*built* vessels prevents a wholesale entrance of foreigners as owners. But, once admit foreign-built vessels to general registry, and alien ownership will come with whole fleets of craft, sail and steam. By means of bills of sale and mortgages, foreigners could safely trust, even strangers among our citizens, to cover their property for a small interest in it. Under such circumstances, and the passage of a free-ship bill, prices for Canadian and British tonnage would appreciate. Our own people, having now all the tonnage they need, would have no call to buy abroad, and the consequence of the situation would be the overcrowding of our ports with tonnage, some of it idle much of the time. Freights would fall. Our coasting and lake business might be demoralized in a single year, and our own people could not fail to be the losers in the end, and that shortly. Before long, our citizens would have to give up the domestic, as they have been obliged to quit the foreign trade. An alien interest would succeed a native. A foreign, disloyal, inferior service would take the place of what is now national, advantageous, and profitable.

Here it may be asked, What general good would be accomplished for the country, by the changes which would surely follow the free importation of vessels? Has any good grown out of the "maritime-reciprocity" acts and treaties which have given our foreign trade into the hands of rivals and enemies? Are the statesmen of the Republic giving attention to the consequences of breaking up American power on the sea? What can they substitute for that power in the day of need? One inventive American shipbuilder, one enterprising American shipowner carrying on his business, is of greater use to the country, gives it more strength, adds more to its independence and its fame, than thousands of some other citizens.

What is a free-ship proposition to the people of the United States? It is abandonment of the sea, and nothing else. There is folly in every feature of it. To quit building ships ourselves and buy from the British flag is to go under that flag

on our ocean domain. It is to repudiate our own banner every time a ship is launched for use in our trade. Having to go to Canada or Great Britain to see the launch of an *American* ship — What delusion is in the thought!

Jefferson Davis, and his compeers of secession memory, never put their hands on the American ship in the domestic trade. They cut off subsidies in the foreign trade; they could have passed a free-ship bill; they could have opened the coasting trade; but they were too American. A decent self-respect, pride in the land of their birth, in the time of bitterest politics, kept the hands of Southern statesmen off the shipyards of the North. Strange it is, that it should be left to the present time of sectional peace for pygmies to strike the blow that giants scorned to deliver.

CHAPTER XII.

THE UNITY OF INTEREST IN SHIPBUILDING AND SHIPOWNING.

The friends of "free-ships" have sought to divide the shipping interest into two antagonistic parts, shipowning and shipbuilding, and to prejudice the country against the men who carry on the latter business. It is alleged that shipbuilding is a "protected industry," therefore a "monopoly," and responsible, through high prices, for the ruin of shipowning. But as the same sophists assert that shipbuilding has been "protected to death," this doctrinal proposition cannot be true. It has been shown, Chapter V., that shipowning in the domestic trade has flourished, but in the foreign trade has perished; and, needless to say, the shipbuilders have been *the same* for both trades. Only one kind of owning and building has suffered, and that is found in the unprotected foreign trade. It has been shown in Chapter VII., that shipping in the foreign trade flourished along with that in domestic trade, while both kinds of tonnage had protection. In Chapters VIII. and IX. it is fully established that decline and decay of our foreign-trade marine set in, continued, and effected their work under one-sided reciprocity and inequitable free trade.

Shipowners, as a body, never gave countenance to sophistical arguments of any kind for stripping protection from shipbuilding, because they knew what was needed was employment for tonnage, not cheap ships, but good ones, and plenty of work for them to do. American shipowners, ever since the war, have found the tonnage which they used to be altogether too cheap for profit. They have sold it freely at bargain prices, and quit buying at any price, except for the protected domestic trade. Only a few of them have ever thought they could see even a personal advantage in purchasing vessels abroad, while none have pretended that the national interest would be served by giving up the substance of shipbuilding for the shadow of ship-

owning, under present conditions of competition. They all know that to strip protection from shipbuilding would bring to that trade the same scourge that has afflicted their own. In other words, that increased competition in shipbuilding, supposing our own to survive, could not, and would not, compensate for un-protected competition in shipowning.

Builders as Owners. But for holding on to our shipbuilding, there are even stronger reasons than these, in the unity of interest naturally existing between this trade and shipowning. Our builders have generally been owners, and many of our largest owners are even now their own builders. On investigation it appears that American shipbuilders in 1890–91 represented the ownership of 168,186 tons of sail shipping. There were 182 vessels, average size of 924 tons, with none above twenty-eight years of age, and the greater number under ten years. Of the whole number, 155 of 151,926 tons, average size of 924 tons, hold class in the "Record," or the "Veritas," and are fit for voyages around the Capes. With regard to ownership in steam vessels, it is not easy to determine the interest held by builders, but it is believed to be considerable. As the Lloyd's Register Book, from which the foregoing facts are derived, credits the United States with 1,306,488 tons of sea-going sailing vessels, it would appear that the proportion of this tonnage held by its builders is about one eighth.

Owning Follows Building. Here is a simple fact that proves the harmony of owning and building. The sinews of shipowning are centred to-day in the city of Bath, in the State of Maine, where shipbuilding has found its deepest rooting and the surest footing in the United States. Once the blows of the shipwright sounded full and forceful in the South. In 1789 Charleston and Baltimore led the trade in petitioning Congress for navigation laws. Norfolk had early distinction, especially for pilot-boat building. Virginians then took pride both in building and owning. Washington himself built a vessel at Alexandria. Baltimore first built "clippers" of world-wide renown; and once led New York in ownership of sea-going craft. Savannah sent forth the first steam vessel to cross the Atlantic. Indeed, in the early history of this country there was quite a time during which the commerce of Charleston, South Carolina, equaled that of all the New England ports

together. Then shipbuilding flourished in the sunny city. An evil day came, however. A better knowledge of the Gulf Stream, and consequently of safer sailing to and from Northern harbors in the winter season, turned the course of commerce from South to North. This increased New England shipbuilding, raised wages, and drew off Southern builders and their mechanics to the free States.

Note this: While shipbuilding tarried in the South, much of the best shipping of the Union hailed from our Southern ports. Vessels and shipyards departed in company. The passion for owning died with the ardor for building. Where shipbuilding did not stay, owning has not remained. Where shipowning did not bide, building has not continued, but both moved to better ground. This is ever the way with these trades, as may be demonstrated from the history of shipbuilding and owning in Great Britain. The time was when these trades centred in London. Of late, however, the metropolis has lost her shipyards, and her ownership has ceased to keep pace with her commerce, showing that shipbuilders are better than merchants to maintain a marine. The following table will prove this proposition: —

VALUE OF IMPORTS AND EXPORTS AND THE NUMBER AND TONNAGE OF VESSELS BELONGING TO DIFFERENT PORTS OF GREAT BRITAIN IN THE YEAR 1889.

Name of Port.	Commerce.		Vessels belonging to each Port.	
	Imports.	Exports.		
	£	£	No.	Tons.
London	144,711,517	48,251,282	2,577	1,327,726
Liverpool	111,152,007	102,513,722	2,313	1,881,862
Glasgow	12,683,064	14,880,389	1,549	1,224,002
Tyne Ports	38,617	—	825	399,206
Hartlepool	1,997,299	1,003,799	290	279,854
Sunderland	714,421	734,199	309	242,471
Greenock	3,879,804	271,798	326	231,900
Hull	26,285,229	16,768,144	835	220,923

When shipbuilding left London it made its way to Liverpool, and later to Glasgow, where it now overshadows all other ports, having built up a great city with shipownership nearly equal

to London, but only 14 per cent. as much commerce. The Tyne Ports, Hartlepool, and Sunderland, like Glasgow, are great shipbuilding points, with but little commerce, but great ownership of vessels. If Greenock be included, the four places would doubtless this year equal London in owning tonnage, notwithstanding its greatness in trade, and their lack of it.

Shipowning accompanies shipbuilding for a very simple reason. Builders are always becoming owners. One vessel is no sooner launched than another must be begun, or its builder will see his workmen scatter and his business cease. Either with his own or other capital, a builder must keep his yard agoing. But for builders, owners would be much less in number in every country. Vessels are often built and owned as railroads are, by shares, sometimes whole communities taking stock until a market is found, perhaps years afterward. Thus it is that the tonnage of a shipbuilding town, city, or country is always as large as business will permit, while the communities or nations who do not build, but buy their vessels, are certain to fall behind.

The idea that shipbuilding survives by the favor of capitalists, or even of shipowners as a class, is a mistake. The first man necessary to the creation of a marine is not a shipowner, but a builder. Any one with money can become an owner; but it takes a mechanic to plan and build, and increase the business of owning. Where capitalists may originate one scheme in shipowning, practical builders launch ten. Shipmasters stand before capitalists, and next after builders, in the promotion of shipowning. It is generally the case that capitalists proper are drawn into shipowning by builders or masters, especially in dull times. From 1845 to 1870 Mr. William H. Webb was the foremost shipbuilder of New York, and, indeed, of the country. He launched in all about 150 vessels, many of the largest size, on one occasion three at once, and owned shares in nearly fifty sail at one time. He was then the leading shipowner of New York, but he might never have owned a timber-head in a ship had he not come up as a builder and constructed his own vessels. One of these is on class to-day, at the age of forty-six years. The principal builders in all our ports have had a similar experience. The only shipowners who have increased their sail tonnage in the foreign trade, for the

last dozen years, are a few shipbuilders in Maine. Hundreds of thousands of tons of shipping, in shares, once belonged to American shipbuilders, and engaged in the trade of the world. It follows, then, from the closeness of connection, that protection to shipbuilding has been, practically, protection to shipowning, and especially so for the country at large. It results, also, that the incitement of discord and strife between these great interests is calculated to injure them both, and to make for the advantage of foreign nations.

CHAPTER XIII.

TRUE ECONOMY IN SHIPOWNING.

It is perfection, and not cheapness, that characterizes the economic ship. American shipowners are, mostly, practical men. They know well that where cheapness rules in mechanism, parsimony, and not economy, is indicated. They have been trained to appreciating ships for their qualities, and not lowness in price. They have sought improvements in strength, safety, durability, and speed, and cared less for bargains than for excellence. Under the call of their intelligence, our shipbuilders have led the world for a hundred years in the models, the rigs, and the machinery for propelling and working ships. While they have studied improvements, especially in respect to wooden ships, price has never put a balk in their path. Our shipowners, as a class, well understand the fitness and advantage of having ships built and repaired at home, where they know the service is better than abroad. Here they can get their money's worth, and credit if they need it; while the employment given confers a benefit on their fellow-citizens, adds to the wealth and increases the power of the republic, and, last but not least, gratifies their own good sense of national duty.

The eternal fitness of things has seemed to indicate the independence of the United States in the building of shipping. We are thousands of miles distant from the great shipyards of Europe, with no interest in navigation and commerce that is not antagonized there. It is, therefore, peculiarly proper to depend on ourselves for ships and for a system of building, adapted to our wants, that shall be our own. We must have ships and commerce of our own. Maritime nations without shipbuilders are nations without ships and without trade of their own. Shipbuilding nations are shipowning nations. Half the ships on the sea to-day belong to that aspiring people

who want to build and own the shipping of the world, and bid fair to do so. To lose our shipbuilding is to lose our shipowning, and this, again, is to let our commerce slip out of our own into foreign hands, as our unsuccessful owners have learned from sad experience. What they want is employment again *in our own trade*, for ships built to order at home; and not foreign ships built "cheap" for foreigners, with no protection to their use when obtained.

As for "iron" ships, there is nothing in the name. It has been British policy for forty years to overrate their merit, because the British ship must be iron-built; and to underrate the worth of wooden vessels, because our rival tonnage, sail especially, may be advantageously built of wood. To the British nation, the relative merits of wood and iron for all kinds of shipping is not of moment. Of necessity, it must stick to iron and steel. The case is different with the United States. We produce abundantly both wood and iron, and are able to choose from home materials the very best for every service. Thus it is, we are free to practice true economy, which is this: —

In the ratio that materials are costly, perfect the workmanship and increase the durability. In proportion as wages are high, invent and apply labor-saving machinery.

Building thus, our vessels of wood or iron, in the future as in the past, will have no superiors on the sea. Enemies they will always have, however, because certain classes of our own people take no pride in anything that is made at home. To them the cry of "cheap ships" contains a weighty argument for foreign ships, and consequent foreign dependence.

As for the merits of cheap ships, parsimony, and not economy, has made the British iron ship a bargain. At the first, vessels iron-built were much more costly than of wood; and iron builders in England, after 1850, had to compete with wooden all over the world. Then, such iron builders as necessarily bought materials had to compete with those who produced their own. These conditions induced a pressure on Lloyd's Committee to cut down requirements for strength to the lowest limit supposed to be safe. Satisfaction reigned but a short time. In 1862 the interest in iron-making, now firmly welded to the interest in iron-building, took steps for the

establishment of an opposition register at Liverpool, to be called the "Underwriters'," and to be confined to the inspection and classification of iron shipping. The sentiment of England sustained this unwise course, in order to cheapen the British ship. While the London Lloyd's Register was rating first-class iron ships A 1 for twelve years, the Liverpool Red Book, after reducing scantlings and weights, rated them A 1 for twenty years. This movement greatly encouraged the building of iron tonnage, though it broke the backs of unwary underwriters by the score.

In the history of iron shipbuilding cheapness was not always the makeshift for merit. In the infancy of the art, when it cost a half or third more to build iron than wooden ships in England, the advocates of the new industry, having an eye to safety and true economy, gave out that "vessels built of iron would last twice as long as those of wood." In this proposition was a recognition of the true economy of shipowning. There was no experience to prove the difference claimed for durability, but its truth was generally accepted as a matter of faith, the more readily, perhaps, that it justified a preference for a new material, which was then England's own. Since that time, more than fifty years ago, experience has demonstrated that durable iron or steel vessels are still costly, even in England. In other words, that cheapness is merely *discounted* durability. The average British-built iron or steel ship, as she sails to-day, has not the durability of the British or American built wooden vessel which she has displaced. This fact answers much that has been advanced in her favor.

The Test of Economic Building. It may be inferred from what has been advanced that cheapness in price is no test at all of economic building, but that durability cuts, at least, an equal figure. This being the case, the conclusion of mere economists, that iron vessels have become "the principal vehicles of commerce on account of their cheapness," if true, contains much error as a doctrine to be taught. The real problem is not hard of comprehension. The only difficulty is in our ignorance of the *time* for which vessels of all kinds endure. Much as has been said by the advocates of iron, and the detractors of wooden ships, not one has had the spirit of investigation or the fairness to find and declare the truth about

endurance. With this knowledge gained, fair comparisons may be made, as it will only be needful, then, to reduce the cost per ton to the cost per ton per year. For example, if a vessel of a certain build, costing forty dollars per ton, will last for use twenty years, then, manifestly, her cost per ton per year is two dollars. Another kind of vessel costing sixty dollars per ton would have to endure for thirty years, to have an equal yearly cost per ton. Thus we get a first view of the problem to be solved.

We will now go a step farther. It is known that all vessels sooner or later repay their cost with interest, if any profit is to be derived from their use while they last, and that their durance or sea-life, on the average, is brief at the best. Some twenty years or more ago, it was given out that the Treasury Department had computed that the average lifetime of American vessels of all kinds, ocean, lake, river, and canal, jumbled together, was only *fourteen* years. This unscientific result had no value whatever. It was incorrect and misleading, especially for lake and ocean vessels. For the wooden shipping of the Great Lakes, the author has never found a lower average term of life, in the fleets lost annually, than eighteen years. Statistics of the Bureau Veritas, relating to annual losses of inspected and classed sea-going American vessels, gives 2.75 per cent. as the proportion lost last year (1891). This is less than for any nation but the Swedish, and imports a sea-life of thirty-six years for the class of vessel described. But sea-life is one thing, and duration is another and quite different thing. The former is determined, in a large degree, by the accidents arising from the perils of the sea, — from causes over which man has no control, save in the qualities of seaworthiness, which his skill may incorporate in building, — while the latter is dependent upon the kind and quality of materials and workmanship, together with careful use. A wise economy builds vessels in view of their *durability*, and not of their probable term of life; though it would be foolish to undertake the building of everlasting vessels. On the other hand, it is manifest that vessels built in view of brevity or short duration should be *cheaply* built, like the flat-boats of the Mississippi. It may be conceded, also, that shipping in very profitable use, like the early steamboats of the Western

rivers, need not be built so durable as others in poorly paying trades; say, the boats of the present time. But it should be observed that the best-built vessels have practical advantages over the poorer and cheaper-built, in all trades at all times.

In comparing different builds of vessels, to ascertain their economic differences, what we need to know is, the *profit-time* remaining after the first cost has been repaid with interest. For example, four, six, eight, or even ten years of a ship's survival-time may have to be deducted, to find the profit-time, which is to be compared. Assuming that the vessel described above as costing forty dollars per ton, and lasting twenty years, discharges her indebtedness to owners in four years, then she has before her sixteen years of profit-time, and her cost distributed over this term would be $2.50 per ton per year. The other vessel described as costing sixty dollars per ton, lasting thirty years, and returning her cost in the proportionate time of six years, would have twenty-four years of profit-time, and her cost per ton per year would be the same sum of two dollars per year of lifetime, or $2.50 per year of profit-time; and similarly for other periods of time for repayment of cost and profit, as will appear from the following table: —

COMPARATIVE COST AND DURABILITY.

Original Cost per Ton.	Term of Years.			Cost per Ton per Year.	
	For Life.	For Repayment.	For Profit.	Of Life-time.	Of Profit-time.
Forty dollars	20	4	16	$2.00	$2.50
		6	14	2.00	2.85
		8	12	2.00	3.33
		10	10	2.00	4.00
		12	8	2.00	5.00
Fifty dollars	25	5	20	2.00	2.50
		7.5	17.5	2.00	2.85
		10	15	2.00	3.33
		12.5	12.5	2.00	4.00
		15	10	2.00	5.00
Sixty dollars	30	6	24	2.00	2.50
		9	21	2.00	2.85
		12	18	2.00	3.33
		15	15	2.00	4.00
		18	12	2.00	5.00

From this we learn, cost and terms of years being propor-

tionate, that cost per ton per year of lifetime is the same, but cost per ton per year of profit-time differs greatly. As profit-time contains the real value of vessels, an owner's interest lies in having it as great as possible. In this view, the fact of most importance to him is a speedy repayment of cost. In other words, there is urgency in the employment of vessels, but not in their cost, where that is proportionate to durability. No difference in economy appears in favor of cheap, or against durable vessels. But the running of superior ships alongside of inferior ones, where fair play obtains, always develops a difference, and reveals advantages. This fact accounts for the British claiming superiority for their iron ships, precisely as they once did for wooden ones of their own building.[1] What is true is this: Strong, durable vessels need less annual and periodical repairs, insure equitably at lower rates, command justly higher freights, get generally quicker dispatch in ports, make better voyages and more money in a given time. Therefore, the foregoing table needs modification in favor of the really higher classes of vessels; that is to say, they are worth more for use than they cost, in proportion to the price of cheaply built. In the ship market, however, the modification is made the other way, and for the reason that the cost of building does not increase in proportion to durability and merit, as supposed in the table. Hence, intelligent ship-owners, and those who are also building for their own use, always build the best, *i. e.*, the *durable* and not the "cheap" ship. It may be seen from what has been said, that they have a double inducement to do so. Also, it should be stated in this connection that workmen, accustomed to doing a perfect job, cannot so slight their work as to build "cheap" ships *cheaply*, but such vessels must have their materials knocked together by a rough class of lumpers. To illustrate further, the following table is submitted: —

[1] It also accounts for the Lloyds' depreciation of wooden (American) vessels, and the different discriminations of British underwriters in favor of vessels flying the "Union Jack."

PRICES OF WOODEN SHIPS IN LIVERPOOL, 1869, A 1, WITH EAST INDIA OUTFIT AND YELLOW METALED.

Class of Vessel.	Approximate Class Time.	Average Price per Ton.
A 1.	Years.	£ *s.* *d.*
Fourteen years	36	15 7 0
Thirteen years	33	14 6 0
Twelve years	30	13 5 0
Eleven years	27	12 5 0
Ten years	25	11 6 0
Nine years	22	10 7 0
Eight years	20	9 15 0
Seven years	18	9 0 0

It is plain from this table that, instead of vessels doubling in price by reason of being doubled in durability, about 60 per cent. is added, and in that proportion. So, from this source, there is 40 per cent. of inducement to purchasing durable vessels, to which may be added as much more attraction on account of the running advantages mentioned. And, besides these, the durable ship will have, at least, a half more time than the transient, in the grades below A 1. Thus, to owners of every kind, cheap ships are not the economic or the best ships, but these are the perfect, the durable, and the costlier ships wherever built. And thus it is, the cheap-ship notion that has had so much attraction for the inexperienced and uneducated on the subject has fallen flat on the shipowning mind of the United States. Bright and experienced owners, able to buy or build good ships, never invest in poor ones, but always sell such as have become inferior, and have consequently lost their practical value. Persons in want of cheap vessels have no need to get them built, for as time elapses all that have been built become cheap and worthless. We propose next to investigate the durability of vessels.

CHAPTER XIV.

DURABILITY OF BRITISH AND AMERICAN BUILT SHIPPING.

To reach a knowledge of the durability of the different kinds of vessels, three ways may be taken. First, the endurance, or average age at which ships are quite worn out may be ascertained. It may be objected to this, that comparatively few of the whole number of a given fleet will ever be "condemned," "dismantled," or "broken up." The greater number will be lost at sea, or wrecked on reef or shore, before becoming unfit for use, many of them in their prime, and others when almost new. Then the ages of craft fairly worn out have never been carefully recorded, at least in the United States.

Second, we may arrive at the average lifetime or longevity of different fleets; but as this would include "wrecked," "lost," or "abandoned" and "missing," as well as condemned, dismantled, and broken-up vessels, the results found might, and doubtless would, be unsatisfactory. And then the annual losses are only a small fraction of the shipping preserved.

The third and best way to solve the problem seems to be to determine the *survival* or continuance of vessels beyond certain ages. By this course we would deal with whole fleets instead of fractions, thus getting the use of more reliable quantities and numbers. We shall, however, try all the ways mentioned.

Our object in this investigation is to compare the merits of British and American shipbuilding, and to discover, if we can, whether they are British or American shipowners who are supplied with the more economical tonnage. In other words, whether they are British or American shipbuilders who need to make improvements on their average practice. The friends of "free" ships should admit that we ought not to go abroad for ships, except to get more economic bottoms than are built at home. Our inquiry will extend to and include all vessels but those of the Lakes, built under the respective flags, no matter where they may happen to be owned now.

Lloyd's Register for Authority. We shall use Lloyd's Register as authority for facts and figures; for one reason, because, besides our own, we are to deal with British-built shipping; and for another, because this work is generally accepted as a standard one throughout the world. The edition used will be the book for 1890–91. We are not entirely sure that Lloyd's is as accurate as the Veritas Repertoire Général, a work that has been longer in the field as a reference book of the shipping of the world; but the advocates of the cheaply built British ship would no doubt prefer to learn from Lloyd's.

Beginning with the first way of getting knowledge on the subject, the following table shows the endurance, or average age at which British and American vessels, respectively, were *worn out*, during the two or three years preceding publication of the book for 1890–91.

ENDURANCE OF SAIL VESSELS ABOVE 100 TONS.

Kinds of Vessel.	Manner of Extinction.	Average Age.	
		British.	American.
		Years.	Years.
Wood	Condemned.	23.00	36.20
	Broken up.	32.92	38.93
	Dismantled.	32.36	34.75
Average age of all (67) (43)		30.19	36.28
Iron	Condemned.	No cases given.	None worn out.
	Broken up.		
	Dismantled.		

ENDURANCE OF STEAM VESSELS ABOVE 100 TONS.

		Years.	Years.
Wood[1]	Condemned.	No cases given.	27.00
	Broken up.		29.00
	Dismantled.		26.50
Average age of all (8)			28.12
Iron	Condemned.	25.50	None worn out.
	Broken up.	22.50	
	Dismantled.	28.71	
Average age of all (19)		25.15	—

It would seem from this table, first, that American worn-out sailers of wood exceed the British in age, and, consequently, have greater durability, on the average, by 20 per cent.; see-

[1] Composite vessels not included.

ond, what may excite the wonder of the inexpert, that American wood steamers outlast British iron, and exceed them in durability by 12 per cent.

We have only three iron sailing vessels, and of coursé none are worn out. The British have a fleet of 1,954 in number, and it looks singular that no record is made of any being "condemned," "broken up," or "dismantled" within a year or two past. That some such cases exist is beyond a doubt, it being a common thing for owners to send unseaworthy iron vessels, sail as well as steam, to the "breaker's yard." The omission of worn-out sail in the Register may arise from imperfect compilation, though it is more likely to be intentional, a part of the policy prevailing to shield iron vessels from a loss of reputation, taking care, however, to let no wooden craft escape the record. But notwithstanding the neglect of Lloyd's, indications exist to show that the "condemned, broken-up, and dismantled" iron sail, if its average age was obtained, would show inferiority, not only to American, but British wood as well. One of the best of these indications is found in the table for iron steam, which is 30 per cent. inferior to American (wood) sail. Respecting British wood steam, the whole fleet numbers only 198, and the Lloyd's may be correct in giving no worn-out cases in it.

If it be objected that American shipping appears to outlast British, but does not, because the latter keep their vessels running until they are lost at sea, the next thing in order is to investigate the longevity of craft, whose end comes on the ocean in place of in port. While the following table supplies this desideratum, it gives only a slight support to the position noted, in the case of wood, while iron is left a long way behind.

LONGEVITY OF SAIL VESSELS ABOVE 100 TONS.

Kinds of Vessel.	Manner of Extinction.	Average Age.	
		British.	American.
		Years.	Years.
Wood	Dismantled.	32.36	34.75
	Condemned.	23.00	36.20
	Broken up.	32.92	38.93
	Missing.	19.56	18.27
	Abandoned.	21.46	21.17
	Foundered.	18.33	27.00
	Sunk.	19.80	22.00
	Lost.	25.39	23.12
	Wrecked.	18.51	19.01
Average life of all (213) (215)	. . . . .	23.72	23.62
Iron	Dismantled.	No cases given.	None worn out, and none have been lost.
	Condemned.		
	Broken up.		
	Missing.	13.00	
	Abandoned.	—	
	Foundered.	15.00	
	Sunk.	4.00	
	Lost.	23.71	
	Wrecked.	16.82	—
Average life of all (39)	. . . . .	15.74	—

This table is interesting. First, we have an illustration of the even occurrence of fatalities and the consequent reliability of wooden sailing vessels as they have been built in the recent past. The British fleet, out of which 213 gave up existence, numbered 3,453; and the American fleet numbered 3,458, with a loss of 215. Second, the great difference in favor of American durability by the preceding table is not paralleled in this one of longevity, where the British is four tenths of one per cent. above par. That this trifling superiority obtains is due, no doubt, to the fact that the perils of navigation are somewhat greater for American than British vessels.

Excluding from the comparison worn-out vessels, which end their days in port, the British wooden sailer exceeds the American in *sea-life* 1.5 per cent., but British iron sailers fall behind American fifteen times as much.

PROPER SEA-LIFE OF SAILERS.

	Years.
British wood	20.76
American wood	20.45
British iron	15.74

As between the wooden fleets honors, if not easy, are very near it, but the British iron is beaten by the British wood, 31.89 per cent., and by the American wood, 29.93 per cent. Consequently, it begins to look as though the vaunted iron sailer is far too cheaply built.

LONGEVITY OF STEAMERS ABOVE 100 TONS.

Kinds of Vessel.	Manner of Extinction.	Average Age.	
		British.	American.
		Years.	Years.
Wood[1]	Dismantled.	—	26.50
	Condemned.	—	27.00
	Broken up.	—	29.00
	Missing.	—	—
	Abandoned.	—	—
	Foundered.	—	—
	Sunk.	—	—
	Lost.	20.00	17.00
	Wrecked.	—	21.75
Average life of all (2) (13)	. . . . .	. . . .	25.30
Iron	Dismantled.	28.71	—
	Condemned.	25.50	—
	Broken up.	22.50	—
	Missing.	17.00	—
	Abandoned.	14.20	—
	Foundered.	11.50	—
	Sunk.	20.83	—
	Lost.	11.33	8.50
	Wrecked.	12.48	16.00
Average life of all (98) (3)	. . . . .	15.79	—

The showing in this report of British wood and American iron steamers lost may be neglected, as there are only two of the former and but three of the latter, and for induction all too few. The low average lifetime of British iron steam, 15.79 years, is almost identical with that for British iron sail, which was 15.74. The greater longevity of American wood than British iron steam, shown to be 60 per cent., is not due altogether to the fact that none of the former, but several of the latter were "missing," "abandoned," "foundered," or "sunk." The British steamers becoming extinct in this way numbered 32, or one third of the whole, with average age of 15.56 years.

[1] Composite vessels not included.

Excluding worn-out vessels, sea-life for sail and steam, so far as appears, may be stated as follows: —

PROPER SEA-LIFE OF SAILERS AND STEAMERS.

	Years.
British wood sail	20.76
American wood sail	20.45
British iron sail	15.74
American iron sail (none lost)	—
British wood steam (2 only)	—
American wood steam	25.30
British iron steam	13.43
American iron steam (3 only)	—

And we found the worn-out fleets had longevity as follows: —

LONGEVITY OF WORN-OUT FLEETS.

	Years.
British wood sail	30.19
American wood sail	36.28
British iron sail (no cases given)	—
American iron sail (none worn out)	—
British wood steam (no cases given)	—
American wood steam	28.12
British iron steam	25.15
American iron steam (none worn out)	—

Plainly, these figures show nothing for Americans to be ashamed of, nor give any evidence of the alleged superiority of British shipbuilding and navigation. But there will be fuller statistics given as conclusive proof of American superiority, and these we shall next present; meanwhile, the coming comparison has cast its shadow before.

The Ratio of Life to Endurance. Some interesting facts may be noticed here. Taking the British and American wood sail together, the term of sea-life is found to be about 62 per cent. of that of the time of endurance; but British iron steam has a proportion of only 53.4 per cent. For British iron sail, as we have seen, full data is not at hand, but the proportion is probably not above 55 per cent. These findings cannot be far from the mark, both absolutely and relatively. While they prove that the wooden sailing ship of the United States is entitled to the greater confidence, which is bestowed by seamen, they also show how large is the margin for improvement in the seaworthiness and safe navigation of all kinds of ves-

sels, but particularly those of British metal cheaply built. The London Lloyds had much better be employed in raising the low character of British iron shipping than in contriving to starve out and run off the sea the safer tonnage of the United States. Such of our own people as have aided and abetted their course owe it to conscience and to duty to hold in honor hereafter the tall mastheads flying their country's flag.

Comparative Survival of British and American built Wood and Iron Vessels. The national fleets with which we are now to deal comprise much the greater portion of the shipping of the world. They are the largest that have been built by any two nations, and should afford averages of sufficient number and quantity to indicate truly the comparative merits of their construction. They include all vessels, British and American built, of the different kinds and classes, except composite, above 100 tons (net for sail and gross for steam vessels), found in Lloyd's Register for 1890–91.

It will be seen from the tables numbered I., II., III., IV., and V., which accompany this text, that each distinctive fleet of steam and sail, wood and iron, is principally composed of vessels known as "classed" and "unclassed;" but in most cases there is also a small fleet of "class expired." These divisions or subdivisions are treated separately, and then combined as one. Then the steam and sail, wood and iron vessels having been handled separately for the two flags, all the fleets of each are combined as one. Thus wise is shown, in specialty and generality, the comparative merits of the shipbuilding carried on by Great Britain and the United States. The comparisons made may relate to any two kinds or classes of vessel, of either or both nations. It will be observed that the columns of the tables first give the age, number, and tons; and tables II., IV., and V. give the percentage of number and tons, for the whole of any fleet or division; and then at stages of ten years and upward, fifteen years and upward, and so on, in five-year steps to thirty-five years and upward of age. Also, that the numbers, tonnages, and the average of the same are given for each of the divisions composing a fleet, as well as for the fleet entire.

Referring especially to Table I., it will be seen that the different fleets, in the order of average age, take precedence as follows: —

COMPARATIVE SURVIVAL OF BRITISH AND AMERICAN BUILT WOOD AND IRON VESSELS. TABLE I.

Description of Vessel.	Whole Fleet.			Vessels above 10 Years Old.			Vessels above 15 Years Old.			Vessels above 20 Years Old.			Vessels above 25 Years Old.			Vessels above 30 Years Old.			Vessels above 35 Years Old.			Oldest Vessel.
	Av. Age.	No.	Tons.	Av. Age.	No.	Tons.	Av. Age.	No.	Tons.	Av. Age.	No.	Tons.	Av. Age.	No.	Tons.	Av. Age.	No.	Tons.	Av. Age.	No.	Tons.	Years.
American-built.																						
Wood steamers, classed . .	8.91	35	26,783	16.66	9	7,279	25.66	3	1,864	30.00	1	1,271	38.00	1	244	38.00	1	244	38.00	1	244	38
Wood steamers, unclassed .	17.57	223	167,026	25.03	141	123,833	26.87	122	112,779	27.93	110	103,419	29.72	79	68,194	37.42	19	15,961	39.58	12	9,921	51
Wood steam fleet	16.40	258	193,809	24.54	150	131,112	26.84	125	114,643	27.97	111	104,690	29.82	80	68,438	37.45	20	16,205	39.46	13	10,165	51
British-built.																						
Wood steamers, classed . .	12.46	15	3,055	21.14	7	1,599	23.80	5	1,289	28.33	3	828	30.50	2	392	35.00	1	186	—	—	—	35
Wood steamers, unclassed .	20.88	183	42,679	23.26	158	38,143	25.28	132	33,766	28.76	88	18,484	33.25	51	10,194	36.85	28	5,725	40.64	14	2,458	65
Wood steam fleet	20.24	198	45,734	23.16	165	39,733	25.22	137	35,055	28.74	91	19,312	33.15	53	10,586	36.79	29	5,911	40.64	14	2,458	65
American-built.																						
Iron steamers, classed . . .	9.77	117	253,435	14.82	46	105,344	17.65	20	44,193	24.00	1	2,287	—	—	—	—	—	—	—	—	—	24
Iron steamers, unclassed . .	10.88	313	200,536	20.65	121	72,769	24.14	84	55,964	27.77	52	34,865	31.62	29	17,202	34.53	15	8,027	39.00	4	2,394	45
Iron steamers, class expired .	19.07	10	12,370	19.07	10	12,370	19.07	10	12,370	22.16	6	7,238	30.00	1	2,003	—	—	—	—	—	—	30
Iron steam fleet	10.79	440	466,341	19.08	177	190,483	22.61	114	112,527	27.13	59	44,390	31.56	30	19,205	34.53	15	8,027	39.00	4	2,394	45
British-built.																						
Iron steamers, classed . . .	8.58	4,915	7,551,681	16.82	1,500	1,866,136	20.44	816	951,628	25.55	265	265,135	28.77	104	96,356	33.90	21	21,017	36.66	3	2,480	37
Iron steamers, unclassed . .	16.69	2,943	2,844,071	21.96	1,968	1,757,331	24.51	1,527	1,403,732	27.91	1,006	755,415	31.29	585	389,743	35.10	288	159,678	38.82	104	47,091	51
Iron steamers, class expired .	17.34	73	54,972	22.07	52	38,284	25.08	39	32,245	27.34	29	31,741	30.25	16	14,232	34.28	7	7,016	36.00	2	1,432	36
Iron steam fleet	11.67	7,931	10,450,724	19.77	3,520	3,661,751	22.19	2,482	2,387,605	27.42	1,300	1,052,291	30.89	705	500,331	35.00	316	187,711	38.71	109	51,003	51
American-built.																						
Wood sail, classed	15.05	1,591	1,130,240	20.86	953	707,126	23.46	714	384,676	28.83	388	282,210	34.59	201	147,850	38.86	124	82,232	42.72	70	41,844	75
Wood sail, unclassed . . .	22.90	1,867	618,889	26.06	1,571	513,748	27.55	1,402	452,354	31.47	1,009	326,375	35.92	660	219,060	39.10	478	160,813	42.48	304	95,770	89
Wood sail fleet	19.26	3,458	1,749,129	24.10	2,524	1,220,874	26.17	2,116	837,030	30.74	1,397	608,585	35.61	861	366,910	39.01	602	243,045	42.53	374	137,614	89
British-built.																						
Wood sail, classed	17.17	869	257,270	20.00	694	215,222	23.92	438	142,850	27.71	273	92,580	31.66	149	48,856	36.28	68	22,848	46.37	19	4,425	71
Wood sail, unclassed . . .	24.60	2,575	675,642	26.74	2,301	622,786	28.09	2,022	547,090	31.05	1,644	433,675	34.96	1,093	290,821	39.71	660	169,113	45.66	352	78,282	115
Wood sail, class expired . .	20.77	9	3,858	20.77	9	3,858	22.71	7	2,367	28.00	3	1,084	31.50	2	793	36.00	1	204	36.00	1	204	36
Wood sail fleet	22.69	3,453	936,770	25.16	3,004	841,866	27.74	2,467	692,307	30.57	1,920	527,339	34.56	1,244	340,470	39.33	729	192,165	45.67	372	82,911	115
American-built.																						
Iron sail, classed. (All) . .	6.66	3	4,437	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
British-built.																						
Iron sail, classed	14.21	1,791	2,233,184	19.30	1,150	1,183,386	23.34	668	655,752	25.02	523	478,116	28.60	214	198,516	33.81	42	42,930	37.22	9	10,868	39
Iron sail, unclassed	13.76	158	66,275	22.04	83	30,449	28.12	50	21,072	29.87	43	18,983	32.77	31	15,939	35.90	20	10,870	39.62	8	4,029	44
Iron sail, class expired . . .	26.00	5	3,555	26 00	5	3,555	26.00	5	3,555	28.00	4	2,199	29.00	3	1,681	34.00	1	777	—	—	—	34
Iron sail fleet	14.20	1,954	2,303,014	19.51	1,238	1,217,390	23.68	723	680,379	25.41	570	499,298	29.11	248	216,136	34.47	64	54,577	38.35	17	14,897	44

AVERAGE AGES OF EXISTING FLEETS.

	Years.
American iron sail	6.66
American iron steam	10.79
British iron steam	11.67
British iron sail	14.20
American wood steam	16.40
American wood sail	19.26
British wood steam	20.24
British wood sail	22.69

From this statement it is easily seen that the wooden fleets are much older than the iron, and the oldest of the iron is British-built. While the comparison here is valuable, as reflecting shipbuilding history, there would be something more in it if all other things were equal. The comparative durability of fleets may be indicated by their average ages; for the shorter or longer the duration of vessels, the greater or lesser number of newly built would be included in the calculation. But other things are not quite equal in any two of the above fleets. The British have nearly ceased building wood, steam and sail; and though we have built considerable iron steam, we have scarcely begun to build iron sail, hence comes much of the difference in the ages of these particular fleets. The only approximately fair comparison is between British iron and American wood sail, as these fleets are in course of maintenance by constant new building, the only difference being that British iron is increasing faster than American wood sail. But as shown in the table, 14.20 years against 19.26, the American sail vessel (wood) does not have to be replaced so quickly as the British (iron) by 35 per cent.

It may interest underwriters to note, as between the classed and unclassed divisions, that, excepting in a single instance, — British iron sail, — the unclassed have the greater average ages, and, without exception, the greater survival at ages above ten years. This has the look of there being much less virtue in vessel inspection and classification than is commonly supposed. The greatest lack of Lloyd's or other classification is in British iron steamers, in which division the unclassed is about 37 per cent. of the whole number, and seem to be much the best constructed and navigated. (Table II.) Some of the large

COMPARATIVE SURVIVAL OF BRITISH AND AMERICAN BUILT WOOD AND IRON VESSELS. TABLE II.

Description of Vessel.	Whole Fleet.			Vessels above 10 Years.			Vessels above 15 Years.			Vessels above 20 Years.			Vessels above 25 Years.			Vessels above 30 Years.			Vessels above 35 Years.			Oldest Vessel in Years.
	Average Age.	Whole.		Average Age.	Percentage.		Average Age.	Percentage.		Average Age.	Percentage.		Average Age.	Percentage.		Average Age.	Percentage.		Average Age.	Percentage.		
		Of No.	Of Tons.		Of No.	Of Tons.		Of No.	Of Tons.		Of No.	Of Tons.		Of No.	Of Tons.		Of No.	Of Tons.		Of No.	Of Tons.	
American-built.	Yrs.																					
Wood steamers, classed . .	8.91	35	26,783	16.66	25.71	27.17	25.66	8.57	6.96	30.00	2.87	4.74	38.00	2.87	.91	38.00	2.87	.91	38.00	2.87	.91	38
Wood steamers, unclassed .	17.57	223	167,026	25.03	63.22	74.14	26.87	54.70	67.53	27.93	49.32	61.92	29.72	35.42	40.83	37.42	8.52	9.55	39.58	5.38	5.94	51
Wood steam fleet	16.40	258	193,809	24.54	58.14	67.34	26.84	48.44	58.73	27.97	43.02	54.01	29.82	31.00	35.31	37.45	7.75	8.36	39.46	5.03	5.24	51
British-built.																						
Wood steamers, classed . .	12.46	15	3,055	21.14	46.66	53.00	23.80	33.33	42.96	28.33	20.00	27.60	30.50	13.33	13.06	35.00	6.66	6.20	—	—	—	35
Wood steamers, unclassed .	20.88	183	42,679	23.26	86.34	89.53	25.28	72.12	78.32	28.76	48.08	43.38	33.25	27.86	23.93	36.85	15.21	13.43	40.64	7.65	5.77	65
Wood steam fleet	20.24	198	45,734	23.16	83.33	86.94	25.22	69.19	78.89	28.74	45.94	42.25	33.15	26.76	23.16	36.79	14.64	12.93	40.64	7.07	5.37	65
American-built.																						
Iron steamers, classed . .	9.77	117	253,435	14.82	39.31	41.57	17.65	17.09	17.44	24.00	.08	9.03	—	—	—	—	—	—	—	—	—	24
Iron steamers, unclassed .	10.88	313	200,536	20.65	38.66	36.29	24.14	26.83	27.91	27.77	16.61	17.38	31.62	9.26	8.57	34.53	4.79	4.03	39.00	1.27	1.19	45
Iron steam, class expired .	19.07	10	12,370	19.07	100	100	19.07	100	100	22.16	60.00	58.84	30.00	10.00	16.28	—	—	—	—	—	—	30
Iron steam fleet	10.79	440	466,341	19.08	40.22	40.85	22.61	25.91	24.13	27.13	13.41	9.52	31.56	6.82	4.11	34.53	3.41	1.71	39.00	.91	.51	45
British-built.																						
Iron steamers, classed . .	8.58	4,915	7,551,681	16.82	30.56	24.71	20.44	16.62	12.60	25.55	5.39	3.50	28.77	2.09	1.27	33.90	.42	.27	36.66	.01	.03	37
Iron steamers, unclassed .	16.69	2,943	2,844,071	21.96	66.86	61.78	24.51	51.88	49.35	27.91	47.77	26.56	31.29	19.87	13.70	35.10	9.78	5.61	38.82	3.53	1.65	51
Iron steamers, class expired	17.34	73	54,972	22.07	71.23	69.44	25.08	53.42	58.65	27.34	39.72	57.74	30.25	21.91	25.89	34.28	9.59	12.76	36.00	2.74	2.60	36
Iron steam fleet	11.67	7,931	10,450,724	19.77	44.55	35.04	22.19	31.41	22.84	27.42	16.45	10.07	30.89	8.92	4.78	35.00	4.00	1.79	38.71	1.38	.48	51
American-built.																						
Wood sail, classed	15.05	1,591	1,130,240	20.86	59.93	62.57	23.46	44.90	34.03	28.83	24.40	21.97	34.59	12.64	13.08	38.86	7.80	7.27	42.72	4.30	3.70	75
Wood sail, unclassed . . .	22.90	1,867	618,889	26.06	84.14	83.02	27.55	75.09	72.93	31.47	54.04	52.74	35.92	35.35	35.40	39.10	25.60	25.98	42.48	10.92	15.47	89
Wood sail fleet	19.26	3,458	1,749,129	24.10	72.99	69.79	26.17	61.19	47.85	30.74	40.39	34.79	35.61	24.89	20.97	39.01	17.40	13.89	42.53	10.81	8.10	89
British-built.																						
Wood sail, classed	17.17	869	257,270	20.00	79.86	83.65	23.92	50.40	55.53	27.71	31.42	35.99	31.66	17.15	18.99	36.28	7.82	8.88	46.37	2.18	1.72	71
Wood sail, unclassed . . .	24.60	2,575	675,642	26.74	89.36	92.18	28.09	78.52	80.97	31.05	63.84	64.19	34.96	42.45	43.04	39.71	25.63	25.02	45.66	13.67	11.58	115
Wood sail, class expired .	20.77	9	3,858	20.77	100	100	22.71	77.77	61.35	28.00	33.33	28.10	31.50	22.22	20.55	36.00	11.11	5.28	36.00	11.11	5.28	36
Wood sail fleet	22.69	3,453	936,770	25.16	87.00	89.87	27.74	71.44	73.90	30.57	55.60	56.29	34.56	36.06	35.70	39.33	21.11	20.51	45.67	10.77	8.85	115
American-built.																						
Iron sail, classed	6.66	3	4,437	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7
British-built.																						
Iron sail, classed	14.21	1,791	2,233,184	19.30	64.21	52.99	23.34	37.30	29.40	25.02	29.20	21.41	28.60	11.94	8.88	33.81	2.40	1.92	37.22	.49	.48	39
Iron sail, unclassed . . .	13.76	158	66,275	22.04	52.53	45.93	28.12	31.64	33.30	29.87	27.21	28.66	32.77	19.62	24.49	35.90	12.65	16.40	39.62	5.06	6.08	44
Iron sail, class expired . .	26.00	5	3,555	26.00	100	100	26.00	100	100	28.00	80.00	61.86	29.00	60.00	47.25	34.00	20.00	2.18	—	—	—	34
Iron sail fleet . . . . compared with	14.20	1,954	2,303,014	19.51	63.36	52.86	23.68	37.00	29.54	25.41	29.17	21.68	29.11	12.69	9.38	34.47	3.22	2.36	38.35	.87	.64	44
American wood sail fleet	19.26	3,458	1,749,129	24.10	72.99	69.76	26.17	61.19	47.85	30.74	40.39	34.79	35.61	24.89	20.97	39.01	17.40	13.89	42.53	10.81	8.10	89

corporations, owning many steamers, depend altogether upon their own inspectors, in building and repairing. In British iron sailers the unclassed division is very small, — only 1.19 per cent., — but its superiority in survival is manifest. These facts indicate, plainly, that the average British shipowner has had too much influence in Lloyd's inspection and classification.

The average ages of the fleets with class "expired" rather exceeds the sea-lifetime, but falls short of the longevity of worn-out fleets, for same kinds of vessel, as appears below: —

CLASS EXPIRED.

	Years.
British-built iron steamers	17.34
British-built wood steamers (none)	—
American-built iron steamers	19.07
American-built wood steamers (none)	—
British-built wood sail	20.77
British-built iron sail	26.00
American-built wood sail (none)	—
American-built iron sail (none)	—

These divisions or sub-fleets may be thought too small for just inductions, because they may not represent fairly the average vessel of the fleets to which they belong.

As might be expected, the oldest vessels of the different fleets are unclassed, it being generally the case that vessels are run, some of them, several years after they cease to bear inspection for class. The following table shows the ages of the oldest on class, and of fleet, for the eight different fleets analyzed: —

EXTREME SURVIVAL, VESSELS ABOVE 100 TONS.

Kinds of Vessel.	Oldest on Class.	Oldest of Fleet.
	Years.	Years.
American iron sail (3 in all)	7	7
American iron steam	24	45
British wood steam	35	65
British iron steam	37	51
American wood steam	38	51
British iron sail	39	44
British wood sail	71	115
American wood sail	75	89

COMPARATIVE SURVIVAL OF BRITISH AND AMERICAN BUILT WOOD AND IRON FLEETS. TABLE III.

Description of Fleet.	Whole Fleets.			Fleets above 10 Years.			Fleets above 15 Years.			Fleets above 20 Years.			Fleets above 25 Years.			Fleets above 30 Years.			Fleets above 35 Years.		
	Number.	Average.		Number.	Average.		Number.	Average.		Number.	Average.		Number.	Average.		Number.	Average.		Number.	Average.	
		Age.	Tons.		Age.	Tons.		Age.	Tons.		Age.	Tons.		Age.	Tons.		Age.	Tons.		Age.	Tons.
Steam Fleets.																					
American-built. Iron	440	10.79	1,059	177	19.08	1,076	114	22.61	987	59	27.13	752	30	31.56	640	15	34.53	535	4	39.00	598
British-built. Iron	7,931	11.67	1,317	3,520	19.77	1,040	2,482	22.19	961	1,300	27.42	809	705	30.89	709	316	35.00	590	109	38.71	467
American-built. Wood	258	16.40	751	150	24.54	874	125	26.84	917	111	27.97	943	80	29.82	855	20	37.45	810	13	39.46	781
British-built. Wood	198	20.24	226	165	23.16	240	137	25.22	255	91	28.74	212	53	33.15	199	29	36.79	204	14	40.64	175
Sail Fleets.																					
American-built. Iron	3	6.66	1,479	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
British-built. Iron	1,954	14.20	1,179	1,238	19.51	983	723	23.68	941	570	25.41	875	248	29.11	871	64	34.47	852	17	38.35	876
American-built. Wood	3,458	19.26	505	2,524	24.10	483	2,116	26.17	395	1,397	30.74	435	861	35.61	426	602	39.01	403	374	42.53	368
British-built. Wood	3,453	22.69	271	3,004	25.16	280	2,467	27.74	280	1,920	30.57	274	1,244	34.56	273	729	39.33	263	372	45.67	222
Totals.																					
American-built vessels, all kinds	4,159	—	2,413,716	2,851	—	1,542,469	2,355	—	1,064,200	1,567	—	757,665	971	—	454,553	637	—	267,277	391	—	150,173
British-built vessels, all kinds	13,536	—	13,736,242	7,927	—	5,134,096	5,809	—	3,795,346	3,881	—	2,098,240	2,250	—	1,067,523	1,138	—	440,364	512	—	151,269
Comparison of Totals.																					
American, in percentage of British	30.72	—	17.57	35.96	—	30.04	40.54	—	28.04	40.37	—	36.11	43.15	—	42.58	55.97	—	60.69	76.37	—	99.27

Note. — In the lower line of this table — "comparison of totals" — we have a test of the character of work turned out by the shipyards of Great Britain and the United States. The British fleet is 92.8 per cent. iron-built; the American fleet is 80.4 per cent. wooden. To begin with, the British fleet is nearly 6 to 1 of ours in tonnage, but above the age of 35 years we have almost as much as the British. To have the greater endurance shown, our vessels must have been the better built.

American iron appears at some disadvantage here, but the reason is good why it does not compare favorably for extreme survival.

The industry is young, having sprung up mainly since the war, consequently the vessels built in the mean time cannot be distinguished for age. It is different with the British; they sent the first iron sailer to sea in 1838, and iron steamers were in use before that time, in river and channel navigation. As for the apparent superiority of British wood sail over American in extreme age, it would disappear if the limit of tonnage was either 50 or 250 tons, instead of 100. As it is, American shipwrights must be credited with building the vessel now the oldest on class (not at Lloyds) in the world.

Comparing the figures under the ten-year heading in all the tables of fleets, it will appear that all the steamers are proportionably younger than the sailers. This does not indicate that the survival of steam is less than of sail, but only that there has been the more activity in steam construction in ten years past. We may likewise observe that the difference in ages of the various divisions of fleets is considerably less than between the fleets entire. In the order of survival, the fleets above ten years of age stand as follows: —

AGES OF FLEETS ABOVE TEN YEARS.

	Years.
American-built iron steam	19.08
British-built iron sail	19.51
British-built iron steam	19.77
British-built wood steam	23.16
American-built wood sail	24.10
American-built wood steam	24.54
British-built wood sail	25.16

As for the size of vessels, it plainly appears from the tables, that British iron, both of steam and sail, and American wood of sail propulsion, have increased considerably in average capacity in the past ten years. The smallest vessels of sail and steam are British wood, and the largest British iron.

We will pass now to Table IV., which begins with vessels "above 15 years" of age. While the average longevity of poorly built vessels extends only to 20 years, of fairly built to 25 years, and of the best built to 35 years, without prejudice

to the latter classes, we may fix upon the age of 15 years as the limit when *age*, for all vessels to be compared for survival, may be supposed to begin. Table IV. is therefore composed of fleets, every vessel of which is 15 years old and upward. The average survival of the various fleets, in the order of age, is as follows: —

AGES OF FLEETS ABOVE FIFTEEN YEARS.

	Years.
British-built iron steam	22.19
American-built iron steam	22.61
British-built iron sail	23.68
British-built wood steam	25.22
American-built wood sail	26.17
American-built wood steam	26.84
British-built wood sail	27.74

In this table it is easily seen that wood has a greater survival than iron. This is not altogether due to material, but in part to wood being the longest in use, particularly in the United States, and also, in great degree, to iron vessels, particularly British, having been built too cheaply (not too economically), not of the best material, nor sufficient of it, nor with good work to attain *age*. This fact will appear even more conspicuous in the figures of the table below, from which it is clear that iron has not overtaken, and it is plain cannot overtake, the wood in the various steps of five-year survivals. It also appears that the last test of 35 years and upward records a victory for wood and American workmanship in iron. We copy from Table V., in order of superiority: —

(A) AVERAGE AGES OF FLEETS AT DIFFERENT STAGES OF SURVIVAL.

Kinds of Vessel.	Above 15 Years.	Above 20 Years.	Above 25 Years.	Above 30 Years.	Above 35 Years.	Common Average.
	Years.	Years.	Years.	Years.	Years.	Years.
British iron sail	23.68	25.41	29.11	33.81	38.35	29.76
American iron steam	22.61	27.13	31.56	34.53	39.00	30.94
British iron steam	22.19	27.42	30.89	35.00	38.71	31.03
American wood steam	26.84	27.97	29.82	37.45	39.46	32.30
British wood steam	25.22	28.74	33.15	36.79	40.64	32.85
American wood sail	26.17	30.74	35.61	39.01	42.53	34.91
British wood sail	27.74	30.57	34.56	39.33	45.67	35.17

At the right of this table is a column headed "Common Average," in which will be found a concentrated expression of the various ages given in the preceding columns. From this it appears that wood is superior to iron, and that American wood sail is superior to British iron sail, by 17.30 per cent. At first sight British wood sail is superior to American, but in Tables B and C to follow, we shall see that under the heading "above 35 years," that American wood sail leads all the other fleets by considerable. As for the iron fleets, American steam almost equals British, and excels British sail nearly 4 per cent., which is wonderful in view of the fact, hitherto mentioned, that Great Britain has been building in iron so much longer than the United States, at so much less expense for materials and labor, and therefore with so much more to be expected from her.

We will now examine a table showing the proportionate number of vessels of the fifteen-year and upward fleets, surviving to different ages, copying from Table V. in the order of superiority: —

(B) PROPORTION OF VESSELS ABOVE 15 YEARS OF AGE SURVIVING TO DIFFERENT AGES.

Kinds of Vessel.	Above 20 Years.	Above 25 Years.	Above 30 Years.	Above 35 Years.	Amplitude of Survival Divided by 30.
	Per cent.	Per cent.	Per cent.	Per cent.	Proportionate Nos.
American iron steam .	51.75	26.31	13.16	3.51	23.09
British iron steam . .	52.37	28.40	12.73	4.39	23.42
British iron sail . . .	78.83	34.30	6.43	2.35	28.44
British wood steam . .	66.41	38.68	21.16	10.21	29.88
American wood sail . .	66.02	40.69	28.45	17.67	32.05
British wood sail . . .	77.82	50.42	29.55	15.07	35.85
American wood steam .	88.80	64.00	16.00	10.40	37.08

Observing that British iron sail, above the average age of 20 years, meets extinction *faster* than any other class, and that American wood sail *excels* all other classes in continuation above 20 years, we will examine another table, showing the proportionate tonnage of the fifteen-year fleets surviving to different ages, when comment will be made on both tables to-

COMPARATIVE SURVIVAL OF BRITISH AND AMERICAN BUILT WOOD AND IRON VESSELS. TABLE IV.

Description of Vessel.	Vessels above 15 Years.			Vessels above 20 Years.			Vessels above 25 Years.			Vessels above 30 Years.			Vessels above 35 Years.		
	Average Age.	Number.	Tons.	Average Age.	Percentage.		Average Age.	Percentage.		Average Age.	Percentage.		Average Age.	Percentage.	
					Of No.	Of Tons.		Of No.	Of Tons.		Of No.	Of Tons.		Of No.	Of Tons.
American-built.															
Wood steamers, classed	25.66	3	1,864	30.00	33.33	68.19	38.00	33.33	13.09	38.00	33.33	13.09	38.00	33.33	13.09
Wood steamers, unclassed	26.87	122	112,779	27.93	90.16	91.70	29.72	64.75	60.46	37.42	15.57	14.15	39.58	9.83	8.79
Wood steam fleet	26.84	125	114,643	27.97	88.80	91.31	29.82	64.00	59.69	37.45	16.00	14.13	39.46	10.40	8.86
British-built.															
Wood steamers, classed	23.80	5	1,289	28.33	60.00	64.23	30.50	40.00	30.41	35.00	20.00	14.43	—	—	—
Wood steamers, unclassed	25.28	132	33,766	28.76	66.66	54.71	33.25	38.63	30.19	36.85	21.21	16.95	40.64	10.60	7.28
Wood steam fleet	25.22	137	35,055	28.74	66.41	55.09	33.15	38.68	30.24	36.79	21.16	16.88	40.64	10.21	7.00
American-built.															
Iron steamers, classed	17.65	20	44,193	24.00	5.00	5.17	—	—	—	—	—	—	—	—	—
Iron steamers, unclassed	24.14	84	55,964	27.77	61.90	62.30	31.62	34.52	30.73	34.53	17.85	14.34	39.00	4.76	4.28
Iron steamers, class expired	19.07	10	12,370	22.16	60.00	58.51	30.00	10.00	16.19	—	—	—	—	—	—
Iron steam fleet	22.61	114	112,527	27.13	51.75	39.44	31.56	26.31	17.06	34.53	13.16	7.14	39.00	3.51	2.12
British-built.															
Iron steamers, classed	20.44	816	951,628	25.55	32.47	27.86	28.77	12.74	10.12	33.90	2.57	2.20	36.66	.36	.26
Iron steamers, unclassed	24.51	1,527	1,403,732	27.91	65.88	53.81	31.29	38.31	27.76	35.10	18.86	11.37	38.82	6.81	3.35
Iron steamers, class expired	25.08	39	32,245	27.34	74.36	98.47	30.25	41.02	44.19	34.28	17.95	21.78	36.00	5.13	4.44
Iron steam fleet	22.19	2,482	2,387,605	27.42	52.37	44.07	30.89	28.40	20.96	35.00	12.73	7.86	38.71	4.39	2.13
American-built.															
Wood sail, classed	23.46	714	384,676	28.83	54.34	73.36	34.59	28.15	38.43	38.86	17.36	21.37	42.72	9.80	10.87
Wood sail, unclassed	27.55	1,402	452,354	31.47	72.07	72.15	35.92	47.14	48.42	39.10	34.14	35.55	42.48	21.71	21.17
Wood sail fleet	26.17	2,116	837,030	30.74	66.02	72.77	35.61	40.69	43.83	39.01	28.45	29.03	42.53	17.67	16.33
British-built.															
Wood sail, classed	23.92	438	142,850	27.71	62.32	64.81	31.66	34.01	34.20	36.28	15.52	15.99	46.37	4.33	3.09
Wood sail, unclassed	28.09	2,022	547,090	31.05	81.30	79.27	34.96	54.05	53.16	39.71	32.68	30.91	45.66	17.40	14.31
Wood sail, class expired	22.71	7	2,367	28.00	42.86	45.79	31.50	28.57	33.02	36.00	14.28	8.61	36.00	14.28	8.61
Wood sail fleet	27.74	2,467	692,307	30.57	77.82	76.17	34.56	50.42	49.17	39.33	29.55	27.75	45.67	15.07	11.97
American-built.															
Iron sail, classed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
British-built.															
Iron sail, classed	23.34	668	655,752	25.02	78.29	72.91	28.00	32.03	30.27	33.81	6.43	6.55	37.22	1.34	1.65
Iron sail, unclassed	28.12	50	21,072	29.87	86.00	90.09	32.77	62.00	75.64	35.90	40.00	51.58	39.62	16.00	19.12
Iron sail, class expired	26.00	5	3,555	28.00	80.00	61.86	29.00	60.00	47.28	34.00	20.00	21.86	—	—	—
Iron sail fleet	23.68	723	680,379	25.41	78.83	73.39	29.11	34.30	31.77	34.47	8.85	8.02	38.35	2.35	2.18
compared with															
American wood sail fleet	26.17	2,116	837,030	30.74	66.02	72.77	35.61	40.69	43.83	39.01	28.45	29.03	42.53	17.67	16.33

gether. These two tables, B and C, are doubtless more instructive than Table A, since they embrace two elements of computation, viz., number and tonnage or quantity.

(C) PROPORTION OF TONNAGE ABOVE 15 YEARS OF AGE SURVIVING TO DIFFERENT AGES.

Kinds of Vessel.	Above 20 Years.	Above 25 Years.	Above 30 Years.	Above 35 Years.	Amplitude of Survival Divided by 30.
	Per cent.	Per cent.	Per cent.	Per cent.	Proportionate Nos.
American iron steam .	39.44	17.06	7.14	2.12	17.92
British iron steam . .	44.07	20.96	7.86	2.13	19.54
British wood steam . .	55.09	30.24	16.88	7.00	25.26
British iron sail . . .	73.39	31.77	6.55	2.18	26.97
American wood sail. .	72.77	43.83	29.03	16.33	33.95
British wood sail. . .	76.17	49.17	27.75	11.97	34.77
American wood steam .	91.31	59.69	14.13	8.86	36.11

From these tables it appears that, in the amplitudes of number and of tonnage for survival, American wood steam holds first place, though it occupies the fourth in Table A. In like manner, British wood sail holds second rank, though it has the first in Table A. Also, American wood sail holds third place, though it has the second in Table A; and British iron sail, in the seventh rank in Table A, gets promotion to the fifth in Table B, and to the fourth in Table C, and other changes may be noted. It is therefore necessary to combine the results in a fourth table, D, in which proportional numbers shall represent age, number, and tonnage. This may be done by finding the common average of the proportional number in the three tables, A, B, C, by applying Simpson's rule of alternate multipliers, as for the areas of surfaces of curvilinear outline, in use by naval architects, and then reducing by a divisor to a number of a size convenient for comparison.

COMPARATIVE SURVIVAL OF BRITISH AND AMERICAN BUILT WOOD AND IRON FLEETS. TABLE V.

Description of Fleet.	Fleets above 15 Years.			Fleets above 20 Years.			Fleets above 25 Years.			Fleets above 30 Years.			Fleets above 35 Years.		
	Average Age.	Number.	Tons.	Average Age.	Percentage.		Average Age.	Percentage.		Average Age.	Percentage.		Average Age.	Percentage.	
					Of No.	Of Tons.		Of No.	Of Tons.		Of No.	Of Tons.		Of No.	Of Tons.
Steam Fleets.															
American-built. Iron	22.61	114	112,527	27.13	51.75	39.44	31.56	26.31	17.06	34.53	13.16	7.14	39.00	3.51	2.12
British-built. Iron	22.19	2,482	2,387,605	27.42	52.37	44.07	30.89	28.40	20.96	35.00	12.73	7.86	38.71	4.39	2.13
American-built. Wood	26.84	125	114,643	27.97	88.80	91.31	29.82	64.00	59.69	37.45	16.00	14.13	39.46	10.40	8.86
British-built. Wood	25.22	137	35,055	28.74	66.41	55.09	33.15	38.68	30.24	36.79	21.16	16.88	40.64	10.21	7.00
Sail Fleets.															
American-built. Iron	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
British-built. Iron	23.68	723	680,379	25.41	78.83	73.39	29.11	34.30	31.77	33.81	6.43	6.55	38.35	2.35	2.18
American-built. Wood	26.17	2,116	837,030	30.74	66.02	72.77	35.61	40.69	43.83	39.01	28.45	29.03	42.53	17.67	16.33
British-built. Wood	27.74	2,467	692,307	30.57	77.82	76.17	34.56	50.42	49.17	39.33	29.55	27.75	45.67	15.07	11.97
Totals of Number and Tonnage. (From Table III.)															
American-built vessels [1]	—	2,355	1,064,200	—	1,567	757,665	—	971	454,553	—	637	267,277	—	391	150,173
British-built vessels	—	5,809	3,795,346	—	3,881	2,098,240	—	2,250	1,067,523	—	1,138	440,364	—	512	151,269
Comparison of Fleets. [2]															
American, in percentage of British	—	40.54	28.04	—	40.37	36.11	—	43.15	42.58	—	55.97	60.69	—	76.37	99.27

[1] Comparison of shipbuilding under American and British flags.
[2] Superiority of American.

(D) COMPARISON OF SURVIVAL: AGE, NUMBER, AND TONNAGE COMBINED.

Kinds of Vessel.	Proportional Numbers of Table A.	Proportional Numbers of Table B.	Proportional Numbers of Table C.	Average of Numbers.
American iron steam	30.94	23.09	17.92	23.98
British iron steam	31.03	23.42	19.54	24.66
British iron sail	29.76	28.44	26.97	28.39
British wood steam	32.85	29.88	25.66	29.46
American wood sail	34.91	32.05	33.95	33.63
American wood steam . . .	32.30	37.08	36.11	35.16
British wood sail	35.17	35.85	34.77	35.26

Here again it is seen that wood-built vessels outlast, and therefore should outrank iron-built. British iron steam outlasts American 2.83 per cent., which is a trifling difference, considering British builders had twenty years the start of American. But for this start, and the fact that much of our iron steam is built for domestic trade; and another fact, that our builders have copied from the British rules of building, instead of striking out for themselves, as our wood builders did, and improving on foreign construction, the figures would have shown a better result. This is foreshadowed in wood steam building, a branch of the trade that has been carried on at equal length in both countries. American wood steam vessels outlast the British 19.34 per cent., and there is no reason why our iron steamers, if not quite so cheaply built, with our superior materials and skill, should not do the same thing. We believe in time they will, as we are sure they would do now, if our computations were confined, on both sides, to an equal proportion of steamers in the ocean trade.

As for the superiority of British wood sail over American, it is only 4.84 per cent., and due partly to building with, and importations of, timber from semi-tropical countries, but more perhaps to a preponderance of small vessels whose traffic is confined to the temperate waters and climate of Europe; whereas many of our smaller craft, built of northern mixed hard and soft wood, spend much of their time in the tropical waters and climate of the Gulf of Mexico and the West Indies, and therefore cannot be expected to outlast vessels of southern

timber used mostly in northern waters. But American sailers, even the poorest, lack nothing when compared with British iron sailers, and this is the comparison *in point* to be made, since our free-ship friends think there is nothing in a wooden ship to be compared with an iron one. The British iron ship is wholly of British materials and skill, as the American wooden ship is of American materials and skill; and both kinds of vessel have been long enough in building to have developed their qualities in perfection.

Not many years ago a senator of Kentucky, the State that first put the question of "free ships" into a political platform, a State wherein an American ocean ship was never built nor owned, in a memorable speech characterized British sailing ships as "fine iron sailing ships," and stigmatized the ships of his own country as "miserable old wooden sailing craft." Little did he think that the vessels which he despised and aspersed could be vindicated to the damage of the "fine" ships that he flattered, and which belonged to our rivals, the ruthless rulers of the sea. The senator's unpatriotic course well illustrates the line of Pope, that, "A little knowledge is a dangerous thing." By the tables, now for the first time made up and published, the superiority of our wooden, over British iron, ships is amply proved. That shipping of iron may be better than of wood is not to be doubted, but to be so it must be built that way, and this is yet to be done in any country for sailing vessels.

Readers will observe in Table D, that the superiority of American wood, to British iron, sail is expressed in the numerical relations of 33.63 to 28.39, — a difference of 18.46 per cent. Also, that our wood sail ships compare with British iron steam, as 33.63 to 24.66, — a difference of 36.37 per cent. And, what is more remarkable, our wooden steamers compare with British iron, as 35.16 to 24.66, — a superiority of 42.57 per cent.

If it be thought that number and tonnage only (leaving out age) should be combined in the final comparison, such table will now be given: —

(E) FINAL COMPARISON OF SURVIVAL: NUMBER AND TONNAGE ONLY COMBINED.

Kinds of Vessel.	Proportional Numbers of Table B.	Proportional Numbers of Table C.	Average of Numbers.
American iron steam	23.09	17.92	20.51
British iron steam	23.42	19.54	21.48
British iron sail	28.44	26.97	27.71
British wood steam	29.88	25.66	27.77
American wood sail	32.05	33.95	33.00
British wood sail	35.85	34.77	35.31
American wood steam	37.08	36.11	36.59

It will readily be seen that this table does not improve the comparison for British iron sail and steam with American wood sail. On the contrary, a still greater weight is loaded on the American end of the beam. The shortcoming of British iron sail that was 18.46 per cent. has become 19.09; and the same for steam, which was 36.37, has become 53.63 per cent.

The facts relating to iron and wooden ships bring to mind the observation of a great Englishman, William Shakespeare, "Poet," that, "Reputation is often got without merit, and lost without deserving."

Final Test of Superiority. In Table V. a comparison is instituted between all the British and all the American fleets, under the respective flags, to the end that we may ascertain the relative merits of the shipbuilding practice of the two nations. All the sail and steam, whether of wood or iron, are included in a single grand fleet on each side, and the average survival of these two fleets is shown at ages above 15, 20, 25, 30, and 35 years. To begin with, the British fleet largely out-numbers the American, but soon falls off in ratio: —

	Per cent.
At the age of fifteen years, of the number of British, the American are	40.54
At the age of twenty years, of the number of British, the American are	40.37
At the age of twenty-five years, of the number of British, the American increased to	43.15
At the age of thirty years, of the number of British, the American increased to	55.97
And at the age of thirty-five years, of the number of British, the American increased to	76.37

As the British-built fleet is composed of nearly equal numbers of iron and wooden vessels, and the American fleet is 95.16 per cent. wooden, the difference in favor of our shipwork and material is very marked. But this difference is even greater than thus appears, when the amount of tonnage surviving, instead of the number of vessels, is compared. The most lasting British vessels are the small wooden ones, whose tonnage cuts a secondary figure in the great total. The average size of vessel of the respective fleets is, for the British, 653 tons, and for the American, 451 tons, or 70 per cent. of the British size. The proportion of number being less than 40 per cent. of British for American, it will be seen that the fairest comparison must be that for the *survival of tonnage*, especially as we are contrasting the shipbuilding performance of the two nations. The British fleet greatly exceeds in tonnage, to begin with, but finally equalizes nearly: —

	Per cent.
At the age of fifteen years, of the tonnage of British, the American fleet is	28.04
At the age of twenty years, of the tonnage of British, the American fleet is	36.11
At the age of twenty-five years, of the tonnage of British, the American fleet is	42.58
At the age of thirty years, of the tonnage of British, the American fleet is	60.69
And at the age of thirty-five years, of the tonnage of British, the American fleet is	99.27

Here is a puncture in the balloon of "free" ships, that should collapse it high in mid-air, surrounded by ice-cold comfort for the detractors of American shipbuilding, a business of which they, one and all, are perfectly innocent of any knowledge that will bear the light of a new moon.

British Iron and American Wood Sail Further Compared. While it is obvious many other comparisons may be made from the tables, we will close with one more. This will be the proportion of present British iron and American wood sail fleets existing at different periods in the past, with the differences between the same, which may be set out as follows: —

PROPORTION OF NUMBERS AND TONNAGE, AND DIFFERENCE.

At Periods of	British.		American.		Difference.	
	Number.	Tonnage.	Number.	Tonnage.	Number.	Tonnage.
	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
Above 10 years.	63.36	52.86	72.99	69.79	9.63	16.93
" 15 "	37.00	29.54	61.19	47.85	24.19	18.31
" 20 "	29.17	21.68	40.39	34.78	11.22	13.11
" 25 "	12.69	9.38	24.89	20.97	12.20	11.59
" 30 "	3.22	2.26	17.40	13.89	14.18	11.53
" 35 "	.87	.64	10.81	8.10	9.94	7.46
Average of differences for periods					13.56	13.15

A problem in point is this: What is the economical value of the great difference in survival shown above? The cost per ton being known, or if the two fleets cost the same sum, as it is probable in this case, first find the difference in survival, second the difference in the profit-time, then obtain the value in terms of the cost of the fleets, and from the latter deduce the ratio of value, as in examples following. Manifestly, if the two fleets cost the same sum, an equal number of years must be deducted for repayment, and the shortage of survival must come off the period for profit-time. From Table I. it may be calculated that portions of the two fleets survive as follows: —

Survival of	American.	British.	Difference.
	Years.	Years.	Years.
Three fourths of the fleets	23.85	17.90	5.95
Half of the fleets	28.52	21.60	6.92
Quarter of the fleets	35.60	27.45	8.15
Eighth of the fleets	41.30	29.12	11.18
Average excess of American survival			6.50

From this showing it is clear, if ten years' time be taken for repayment of cost and interest, that the profit-time remaining for the respective fleets will be as follows: —

Profit-time of	American.	British.	Difference.
	Years.	Years.	Years.
Three fourths of the fleets	13.85	7.90	5.95
Half of the fleets	18.52	11.60	6.92
Quarter of the fleets	25.60	17.45	8.15
Eighth of the fleets	31.30	19.12	11.18
Average excess of American profit-time			6.50

It is obvious from this statement that if we deduct from the four divisions of the two fleets any number equal to, or less than, the time in the British column, the difference in any case, that the average, 6.5 years, will be the same, precisely, as shown above. It follows that 6.5 years expresses the economical average *value* of the American superiority. Also, that if three fourths of the fleets can return their cost in 5.95 years, and the remaining fourth in 8.15 years, as should be easily done, then the American profit-time would be 17.90 and 27.45 years, and the British profit-time would be 11.95 and 19.30, respectively. The value in terms of cost of fleets would be as follows: —

AMERICAN SUPERIORITY.

Portions of Fleets.	American Cost contained in Profit-time.	British Cost contained in Profit-time.	Number of British to Equal one American Ship.
	Times.	Times.	Number.
Three fourths	3.00	2.00	1.50
One fourth	3.36	2.36	1.42
Average British to one American ship			1.48

The Conclusion of the Matter. Here may be closed our examination of the ship-survival question. It must now be clear, that the American wooden sailing ship, worth 48 per cent. more than a British iron one, is a *half cheaper* at the same price. In other words, where the average British iron sailing ship is worth two dollars, the average American wood sailer is worth three dollars per ton; consequently, the height

of folly would be to throw away our knowledge and experience in shipbuilding, quit building our own vessels, and employ the shipyards of Great Britain to produce iron ships for our use. It must also be clear that the British Lloyds and English underwriters generally, prompted thereto by British shipowners and builders, have no just foundation for discriminating against our wooden ships in marine insurance, thereby to run them off the sea. It follows, as a matter of course, that it is the bounden duty of our government to interfere, and protect our shipping rights and interests, as it has not fully done for three quarters of a century past, or pretended to do since 1828. It is especially disgraceful to suffer any foreign nation to invade our ports by their underwriters, and enforce under our very eyes a baseless and fraudulent discriminating policy, for the purpose of acquiring the control of our foreign trade, and corrupting our politics through that control. And those of our people who have believed in suffering this thing to be done, who have aided in the ruin of our foreign shipping business by voice and vote, by refusing to grant it just and equal protection with other American interests, we commend to a better study of the question, feeling assured that, when their judgment is enlightened, their patriotism will be aroused.

CHAPTER XV.

FOREIGN MARINE INSURANCE POWER AND ITS IRON RULE.

Of the active forces which influence, control, or forbid the employment of shipping, none have greater effect than marine insurance power. Beginning with a gentle influence upon new and first-class vessels, with moderate premium rates for hulls and cargoes, it gains control with the lapse of time and advance of age, rates increasing meanwhile; until shortly it forbids the making of distant voyages and the carrying of particular cargoes, rates growing onerous meantime; and, finally, it deserts the worn-out ship in port and leaves its hulk to idle and decay. This is the ordinary course of this speculative power when acting on shipping of its own flag. It is a necessary factor in trade and transportation, is of the utmost utility, and performs a public service. But it has its likes and dislikes, its fancies and caprices, as well as many virtues.

While the skillful and experienced underwriter aims to apply a system of estimation founded on experience, when he fixes the values of the hazards in which he deals, there are many in the business who prefer to conjure with luck. Fire and life insurance aspire to scientific bases, but marine underwriting is of too complex a nature to be readily reduced to a system or body of knowledge, and the interests concerned in the business are too discordant to accept and practice perfect rules if made. It results that, outside of successful mutual companies and well-managed clubs, risks are not classified at all, and premium rates are arbitrary, often unfair, and never justly proportioned to perils. A second-class ship, or one of moderate age, with strength unimpaired, is quite as safe, *per se*, as a first-class or a new one, but a higher premium is charged, on the principle, probably, that it can be collected So, poor vessels are taken with good ones, for a single owner, where the former would be rejected if offered separately by different owners. Underwrit-

ers confer great benefits on commerce, and they know it; and they generally patronize their own flag, favor large customers, and make rival flags and small dealers contribute to the objects of their beneficence. Using such influence and wielding such power, manifestly a nation's underwriters should be its own.

State-Insurance Protection. It has recently come to light that soon after the date of the first British navigation act, the government of Portugal instituted an obligatory insurance system, as an instrumentality of commerce under the patronage of the state. At that time John II., surnamed the Great, founder of the dynasty of Aviz, was the reigning monarch. This ruler laid the foundation of Portugal's greatness in shipping. His government covered the period from 1385 to 1433. On his order, vessels were constructed for the special purpose of contending with the stormy seas of the Cape of Good Hope, the largest of them at first not exceeding 300 tons. From the improvements in shipbuilding thus originated, Portugal became the most advanced state in Europe, in a knowledge of this important art. It was long supposed that the Portuguese alone could build such ships as were required for voyages to India, which they pioneered.

The obligatory insurance mentioned is said to have been applied to Portuguese vessels of less than fifty tons burden, as measured at that time, but by our present rules at least one hundred tons. This insurance indemnified only for total losses, and exacted a premium of two per cent. of the profits of the vessels with the addition of an advance fee as a quota upon the value of each cargo carried. The length of time this policy continued seems to be unknown. In its working, it was practically a bounty of the government, intended to aid shipowners and secure the building of a new vessel in place of one lost; and, it cannot be doubted, contributed much to the spread of Lusitanian commerce over the maritime world. This kind of insurance is now unknown. It may have been suggested by the British navigation law enacted in 1381. That was intended to, and did, protect British shipping, by compelling British merchants to make shipments by British vessels, as explained elsewhere. This Portuguese insurance policy may have prompted British underwriters to protect British shipping, by inspection and underwriting policies, as at the present time.

British Insurance Protection. The next thing to state-insurance protection is the patriotic system of ship inspection and insurance carried on by modern European nations, but particularly the British. Since 1834, when Lloyd's Register was instituted, there has prevailed a general practice of appreciating British, and depreciating "foreign," tonnage, both in classification and underwriting. The foundation for these protective policies was laid in the rules for inspection and classification of wooden ships. These did not aim to grade the "perils of the sea," but to characterize the "intrinsic qualities" of vessels, which, of course, were governed largely by the cost of building and repairing. In other words, classification in Lloyd's Register depended more on cost than skill and security. To this feature was added the condition of being British-built, and especially of British materials. Nothing "foreign" was equal to British, was the teaching of the great authority on shipping. Under this system, there was, of course, a high cultivation of the national sentiment, that no country in the world could build vessels the equals of those turned out in the United Kingdom. While there was no truth in this sentiment, much protection could be evolved from it. When iron shipbuilding sprung up, it was sought to inspect and class its output on the "intrinsic quality" principle, and to set a rating of years, to express durability. This plan, erelong, had to be abandoned, as it was found from experience that iron shipping, as built by their own rules, was too uncertain in its sea-life for the predication of duration. Rating in years was discontinued, and a gradation of numbers substituted. So that now metal vessels are characterized as 100 A, 95 A, 90 A, 85 A, 80 A, or 75 A, according as they may have been built by corresponding tables of scantling sizes and weights of materials. Wooden vessels continue to be classed on the old principle, hence the facility is greater for discrimination against wooden than iron vessels.

The construction of wooden vessels admits the choice of a great variety of material. The policy at Lloyds has been to keep down the rating of the different kinds of timber produced in the United States, and to set up the rating of British forest products. To this day our matchless white oak of New Jersey, Maryland, Virginia, and North Carolina is graded the same in

years as the growth of Canada, which is two thirds the time of British oak, also inferior in strength and durability. To this day, also, Lloyd's have never appointed surveyors to inspect wooden vessels in course of construction in this rival country of ours, though they were sent to all other countries, and this discrimination was practiced before iron shipbuilding became an industry in England. From the first a standing rule to give no vessel a full class, if not built under survey, has been in force; and so has another rule, to grant the character A to no vessel, unless her date and place of building is made known. These distinctions and regulations declare their objects, — the protection of the British marine.

The course of Lloyds in forcing our wooden sailing ships out of their Register in 1870, with a view to discriminating our export cargoes into British iron ships, has been described elsewhere. That attack upon a rival marine [1] was a mild exhibition of underwriting rule compared to the latest aggression, which may be characterized, not only as selfish and severe, but offensive and insulting.

The "Wheat Tariff Association." One would not suppose that a "Wheat Tariff" was an underwriters' association, yet it is. Sixteen companies of London and Liverpool, having agencies on the Pacific coast (and for the most part in all our larger ports), closed an agreement the first of June, 1891, to write no risks on grain, flour, or other merchandise by vessels from San Francisco, Columbia or Willamette rivers, or Puget Sound, to ports in Europe, except on terms and conditions as set forth in a compact, which has been published in a British journal.[2]

COPY OF AGREEMENT.

We the undersigned insurance companies agree that we will not write any risks on grain &/or flour &/or salmon &/or other merchandise by vessels from San Francisco, Columbia &/or Willamette rivers or Puget Sound to port or ports in Europe, except on terms and conditions set forth in the tariff agreement of 3d November last (1890) and annexed hereto (Schedule A), subject, however, to such alterations as may be determined from time to time by the Tariff Committee.

[1] See *Lloyd's Rules and Regulations for* 1870, pages 43 and 44, article, "Foreign-Built Ships."

[2] *Fairplay.*

The said committee shall have power to deal with all questions hereunder.

This agreement applies to branches &/or agencies, as well as to the head offices.

It is further agreed that we will not make, allow, or promise any deductions or payments in the shape of rebates, commissions, brokerages, discounts, return commissions, percentages of profits, or otherwise in excess of the deductions allowed by the tariff from time to time.

It is also agreed that, —

I. No Company whose signature is affixed hereto shall withdraw therefrom without giving six months' notice in writing, but in the event of a reduction of rate, any Company may give notice of its refusal to participate in the distribution during such six months' notice.

II. No Company shall have more than one agent or representative at any of the above seaports.

III. The new rates and conditions shall apply to all vessels arriving at the loading port after sundown, 31st May, 1891, local time, and to all insurances effected after that time.

IV. All insurances accepted prior to the sailing of the vessel from the port of loading shall be shared as set forth in the schedule, B, annexed.

SCHEDULE A.

Schedule of rates on wheat &/or flour &/or general merchandise from California, Columbia &/or Willamette rivers and Puget Sound.

FROM CALIFORNIA.

On wheat by first-class iron or steel vessels (as defined below) : —

To United Kingdom, Havre, or Antwerp, direct, or with leave to call at a port in channel for orders, $1\frac{3}{4}$ per cent.

On wheat by first-class wooden vessels (as defined below) : —

To United Kingdom, Havre, or Antwerp, direct, or calling at a port in channel for orders, 2 per cent.

Cargoes of flour containing not more than 25 per cent of wheat in the cargo may be written to a reduction of $\frac{1}{4}$ per cent. from the above rates, but such reduction is not to apply to the wheat on board.

Mixed cargoes consisting of canned goods and general merchandise, containing not more than 25 per cent of wheat in the cargo, may be written at a reduction of $\frac{1}{8}$ per cent. from the above rates, but such reduction is not to apply to the wheat on board.

FROM COLUMBIA &/OR WILLAMETTE RIVERS AND PUGET SOUND.

By first-class iron or steel vessels, as defined below, carrying wheat or general cargo, canned goods, etc.

To United Kingdom, Havre, or Antwerp, direct, or calling at a port in channel for orders, 2 per cent.

By first-class wooden vessels (as defined below) carrying wheat &/or general cargo, canned goods, etc.

To United Kingdom, Havre, or Antwerp or Dunkirk or St. Nazaire direct, or calling at a port in Channel for orders $2\frac{1}{4}$ per cent.

Cargoes of flour containing not more than 25 per cent. of cargo in wheat may be written at a reduction of $\frac{1}{4}$ per cent. from the above rates, but such reduction not to apply to wheat on board.

GENERAL CONDITIONS APPLYING TO ALL PORTS.

No. 1. The above rates apply only to policies free of particular average, and the wheat and flour rates to cargo shipped in bags.

No. 2. No rebate or reduction of any kind to be made from the foregoing rates beyond a rebate of five per cent. and ten per. cent.

No. 3. Continental options to Bordeaux and Hamburg, inclusive, except Havre and Antwerp, Dunkirk and St. Nazaire, excluding Rouen, may be granted at an additional premium of not less than $\frac{1}{4}$ per cent.

No. 4. The minimum rates for particular average of three per cent. on the entire cargo only, shall be not less than $\frac{3}{8}$ per cent. net by first-class iron and steel ships; and not less than $\frac{3}{4}$ per cent. net by first-class wooden vessels from California, $\frac{1}{4}$ per cent additional from other ports.

No. 5. For the purposes of this agreement, first-class vessels shall be defined as follows: —

Iron vessels shall not be more than twenty-five years old at the commencement of the risk.

Hard-wood vessels shall be considered as first-class up to two years prior to the expiration of their original classification, provided they are not more than two years on their metal at the commencement of the risk.

Soft-wood vessels shall be considered as first-class vessels up to five years prior to the expiration of their original classification, provided that they are not more than two years on their metal at the commencement of the risk.

All other wooden vessels shall pay an additional premium of not less than $\frac{1}{4}$ per cent.

SCHEDULE B.

Insurance at home or abroad accepted by any of the Companies signing this agreement shall be shared as under.

£6,000 on cargo shall be reserved by the Company insuring the

cargo; six tenths of the remainder shall be equally distributed amongst the companies in Group I., and four tenths amongst the companies in Group II.

GROUP I.

British & Foreign.	Commercial Union.
London Assurance.	London & Provincial.
The Marine.	Thames & Mersey.

GROUP II.

Alliance.	Ocean.
Indemnity.	Reliance.
International.	Sea.
Maritime.	Standard.
National.	Union.

The Object of this Foreign Trust. It has been denied that Lloyds, or other British underwriters, ever conspired to injure American shipping by discriminative insurance rates or otherwise, but here we have the proof in print, over their own names, of a formidable pool or "trust" organized to control, not only the insurance, but the shipments of our products to European markets in vessels to suit the interest of Great Britain; the old dislike to American shipping, and its rivalry, taking a more hostile form than ever before. Besides this, insurance rates were raised 16.66 per cent. The agents of this combination in the United States have sought to keep its agreement private. No wonder! A principle entirely *new* has been applied, for no other reason, that can be seen, than to drive our superior ships out of — our own trade. This rule is the test *by age*. Lloyd's Register, the Veritas, Record, and all classification books whatever, are set quite aside. From the light cast upon the endurance, sea-life, and survival of vessels in the preceding chapter, we are qualified to affirm that American wood sail shipping is worthy of greater confidence than British iron or steel, as follows: —

Superior wear by	23.10 per cent.
Longer sea-life by	29.92 per cent.
Greater survival by	25.88 per cent.

This latest adverse discrimination is therefore most unjust. While iron ships are to be accepted as first-class up to the age of 25 years, wooden vessels are to be rejected if above half

that age, at the best, and many of them at a quarter of the time.

At the average of 25.41 years of age, but 21.68 per cent. of British metal sail tonnage survives, while at the age of 24.10 years 69.79 per cent. of American wood sail tonnage exists.[1] The protection given by such a discrimination should surely be sufficient for metal tonnage, but the trust adds greatly to this preponderance. Cargoes shipped in what are allowed by it to be first-class wood vessels must pay, from California, 14.28 per cent., and from Oregon and Washington, 12.25 per cent. additional to the rates for metal, "free of particular average." For particular average of 3 per cent. (and above), as nearly all cargoes are shipped, there is an extra charge of .375 of one per cent. for metal, which is made .75 of one per cent. (double) for wood. So that the full discrimination against wood ships is, for cargoes from California, 29.41 per cent., and from Oregon and Washington, 26.31 per cent., in "first-class" vessels. For cargoes in "all other wooden vessels" the higher discrimination is, from California, 41.17 per cent., and from Oregon and Washington, 36.84 per cent. And it is needless to say, that a considerable number of the few of our ships which still remain in the West Coast European trade will be unable to get cargoes under such insurance conditions.[2] These conditions are well calculated for the British fleet to get rid of American competition for freights, the better to control the trade of the Pacific States.

Decline of American Underwriting. Perhaps some economists will say, let shippers get American insurance; let them charter the cheapest carriers, especially if they be our own; let our products go to market under our own flag, and let foreign underwriters go without patronage, if they deal unfairly by our shipping. Good friends, we have been going in for cheap

[1] Table I., Chapter XIV.

[2] In support of this opinion, the facts following may be stated: Since December 25, 1891, up to this date, 135 days, not a single American ship, loaded with grain or flour, has sailed from San Francisco to Europe, while in the same time 75 foreign ships (64 British), with full cargoes, have gone on their way with flying colors. But one American bark has sailed from Portland or Tacoma, in the grain trade, since November 18, 1891, 240 days, while 84 foreign ships (74 British) have cleared in the same time. So the British ban is doing its work. (July 14, 1892.)

insurance, as it is proposed we shall do for cheap ships, regardless of where it comes from or belongs, or what would be the consequences of building up foreign underwriting interests to the neglect and decay of our own. We have opened the sheepfold to the wolf. Where are now the American underwriters you would talk about? What power remains to them to handle the enormous volume of our foreign commerce? Do you not know that they are about as impotent and as wanting as our decayed marine is, for this great work? A short time ago an American shipbuilding concern, shipping machinery from Wilmington, Del., to Puget Sound, Wash., for the purpose of establishing there an iron shipbuilding yard and machine shop, owning the steamer as well as the cargo themselves, the whole valued at about $300,000, had hard work to find American underwriters enough to take the risk. Why did they seek for American underwriters, you may ask? Because all the foreign companies refused. They did so, doubtless, because the enterprise was wholly American, and probably this risk would be all the one ever offered to them by this shipbuilding company. Had the expedition been a British one going from Glasgow to Victoria, B. C., every underwriter in the United Kingdom would have gladly named a rate, or accepted an offer for name and amount, and every one of them will say that sentiment has no influence in their transactions, but that, with them, "business is business." But facts talk. Why did foreign underwriters decline this risk, which was good, and American insurance companies accept it? This incident well illustrates the interest, and *want of interest*, of American and foreign underwriters, respectively, in enterprises wholly of value to our own country, and of disservice to foreign nations.

Our old underwriting strength has not all gone yet, but it will go under, ultimately, with our shipping power. What has wasted the one has destroyed the other; what will save the one will rescue the other. That remedy is the revival of American public spirit and the restoration of our merchant marine, which will be sure to follow that revival, if it ever comes.

British Mercantile Discrimination. This seems a good place to show that business is more than "business" with other classes than shipowners and underwriters of Great Britain. The mer-

chants in their chambers of commerce have their rules and regulations, their tariffs and prohibitions, for the protection of British interests. For a long time it has been privately told that the grain buyers of Liverpool will not pay so much for wheat brought to market in American as in British vessels, hence the greater part of American carriage to Europe has gone to Continental ports. Matters like this seldom get into print, — not even into the market reports, much less free-trade treatises on political economy. It seems we are now so nearly conquered commercially, and so nearly dead in national sentiment, that matters of mercantile discrimination can be allowed the light. In other words, it appears recently that the British merchants have dressed their front behind the underwriters, as well as the shipowners of the kingdom. Complete consent has been given by them for a British monopoly of underwriting on cargoes from the Pacific coast. They support the "Wheat Tariff Association," which we have introduced in preceding pages, as appears from the following article from the "Banker's Magazine:" —

INSURANCE ON WHEAT.

California Banker's Magazine,
San Francisco, 12*th Mar.*, 1891.

The Editor of the Banker's Magazine, London:

Dear Sir, — At p. 351 of your excellent February issue you have an article on "American offices," in which you say, "We have not space to devote to our American cousins;" although you manage to suggest that we Americans have "the assurance to make tempting estimates by which somebody must lose if any are to win;" you charge us "with counting upon the other fellow's losing, and our reliance upon forfeiture." Now really that is bad treatment, as you will probably admit when you have read this.

Take a walk with us round San Francisco; see, here are English offices on the right and left. Here are the Thames and Mersey, the Liverpool and London and Globe, Norwich, Union, Royal, Northern, Imperial, Queen, London and Lancashire, Liverpool-Underwriters, Lion, Phœnix, Sun, Universal, Scottish Union, North British, Guardian, Maritime, Marine, last of all London Assurance. We Americans give you every patronage, and open our cities to your business. What is the return? A simple boycott! The cargoes of wheat that the farmers of California ship to London are forced by you into your London offices. No merchant dare pass his bill of lading and drafts with an American policy, or the cargo would be unsalable.

It is a *sine qua non* that all cargoes must be insured in your offices. Surely, that is a piece of London Assurance.

The California insurance offices joined together, and put up $150,000 as a gold margin deposit, if you would condescend to allow us to insure our own wheat! No! The offer is refused with scorn.

Now suppose (for the sake of argument) that we boycotted you, and ordered all these foreign companies out of San Francisco? Our own good companies, the California Insurance, Commercial, Fireman's Fund, Union, Sun, and others would make the profit upon our own farmer's wheat that you London men take from us. That boycott is a foul, burglarious weapon, that has been imported into America by the laborers, because you English over the Pond had not sense enough to crush it there. While these lines are rolling from my gray goosequill, see! there goes a high wagon along Montgomery Street, painted flaming red, with letters a foot long, "Boycott the firm of ——— ——— ———." You fellows (that is your own word) boycott the farmers and merchants of San Francisco. Now please part with a little of your London Assurance, and tell us: What excuse you have for so mean a trick? Your answer will be waited with impatience by all the distinguished audience of the California Banker's Magazine, Paris, Berlin, Ottawa, Montreal, New York, Boston, Chicago, 1,100 banks in the Pacific States, Sydney, Melbourne, Brisbane. This is the challenge. Please publish this letter in your valuable columns. Answer it in a fair strain, considering the advantages that we grant your English companies, and we may arrive at an adjustment of this London Assurance.

ED. C. B. M.

Boycott of the Liverpool Corn Exchange. In addition to the evidence above, relating to the London merchants, we shall submit a letter from the secretary of the California Insurance Company, one of the strongest and most reliable corporations of the Pacific coast, in regard to the protective policy of the Liverpool Corn Exchange. This letter corroborates the statements of the editor of the "Banker's Magazine," and leaves no doubt of the "taboo" or "boycott" now enforced, with more or less rigor, against American insurance, as well as American carriage, of grain to be sold in the British market. The European nations discriminating against American pigs and products did so under the pretense of health; the British merchants and their agents discriminating against our vessels give for an excuse that they are built of wood; but the new catch-

penny policy of prohibiting American insurance is yet without pretense or excuse, except commercial greed. This new system of "free trade" without "reciprocity" marks the introduction of social "protection" run mad. It discounts subsidies, subventions, bounties, and all forms of legislative action for the object which it has in view.

MR. FOWLER'S LETTER.

The California Insurance Company.
San Francisco, Cal., *Aug.* 25, 1891.

Hon. Wm. W. Bates,
U. S. Commissioner of Navigation, Treasury Dep't, Wash., D. C.

Dear Sir, — I beg to acknowledge due receipt of your esteemed favor of the 22d ult., likewise your valuable Report to the Secretary of the Treasury for last year.

I endeavored to procure for you a copy of the agreement entered into by English companies establishing new rates and rules governing insurance on our exports from California, Oregon, and Washington, but found that no company had one to spare.

You will, no doubt, be surprised to learn that American insurance companies are tabooed by the Liverpool Corn Exchange from underwriting on our grain exports to Europe, whether by American or foreign vessels. With the view of protecting their own insurance companies, the rule of the Exchange is that these cargoes must be insured in standard English companies. Some years back, three of our local companies deposited with English banks at Liverpool the sum of $150,000, which we arranged to keep good at all times, for the better protection of their policy-holders in Europe, but our friends who favored American capital were forced to go over to the enemy, as, to sell their shipments, their Liverpool representatives were compelled to take out insurance thereon in English companies, as our policies were positively refused as not being the required protection. Under such a strong protection (of English companies) our companies had to yield to the inevitable and lose the cream of our business without the power of retaliation.

When iron or steel vessels first commenced trading to our port, the English companies reduced rates for insurance on their cargoes, and of course other companies had to follow.

There is a marked preference of English companies for English-owned vessels, so much so that some will not write at all on American vessels.[1]

[1] A similar rule obtains as to the Calcutta trade.

American companies commenced to lose control of their business when foreign capital began to operate in the United States. Competition naturally followed (their advent), and, to retain their own, American companies had to meet the cut rates and low quotations, which foreign companies offer to get business on their books (and freights for their ships).

Through adverse legislation of all our States against American insurance corporations; the arbitrary attitude of some of their insurance commissioners in the matter of our investments, although the assets of foreign companies are accepted without question, doubt, or examination; and of the favorable conditions under which foreign capital can operate in America, it will be but a short time before our companies will have to cease to be marine underwriters.

I beg to remain, dear sir,

Yours very truly,

WM. H. C. FOWLER, *Secretary.*

The disclosures in this chapter need no comment further than this: They are mortifying to a degree. If such treatment can be taken by the American people without resentment, and without an effort to protect themselves against it, they will deserve the scorn which such a course invites. There is often much talk about a "Monroe Doctrine," to be enforced in some corner of South or Central America, regardless of such foreign imposition on our own citizens as has been, and is being now, practiced with impunity in our own ports. Who will not defend his own, fights not for another's cause.

CHAPTER XVI.

SAILING-SHIP PERFORMANCE.

Comparative Seaworthiness and Safety of Foreign and American Ships. It having been shown that the British handicap our shipping in the Pacific coast and European trade, first, by a preferential mode of building; second, by differential insurance rates; third, by interdicting our underwriting, it will be in order next to show the seaworthiness and safety of American over British shipping in this coveted trade. From 1882 to 1886 the author made accurate observations on the spot, and closely studied the performance at sea of the fleets of different flags engaged. The information derived from this investigation will be highly useful in this discussion.

The California grain trade to Europe came into prominence in 1867. By 1870, when Lloyds virtually cast our ships out of their Register, both the Atlantic and Pacific grain commerce had large proportions for that time. It was the growth of this business, after the close of the war, that induced the spurt of shipbuilding from 1865 to 1870. In this period an average of 90 ships and barks were built each year. In the three years following, partly in consequence of the action of Lloyds, an average of only 28 were built. In 1872–73 an average of 85 shillings per gross ton was paid for freight from San Francisco to Europe. This induced another stir in the shipyards until 1879. By that time our wooden ships had been forced out of the Atlantic grain trade, and freights had got into foreign control in the Pacific commerce. But while the California trade gave anything like a fair field for our shipowning enterprise, new vessels of enlarged tonnage entered it every year. The importance of this fact to the farmers of California consisted in its effect on the rates of freight, which, on the average, with the building of larger vessels, steadily declined. Of the 358 vessels that sailed in 1880–81, but 14

were over 2,000 tons; of these, 12 were American, and they were nearly new. The two foreigners were converted iron steamers. The same season 101 vessels under 1,000 tons, and a tenth of them below 500 tons, sailed in the fleet. In that great harvest year freights averaged 73 shillings per gross ton. But ever from the building of ships for this trade, our owners have increased their size, met the competition of foreign shipping, caused it to be new-built of greater tonnage, and steadily induced a lowering of freights, — to the advantage of our producers. The British, feeling our opposition, have desired to down our competition in building and carrying, and this they have been permitted to do.

The voyage from San Francisco to the ports of Europe, about 14,000 miles, is one of the longest known to commerce. The grain trade is one that calls for the strongest and safest ships, and is well calculated to test the powers of sailing vessels. In the four years of the period investigated, the ships of eight different nations engaged in the trade mentioned. The American and British fleets were large, the German considerable, and the Norwegian, French, and Italian goodly in number. Of course the lion's share of the carrying fell to the British, because their merchants control so largely the European grain markets. British merchants dealt in most of the cargoes, and, naturally, in circumvention of competition, British ships obtained the greater part of the transportation. British cargoes, or those to be sold to British merchants, received their cover from British underwriters; then, pretty much of course, but now nearly all are constrained to do, since merchants and underwriters stand in together for protection, as we have seen. These classes, with the shipowners, are so closely related that this defensive policy has come down, with more or less vigor, from Cromwell's time. It is therefore no wonder that American interests are made to stand back, and await the pleasure and convenience of the London and Liverpool exchanges.

Comparative Ship Performance. The grain year in California, beginning July 1, and ending June 30, corresponds to the harvest seasons and the fiscal year of the government. The facts and computations, which supply the groundwork of the statistics following, have been studied and verified with attention and care, both on the spot and from public reports of

departures and arrivals out, charters and freights, disasters, accidents and losses published in the "Commercial News and Shipping List" of San Francisco, a journal of twenty years' standing, specially devoted to commerce and navigation, and regarded as complete and reliable in its work. The averages in the tables have been made for each one of forty-eight consecutive months, then combined in four one-year statements, and finally united in a four-year table. This work afforded an analytical and complete view of the performance of the different divisions and fleets, under the various flags, by months, separate years, and for a period of four years. Of course, the most reliable deductions will be those from comparisons of the larger fleets, — the British and American, precisely those of most importance in this inquiry. For convenience, in discussion, the large table, VI., will be divided into five parts.

PART FIRST OF TABLE VI. DESCRIPTION OF VESSEL, NUMBER OF EACH KIND, AVERAGE TONNAGE, CARGO, VALUE, AND RATE OF FREIGHT OF EACH FLEET SAILING FROM SAN FRANCISCO TO EUROPE, 1881 TO 1884–85 INCLUSIVE. AVERAGES.

Description of Vessel.	Number of Ships.	Register Tonnage.	Cargo in Centals.	Value in Dollars.	Rate of Freight.
					£ s. d.
American wood .	418	1634.3	52,400	82,113	2 7 $5\frac{2}{3}$
American iron[1] .	5	1201.0	40,799	62,367	2[2] 18 $3\frac{2}{5}$
British wood . .	198	1271.7	42,394	68,201	2 11 $9\frac{1}{6}$
British iron . . .	761	1356.5	44,618	75,595	2 11 $5\frac{1}{16}$
German wood . .	39	1196.4	37,697	63,675	2 9 $0\frac{7}{8}$
German iron . .	41	1006.7	31,999	56,500	2 8 $3\frac{1}{2}$
Norwegian wood .	20	928.7	29,346	46,900	2 14 $9\frac{4}{5}$
Norwegian iron .	2	1111.0	37,711	72,473	2 10 0
French wood[1] . .	16	628.1	20,680	36,718	2[2] 18 $9\frac{3}{8}$
French iron . . .	7	806.3	27,541	44,987	2 10 $8\frac{1}{2}$
Italian wood[1] . .	12	880.9	28,527	41,203	2[3] 6 2
Dutch wood . .	1	1951.0	53,938	72,816	1[3] 7 6
Russian wood . .	1	1383.0	41,823	69,000	3[3] 0 0
British steamers .	11	1761.2	61,330	106,850	2[2] 19 $8\frac{3}{4}$
French steamer .	1	2663.0	73,036	106,046	1 10 0

Two of the American iron sailings in above table were of

[1] No American iron or French wood in 1882–83, or Italian wood in 1883–84.

[2] Most sailed in year of highest freights.

[3] Most sailed in year of lowest freights.

British-built vessels that had been wrecked and subsequently repaired in our ports to such extent as to be entitled to registry. Neither of them sailed in 1882–83. One of the sailings was of a new American-built ship in 1884. Only the larger fleets can be fairly compared with one another on all the points of performance. This is especially true in regard to the rates of freight, which were highest in 1881–82, and lowest in 1884–85. Six of the eleven British steamers sailed in the year of highest freights, which accounts for the apparent advantage of steam over sail in charter rates. Iron steamers in this trade, although making the voyage in about two thirds of sailing time, commanded only a few pence per gross ton higher rates than sailing ships, and were given no advantage whatever in the matter of insurance. Russian, Norwegian, and British wood and French iron also took a disproportionate number of cargoes in the years of highest freights, and so appear to have been unduly favored in their rates. And this is also the case as between American wood and British iron ships, and therefore the average difference in rates, 8.33 per cent. in favor of the latter, does not appear so great as it really was, and as it stands in the one-year tables, where it amounts to 4.75 per cent. in 1881–82; to 13 per cent. in 1882–83; to 17.1 per cent. in 1883–84; and to 14.9 per cent. in 1884–85. The very small average difference in 1881 was due to a circumstance unusual to the trade. In that year wheat was much more abundant in San Francisco than iron tonnage in Liverpool, and the American ships lying in the "spot" market actually received the highest freights. In July, August, October, and November, American wood received from 3 to 5 per cent. more than British iron, which was in large degree chartered "to arrive."

But this fortune was much too good to last. The British merchants soon got the trade in hand again, and next year very much reduced both comparative rates and engagements. The year of 1883–84 opened with an average discrimination, in July, of 23.84 per cent., followed in August with a difference of 19.66 per cent.; in September, 12.06 per cent.; in October, 19.8 per cent.; in November, 37.7 per cent.; and in December of 45.5 per cent. in favor of British iron tonnage. For more than two months following not a single American

ship effected an engagement. In 1884–85 a similar course of competition was pursued. The British iron rates for the month of September averaged 21.26 per cent.; for October, 20.9 per cent.; November, 16.16 per cent.; December, 30.12 per cent.; and January, 19.42 per cent. greater than were paid to American ships.

The British discrimination is not always confined to iron. There were many months of the four years when wooden ships under the British flag received from 5 to 15 per cent. more than like tonnage under the stars and stripes; but from the disparity of numbers in the two fleets, and the falling off in British wood, it resulted that the yearly tables, in three years out of the four, exhibited the American wood ships as receiving the higher freights, by from 2 to 4.5 per cent. In 1882–83, however, the tables were turned in favor of British wood to the extent of 8 per cent. The Italian wood, for the most part chartered in Europe in the year 1884–85, actually received nearly 3 per cent. higher average rates than British iron. The vessels of Italy and Norway did not carry a pound of their California cargoes to their own ports, and few of the French and German sailed to other than British ports. In the large fleets, as a prevailing rule, the highest rates are always paid to British iron, which years ago was made by British merchants and the Lloyds the standard of the trade. Under this discrimination, without justification, except as a policy protective of British interests, American ships are obliged, as a rule, to accept engagements and take the lowest freights, as opportunity offers.

There was another evil. On an average, while the proportion of British to American tonnage under charter and loading was as 2 to 1, the proportion of American to British tonnage, idle and awaiting charter, was often much greater than 4 to 1. In the six months ending October, 1885, the chartering of British in proportion to tonnage in waiting reached a ratio of 5 to 1. While, in seasons of active markets, a very large proportion of British vessels are chartered, months perhaps, before arrival, and few have to wait a month for a cargo, the most of the American ships spent much more time in port than at sea. Many of the best in the business laid a year awaiting an engagement, and several spent three years of time, ready and

willing to accept rates much below the standard of British iron charters.

The Fallacy of Free-Carrying. Such experience as this proves the unprofitableness and foolishness of dependence on free-carrying and open competition, instead of a wisely contrived protection, for the employment of our vessels. It also proves that competition with the British is unequal and unfair, as we should expect it to be with any nation determined to monopolize the commerce of the world for itself. It is an artful publication that, "The ocean is free to all the world, — on the domain of Neptune you cannot apply protection;" but it need deceive only the simple-minded. It is not on the open sea, but in every port of the world, that Great Britain applies protection to her ships. In a liberal degree, her shipping protection inheres in the hearts of her merchants in foreign trade, who prefer British to other vessels. In an overruling measure, it is derived from the policy of her rich underwriters at Lloyds', who always bet their guineas at home and abroad on the national flag, "that has braved a thousand years the battle and the breeze," and against any rival flag. It dwells largely in the loyal devotion of the British people to the welfare and prosperity of their own countrymen.

Lord Bacon's Principle. The great Lord Bacon, on a memorable occasion, before American ships had existence, laid down in very plain English the principle and rule of British protection. "Let us," he exclaimed, "advance the commodities of our own kingdom, and employ our own countrymen before strangers."

On Bacon's principle Great Britain has reared her naval and commercial greatness, and by this principle it will last forever. And it is now enduring at American cost. For if our own good ships can, and do, carry cheaper and safer than the British, whether of iron or wood, their non-employment is our country's loss. Yet this loss in building and sacrifice in carrying, strange to say, our government seems to care nothing about. Upon the merits of American ships the country is sadly misinformed. The enemy hath sown tares in our editorial sanctums — while we slept. Numbers of our own people are at work denouncing our shipbuilders, decrying our ships, and condemning our shipowners, — doing their best to work up

a false sentiment, hurtful to the United States government and damaging to every interest of the American people, but helpful to Great Britain in gaining a monopoly of our foreign trade. Where is our natural pride of country? Where is our boasted love of liberty? Where is our sense of fair play, of independence, and economy?

Let it be noted that the American wooden ships carried larger and more valuable cargoes than their British iron rivals; and if paid at equal rates would have received for their four years' work $940,759 more freight money than they did. On the other hand, if the British iron fleet had accepted the average rate paid the American fleet, the sum saved to California would have amounted to $1,455,184 on the business of the four years. Either way the loss was American, and the gain was British. But the American loss was far greater than these figures represent, as, with fair play in chartering, our fleet engaged in the trade might easily have performed five voyages in place of four, and added one fourth more, or $2,786,455, to its gross earnings.

The four-year table, part first, given above, shows that the average American ship in the California trade is superior to all others in points of size, weight, and value of cargo, and cheapness of freight. Wood vessels constituted about 48, and iron vessels 52, per cent. of all the tonnage in the trade. Of the entire tonnage 32 per cent. was American wood, and 48.33 per cent. was British iron.

In general terms, the trade was nearly equally divided between wood and iron, with the latter on the increase, owing mainly to the protective policy of the British Lloyds, which for more than thirty years has promoted and sustained the building of iron ships, as a British *industry*, and as the only style of ship that Britain can build to her own safety and advantage.

The following tables show the motion of trade from 11 to 7 years ago. Such, however, has been British success in strangling our competition, that, of 93 ships from San Francisco to Europe with grain, in the past 7.5 months, 77 have been British iron, and only 6 American wood. October 14, 1892. Of 35 ships chartered and loading, 32 were British, but *not one* American. Of 56 ships disengaged, 16 were American and 37 British.

THE MOTION OF TRADE. A FOUR-YEAR STATEMENT SHOWING THE PROPORTION AND THE INCREASE OR DECREASE OF AMERICAN AND FOREIGN SHIPPING IN THE GRAIN TRADE OF SAN FRANCISCO,[1] 1881 TO 1885.

Description of Vessel.	Percentage of Number.				
	1st Year.	2d Year.	3d Year.	4th Year.	Average.
American wood . . .	26.72	26.47	26.69	29.28	27.25
British wood	18.31	13.52	7.11	8.84	12.91
British iron	42.43	52.67	55.51	52.60	49.64
German wood	2.61	2.81	2.81	1.94	2.54
German iron	3.36	1.97	3.20	1.94	2.67
Norwegian wood . . .	2.05	.56	1.78	.55	1.30
French wood	1.87	.00	.71	1.10	1.04
French iron	.18	.84	.71	.27	.45
Italian wood	.56	.56	.00	1.93	.77
British steamers . . .	1.12	.56	.71	.27	.71

Description of Vessel.	Percentage of Tonnage.				
	1st Year.	2d Year.	3d Year.	4th Year.	Average.
American wood . . .	32.43	30.58	30.43	33.89	32.00
British wood	17.39	12.60	6.15	8.00	11.80
British iron	41.20	50.34	54.75	51.05	48.36
German wood	1.90	2.63	2.71	1.75	2.10
German iron	2.38	1.54	2.33	1.41	1.90
Norwegian wood . . .	1.35	.45	1.18	.39	.87
French wood	1.01	.00	.27	.34	.47
French iron	.10	.47	.47	.13	.26
Italian wood	.42	.34	.00	1.19	.52
British steamers . . .	1.24	1.01	1.15	.22	.90

In the second and third years of the period, the proportionate number of American ships nearly equaled the percentage of the first year; and in the fourth year there was a gain of 2.59 per cent.; but there was a loss of tonnage in the second and third years to the extent of 2 per cent., which was more than recovered in the fourth year by 1.46 per cent. of the year's traffic. So we fully held our own.

The number and tonnage of the British wood in the trade

[1] Five descriptions of smaller fleets and sailings omitted.

decreased heavily in the second and third years, recovering slightly in the fourth. The falling off in tonnage in three years amounted to 51.28 per cent. of the first year's supply, a rate of decline exceeded only by British iron steamers, which was 82 per cent. of first year's tonnage in the same period.

The greatest proportionate increase in number and tonnage of fleets accrued to British iron sailing ships, — the dearest carriers, but their freights the cheapest insured at Lloyds. In the second year the augmentation amounted to 24 per cent. for number, and 22 per cent. for tonnage, computed on the year's traffic. The third year added 5.39 per cent. to the second for number, and 8.76 per cent. for tonnage; but most of the third year's gain was lost in the fourth. The net gain in three years was 10.17 per cent. for number of ships, and 9.85 per cent. for aggregate tonnage, which was 6.74 times the increase of American shipping. But the British gain in iron vessels was at the expense of wood and steam under their own flag. Taking the tonnage of wood and iron, sail and steam, under the British flag, and comparing it with the wood and iron of our own, we find there was a British loss of .56 per cent., and an American gain of 1.35 per cent., in a period of three years. However, all of our comparative gain, with more besides, was lost to the British fleet during 1886; that fleet for six months averaging engagements in the ratio of 5 to 1 of ours.

The Italian wood seems to have gained a part of what the German, French, and Norwegian wood lost, although the Italians sail the slower and less efficient ships. We will now examine another section of the main table.

CARRIAGE, SPEED, AND EFFICIENCY. A FOUR-YEAR TABLE OF THE COMPARATIVE PERFORMANCE OF FLEETS IN THE GRAIN TRADE OF CALIFORNIA, TERM ENDING JUNE 30, 1885.

Part Second.[1]

Description of Vessel.	Number of Ships.	Carriage Centals per Ton.		Speed Voyage Days.	Efficiency pounds per ton per day.
		Laden.	Delivered.		
American wood . . .	418	32.0626	32.0762	125.5471	25.5492
American iron	5	33.9710	33.8711	124	27.3154
British wood	198	33.3376	33.3120	131.7644	25.2829
British iron	761	32.8908	32.8750	130.6911	25.1547
German wood	39	31.5085	31.4947	135.5263	23.2388
German iron.	41	31.7859	31.7859	136.7317	23.2469
Norwegian wood . . .	20	31.5996	31.5996	127.2500	24.8327
Norwegian iron . . .	2	33.9437	33.9437	137	24.7764
French wood	16	32.9694	32.8116	139.5206	23.5036
French iron	7	34.1578	34.1578	151.4286	22.5569
Italian wood	12	32.3834	32.3834	141.9166	22.8186
Dutch wood	1	27.7027	27.7027	135	20.5205
Russian wood	1	30.3100	30.3100	135	22.4510
British steamers . . .	11	34.8236	34.5687	83.7	41.3007
French steamer . . .	1	27.3881	27.3881	129	21.2255
Total	1,533				

In computing this table the whole number of each description of vessel has been taken as constituting a fleet, and the figures in the different columns express the results for the average ship. In determining the "carriage," in centals, per ton, a distinction has been made between the fleet or the average ship that sailed, and the fleet or the average ship that arrived. Out of several of the fleets that sailed, some vessels were lost, and others jettisoned a portion of their cargoes. The column headed "Laden" shows the centals per ton which all tried, but some failed, to carry with certainty. The column headed "Delivered" exhibits the weight per ton really carried and delivered by the fleets that survived the voyage. In cases where less was delivered than was laden, a presumption arises that the disasters to the fleets, or the losses of cargo suffered by certain ships on the voyage, were more or less due to overloading. The instances are very few, indeed, where the disas-

[1] See page 234 for Part First.

ters and jettisons happened to vessels laden below the average carriage of the fleet to which they belonged. The rule is plainly indicated that over-average *loading* leads to long and perilous voyages.

In the case of American wood, the fleet that arrived carried more to the ton than the fleet that sailed; as the two ships lost, one by striking shore in a fog, and the other by springing a leak, were under, rather than over, the average fullness of loading. This was not the case, however, with American iron. One of these, on her first voyage, attempted to put our wooden ships to shame, by starting with 3,532.85 pounds to the ton, but had to jettison in a gale of wind, and was glad to arrive with 3,501.16 pounds to the ton, in the time of 140 days, — a performance which has been beaten many times by the deeply laden wooden ships of the British Provinces.

The Consequence of Deep Loading. It will be noticed that out of eight fleets carrying more to the ton than American wood ships, five fleets had jettisons and three had missing ships. Also, that three fleets and three single ships, 103 in all, carrying less to the ton than our wooden vessels, escaped rather better than they did from disasters presumptively due to overloading. The three British and the French and Italian wood fleets suffered most proportionately from disasters and perils of all kinds, and it will be seen the ships of these fleets, especially those of the British flag, were those that attempted to carry the largest loads in proportion to registered tonnage. British grain vessels are loaded by "Liverpool rules," which permit iron ships to sink deeper into the water than wooden vessels by about seven inches on the average ship. This discrimination amounts to about one and a half centals per ton in favor of iron. There is no justification for it either in reason, evidence, or experience. It is an appreciation without a difference, — one of the many protective distinctions set up for the advantage of iron shipbuilding as a vital British industry. American ships are loaded by "New York rules," which make no distinction between iron and wood vessels; and do not allow so deep loading as the British rules even for wood, to say nothing of iron, by one, two, or three inches on the average ship. It is due mainly to lighter and safer loading, together with the condition that American wooden vessels are generally heavier in

materials, that British wood ships, many of them composite, really of no greater ability, carry the most to the ton. But the table of performance proves that they do this at a sacrifice of speed and safety, and without full compensation in efficiency. American underwriters deserve great credit for rejecting British rules for loading, and for establishing safer limits. Their action in this regard is helpful in maintaining the high character which, above all things, should mark the performance of American shipping.

Wood Ships can Carry Most. With regard to the carriage of iron ships and their reputed superiority to wooden vessels, in point of capacity or burden in proportion to tonnage, the table above will be an out and out disclosure, especially to persons unacquainted with shipbuilding and navigation, who have been misguided by foreign authors. A comparison between the British sailing fleets shows that the average ship of wood beats the average ship of iron by 43.7 pounds, or 1.329 per cent. per ton, and does this under the "Liverpool rule," permitting the deeper loading to the favorite ship. In view of the lower freeboard generally accorded to iron ships in consequence of the British bias in loading, it is quite apparent from the table that, if all the vessels had been loaded by the same rule for water-line, and been formed into two opposing fleets of wood and iron, the wood fleet would have out-carried and outsailed the former, and shown the safer performance at sea. The iron steamers show an undue average proportion of carrying-power, chiefly because the most of them have too great a deduction made for engine-space in their admeasurement. This is the case with foreign, especially French steamers. Really, for a fair comparison with sailing ships the gross tonnage alone should be taken. The abatement for engine-space is a protective measure, to relieve steamers from taxes and charges based upon tonnage, and to encourage their building.

American Superiority in Speed. In the column headed "Speed," as most of the voyages were made to Cork for orders, the time for ships sailing to other ports direct has been converted into days for Cork, as the standard for comparison. Most of the British iron vessels sailed for Cork, and few of them went to ports on the Continent. It is believed the voyage-time, where computed in small part, is as nearly correct as it is possible to make it, by adding or subtracting an allow-

ance of one or more days for the average difference between a voyage to Cork and any of the other ports; and this has been done according to the judgment of skillful navigators experienced in the trade. At all events, it is certain that American vessels have not gained by the rule adopted for reducing all the voyages to the standard of Cork.

It will be seen that, whether on wood or iron ships, the American flag carried the honors for the highest average speed. American wood beat British iron by 4.09 per cent., and led British wood ships by 4.95 per cent. The Norwegian wooden fleet also beats both the British fleets, and comes nearest of any to an equality with our own. The German, Italian, and French, particularly the latter in iron, make dull voyages; but the Germans and Norwegians, with lighter loads, sail in remarkable safety. The difference in favor of the speed of French wood, as against French iron, amounts to 8.32 per cent., in large part due to what is, no doubt, a dangerous degree of overloading of iron.

American Superiority in Efficiency. In the column headed "Efficiency" will be found a real and accurate measure of the combined sailing and carrying powers of the average ship of the different fleets, shown in pounds per ton per day. This is very simply obtained by dividing the pounds per ton delivered by the days consumed on the voyage, the quotient being the pounds and decimal fraction of a pound which each (net register) ton of the vessel carries in one day of the voyage. (The efficiency of ships may also be expressed by a standard of distance as well as time. The distance between two ports being known, it may be divided by any convenient number, say 100. Then the quotient may be used as a divisor into the pounds per ton to find the pounds per ton per 100 miles.) Owing to the greater average speed or distance made good each day, it will be seen that the British steamers manifested the highest efficiency; but, in comparison with fair sailing vessels, their performance is not so high as generally estimated. For instance, steamers are credited with double the efficiency of sailing ships, but we see that the average British steamer has barely double the efficiency of the least efficient sailer out of 1,521 vessels. Compared with American wood sail, British iron steam shows an advantage of 61.6 per cent. If rightly measured and compared for gross tonnage, the efficiency of first-class freighting

propellers would appear to be about one half greater than average first-class sailing ships reasonably loaded. Against the apparent extra efficiency of steamers, there is a very large offset for greater cost and running expenses. When these are included in the comparison the excess of efficiency disappears, especially in long voyages. It may be noted, that the French steamer in the table had barely a higher efficiency than one of the poorest performers in the list of 1,521 sailing ships. She was, no doubt, the unprofitable product of a short-sighted bounty law, based, not upon performance, as such a law should be, but merely upon the tonnage built and distance run at sea. Such a poor performer is a fraud upon the French treasury. She was built at Havre. The performance of the American iron was rather exceptional. There were three different ships, — two made two voyages each. Other ships, both of wood and iron in the larger fleets, showed a greater efficiency.

Iron Ships Least Efficient. As shown in the performance of the large fleets, and taken collectively, the wood against the iron, it will be seen that the average wooden ship displays the higher efficiency. The three great fleets, American and British wood and British iron, comprising over 92 per cent. of the whole tonnage, stand pretty nearly equal in point of efficiency, but with differences great enough to determine with certainty the question of superiority. The demonstration that it is not necessary to overload American ships in order to compete with the world in efficiency is one of the best results of our investigation. It is to be borne in mind, too, that some of the vaunted steel ships of recent build in England are included in her fleet of "iron," as several of her famous composite ships are included in her fleet of "wood." The following table will show the averages of efficiency for the large fleets in each of the four years of the term: —

	1st Year.	2d Year.	3d Year.	4th Year.
American wood	25.534	25.1659	26.1361	25.4344
British wood	24.917	26.4197	25.4443	24.7216
British iron	25.837	24.8210	24.4100	25.1981

From this statement it appears there has been a general decline in average efficiency, slight for the two wooden fleets, but considerable for the iron one. In the last two years of low freights, there has been less overloading and reckless sailing, fewer disasters and accidents to British, and particularly the iron vessels, than ever known before in the California trade.

In the monthly statements, omitted here for want of space, the figures vary more than in the yearly tables. But taking the performances of the sail vessels of Great Britain and the United States, in large fleets for a considerable length of time, there is no warrant whatever for the pretensions set up by British naval and commercial authorities, and foolishly repeated all through the American press, that the iron ship built in Britain is "the most efficient vehicle of commerce." On the contrary, it may be fairly and truthfully claimed, as proved by experience in the grain trade of California, that, for efficiency with safety, the wood ship built in the United States is entitled to hoist the colors.

Unfounded British Sentiment. America may boast from many victories won, that Neptune subdued is not Britain's palm alone. It is therefore discreditable that any portion of our people should take up the hue and cry of a British trade interest, and hound our legislators to action for the advantage of our foreign rival. For many years the Treasury Department of the United States, through the Bureau of Statistics, annually disseminated the error of American inferiority, and did the cause of the American ship, her owners and builders, serious injury at home and abroad. The story used to run thus: "The iron ship, especially the iron steamer, has become the most efficient vehicle of commerce upon the ocean, to a great extent superseding the wooden ship." The Bureau of Statistics apparently never knew or considered what caused the iron ship and iron steamer to "supersede" the wood and the sail ship. British writers intimated it was superior efficiency, and some of our people are so constituted that what the evil one might say on the other side of the Atlantic becomes genuine gospel on reaching this side of the sea. It is state *policy*, and not efficiency, that has cut a figure in the British choice of tonnage. Necessarily, the British ship must be built of iron or steel. The government and the Lloyds, every influential

society, all political parties, every business company, firm, house, and loyal subject has but one duty to perform in relation to iron ships, and that is to maintain their superiority. Above all countries, England "expects every man to do his duty;" and, beyond all nations, she is never disappointed in public sentiment supporting her rule of the sea. British sentiment is the living soul of the British ship. In the United States the case is just the opposite. There is no prevailing national sentiment here on any question so external as that of ships. For the majority, we seem to be a continental or midland people, content to treat our country as a mere dwelling place, instead of a beloved home-land. Anything said in print by our rivals about our marine is just as likely to be taken for truth as the truth itself.

American Superiority in Speed and Efficiency. The superior speed and efficiency of American wooden ships, as proved in the California trade, may be shown by the following table: —

Description of Vessel.	American Superiority.	
	In Speed.	In Efficiency.
	Per cent.	Per cent.
British wood	4.95	1.053
British iron	4.09	1.568
Norwegian wood	1.35	2.483
Norwegian iron	9.12	3.079
French wood	11.13	8.703
German iron	8.81	8.903
German wood	7.94	9.941
Italian wood	13.03	11.966
French iron	20.61	13.265
Russian wood	7.53	13.354
French iron steamer	2.75	20.376
Dutch wood	7.53	24.505

In view of this table, it is a practical question, What does American commerce want of the inferior ships which we are so actively urged to buy from Britain, or some other foreign country? American shipyards can, and do, produce better ships for less cost than can be bought in Britain. And like advantages can be shown for American-built iron steamers.

Every one of them will outlast their sisters built in Britain. What is wanted for American commerce is not foreign ships, but fair play and free employment for our own shipping, in our own ports, objects which are only to be attained by protection.

American Ships Superior to European Craft. From the first and second parts of the Table of Performance, it has plainly appeared that in size of ship, weight and value of cargo, cheapness of rate, safety of loading and certainty of delivery, time of passage and efficient performance, on the average for the term, the American fleets had no superiors in the trade. Perhaps we should extend our review of the efficiency, or combined speed and burden, of the fleets, and, having given the averages in the principal table, show the extremes in a collateral list. The highest and lowest monthly averages of efficiency for the principal fleets, found in each of the four years of the term, may be set forth as follows: —

EXTREMES OF EFFICIENCY.

Description of Vessel.	Number of Ships.	Pounds per Ton per Day.		Number of Ships.
		Highest.	Lowest.	
American wood, 1st year	7	26.556	24.331	16
" " 2d "	3	28.48	22.93	2
" " 3d "	13	27.1656	24.1111	1
" " 4th "	1	29.2251	23.0699	13
British wood, 1st year	7	26.812	24.092	11
" " 2d "	7	28.7	24.58	3
" " 3d "	2	29.5382	23.194	5
" " 4th "	1	28.6559	23.0384	1
" iron, 1st year	28	28.033	23.683	11
" " 2d "	14	28.061	23.73	30
" " 3d "	14	27.1558	23.2803	18
" " 4th "	18	27.5557	23.4587	18
German wood, 1st year	1	26.606	19.248	1
" " 2d "	2	27	21.928	4
" " 3d "	2	26.3066	21.5341	1
" " 4th "	1	26.7062	21.7582	1
" iron, 1st year	4	25.134	21.65	2
" " 2d "	1	24.69	18	1
" " 3d "	1	25.551	22.3094	1
" " 4th "	1	27.7517	20.2262	1

It may be well to condense this table by combining the averages of the different years, the highest with the highest, and

the lowest with the lowest, for the four-year term, and present a more compact statement of the extremes of performance.

EXTREMES OF EFFICIENCY. AVERAGES OF ONE MONTH IN EACH OF FOUR YEARS.

Description of Vessel.	Number of Ships.	Pounds per Ton per Day.		Number of Ships.
		Highest.	Lowest.	
American wood	24	27.2379	23.7242	32
British wood	17	28.0186	23.8875	20
British iron	74	27.7670	23.5455	77
German wood	6	26.6542	21.4646	7
German iron	7	25.3547	20.7671	5

From this table it is quite plain that the wood beats the iron. A comparison of British wood with British iron, and German wood with German iron, is, perhaps, the best to prove this point. The British vessels were loaded deepest. No doubt it will be of interest to show the extremes of single-ship performance, with the days spent on the voyage. The following table presents this view: —

EXTREMES OF EFFICIENCY IN FOUR YEARS SINGLE-SHIP PERFORMANCE.

Description of Vessel.	Voyage Days.	Pounds per Ton per Day.		Voyage Days.
		Highest.	Lowest.	
American wood	105	33.238	16.84	179
American iron	118	29.7711	25.0083	140
British wood	96	35.3642	15.8326	150
British iron	91	38.5	18.0174	181
German wood	118	29.19	20.3949	157
German iron	112	28.4187	17.8809	168
Norwegian wood	114	29.7231	20.3625	151
Norwegian iron	136	25.0985	24.8284	138
French wood	125	25.2654	17.1994	165
French iron	138	25.2279	19.8678	169
Italian wood	128	25.5443	17.579	158
British steamers	66	55.3	31.9785	91

Since this table was made, the wood ship, Henry B. Hyde, of Bath, Maine, 2,538 tons, arrived in New York, 22 days from Liverpool, having delivered there her first cargo of wheat, 82,234 centals, from San Francisco, after a passage of 95 days. She carried 32.4011 centals to the ton, and displayed an efficiency of 34.1064 pounds per ton per day. This beats the best American performance in the four-year term, and has never been surpassed by any ship not clipper-built. Then consider the cheapness of her carriage. Her rate was 27 shillings per ton. She sailed on November 29, 1885. On the 27th and 31st there sailed for Cork two foreign iron ships with rates of 32 shillings and 6 pence, which was 20.37 per cent. greater than the American ship could command, although she was superior in every respect. It is manifest, this discrimination is an outrage that has to be suffered for the want of proper protection.

The foregoing table does not show the speediest, but the most efficient performances, although in most instances the right-hand column does show the dullest sailing. While British clippers have made the fastest time, and put on record the most efficient single-ship performance of the four years under investigation, British iron bottoms may also boast of having joined in the lowest and extremely slowest work ever done in the California trade.

Observations on Models. Great Britain still builds the clipper type of sailing ship. In the United States very few of this type have been launched since the years before the war, and none now remain in the California trade. The iron fleets really contain the largest proportionate number of clipper models, but even these do not always sail swiftly, because of foul bottoms and loading too deeply. In some of the shorter single voyages of both wood and iron, American and British, the efficiency has been carried above the figure of thirty-two pounds per ton per day, and the cargo delivered in good order, without damage to the ship. But the most efficient grain carrying fleets have yet to be built. The average ship should reach a mark of thirty pounds per ton per day. This would be an improvement of 20 per cent. She may be built of wood, or metal, but must be of not less than 2,000 tons measurement. The following is the list of ships entitled to fly the pennant for

highest efficient performance for a single voyage in the four year period: —

American wood bark, Cassandra Adams . .	1,127 tons.
American iron bark, Annie Johnson . . .	997 tons.
British composite ship, City of Hankow . . .	1,195 tons.
British iron ship, Loch Moidart	2,000 tons.
German wood ship, Clara (American-built) . .	1,600 tons.
German iron ship, Khorassan	1,039 tons.
Norwegian wood bark, Imocos	597 tons.

The Cassandra Adams was built at Seabeck, on Puget Sound, from the fine fir timber of that well-stocked region. The City of Hankow is a composite ship classed as wood. The Loch Moidart is a four-masted ship of large size, with plenty of canvas, good beam, and great proportionate length. These three vessels are of nearly equal light draft loaded. The iron ship has a length to breadth of 6.75 to 1; the composite of 6.3 to 1; and the wood of 4.85 to 1. Thus it is seen why the wooden ship lacked equal power of efficiency, namely, that she was deficient in length, not only in proportion to breadth, but in relation to draft of water. The length is quite as necessary for burden as for speed. Short ships cannot possibly be modeled for great efficiency. The Henry B. Hyde, previously noted, has a length of almost 6 to 1. It is here a good place to complain of the British Lloyd's Rules for Classification, so influential with British shippers that they have been unimproved for a long period, apparently with a purpose of keeping back the efficiency of wooden ships, while care has been taken to advance the rules for iron ships, in the interest of British shipbuilding. If by rules of inspection the wooden ship can be kept short and the iron ship built long, so much of advantage will be gained for the banner of St. George. It is only necessary to use rightly good iron or steel in the construction of wooden sailing ships to provide the rigidity requisite to the best proportions for carrying and sailing — in a word, for efficiency — with greater safety than by using such poor material as commonly goes into British bottoms. The very cheapest metal produced in Britain is what is intended, and used in that country, for building vessels. An examination of price lists will verify this fact. But Lloyd's classification compensates all imperfections.

Safety and Seaworthiness. To return to the performance of the different fleets. Having seen them chartered, loaded, and sailed to their destinations, the first thing in order is to learn their behavior at sea; which fleet displayed the best qualities, was safest from perils, had the fewest disasters, made the least losses, and is the most worthy of confidence. The following section of the Table of Performance supplies this information: —

A FOUR-YEAR TABLE OF THE COMPARATIVE PERFORMANCE OF FLEETS, CARRYING GRAIN AND FLOUR FROM SAN FRANCISCO TO PORTS IN EUROPE, FROM JULY 1, 1881, TO JULY 1, 1885.

Part Third.[1]

Description of Vessel.	Number of Ships.	No. Lost.			No. in Peril.				Accidents.			
		Wrecked.	Missing.	Abandoned.	Distress.	Sprung a Leak.	Jettisoned.	Deck Swept.	Spars and Sails.	Collision.	Grounded.	Anchor and Chains.
American wood	418	1	–	1	2	4	–	6	12	9	5	2
American iron	5	–	–	–	–	–	1	1	–	–	–	–
British wood	198	2	1	1	4	8	4	3	4	4	6	–
British iron	761	2	3	1	2	3	8	27	28	16	8	7
German wood	39	–	–	–	1	1	2	1	2	–	2	–
German iron	41	–	–	–	–	–	–	–	–	1	1	–
Norwegian wood	20	–	–	–	–	–	–	–	1	–	–	–
Norwegian iron	2	–	–	–	–	–	–	–	–	–	–	–
French wood	16	–	1	–	–	1	2	–	1	–	–	–
French iron	7	–	–	–	–	–	–	–	–	–	–	–
Italian wood	12	1	–	–	–	–	–	–	–	–	–	–
Dutch wood	1	–	–	–	–	–	–	–	–	–	–	–
Russian wood	1	–	–	–	–	–	–	–	–	1	–	–
British steamers	11	–	–	1	–	–	–	–	1	–	1	–
French steamer	1	–	–	–	–	–	–	–	–	–	1	–

Of the larger fleets, it appears that the American wood had the fewest accidents, the most infrequent perils, and the smallest number of lost ships. The American total losses — "wrecked," "missing," and "abandoned" — were less than a half (.4784) of 1 per cent. of the number composing the fleet. British iron total losses exceeded three quarters (.7884) of 1

[1] Parts First and Second given in previous pages.

per cent. of the number of the fleet, and amounted to a proportion (.648) nearly 65 per cent. greater than for American wood. But the British wood proved inferior to the iron. The total losses of British wood were (.0202) fully 2 per cent. of the fleet, and amounted to (.294) nearly 30 per cent. more than the iron. This bad record of British shipping is primarily due to weakness of structure and overloading. Necessarily, our better ships, by discriminative premiums, are made to contribute largely of tribute money to reimburse the Lloyds and the insurance companies, who cover almost any risk under the British flag. If we take the total losses under this flag, including the steamers, we have eleven out of 970 vessels. Under the American flag there were two total losses out of 423 vessels. The difference in seaworthiness and safety may be thus exhibited: —

Total losses of American flag	1 out of 212.
Total losses of British flag	1 out of 88.
Proportionate safety of British flag . . .	41.5 per cent.

Nor should it escape attention that half the total losses of British iron were "missing" ships, with all hands lost. With regard to ships in imminent peril, the superior seaworthiness of American ships is even more manifest. Including those in "distress," "sprung a leak," "jettisoned," and "decks swept," in one list, the proportion of American wood is (2.871) $2\frac{7}{8}$ per cent.; of British iron, (5.256) $5\frac{1}{4}$ per cent.; and of British wood, (9.6) $9\frac{6}{10}$ per cent. Under the American flag there were 14 ships out of 423 in peril; but under the British flag there were 59 ships out of 970 in danger. The difference in liability may thus be manifested: —

In danger under American flag	1 out of 30.2.
In danger under British flag	1 out of 16.44.
Proportionate safety of British flag . . .	54.4 per cent.

What have the depreciators and detractors and non-protectors of American ships to say to facts like these, now for the first time marshaled in the cause of truth and justice? When the accidents, perils, and losses are considered, the conclusion is irresistible that, on the average, as generally loaded and sailed, first-class American sail-ships of wood excel the

British, wood or iron, in every quality of good performance at sea, and just as truly in every element of economy in port. This being the settled judgment of American owners and masters, well founded on experience and observation, it is no wonder they see no advantage in changing home for foreign builders. Of this, their decision, let our statesmen take due notice and govern themselves accordingly. Let them seriously consider the fact, that the disadvantages of our shipping inheres in its nationality and the national neglect, and not in its materials or workmanship. Remove the drawback of the *flag*, by instituting benefits for the encouragement of business under it, and protect the *rights* of our ships, and the whole world will help us restore our vanishing power of gathering the wealth of the sea.

The Greater Economy of American Ships. Having shown in previous pages of this chapter that the American sailing ships in the California trade with Europe have no superiors in size of hull and weight of cargo, in cheapness and speed of carriage, in efficiency and safety of performance, it remains to compare their merits as economical instruments of trade, and establish their just claims to exemption from damaging insurance discriminations.

What may be gained from the perfect building and navigation of ships is absolute immunity from the needless waste of property at sea. In the Providence that overrules the deep and directs the whirlwind and the storm, man may not always in his skill and patience successfully prevail. But while the fancied dangers of the deep are few, the positive perils of the ship are many. Ignorance, willfulness, and the greed of gold are the fell destroyers of ships.

What acts are more malevolent than the scanting of materials and the slighting of work? What can be more merciless than fraudulent construction and reckless navigation? And what is more cruel than the overloading of ships to the extent of foundering and drowning their crews? Yet the evil-doer casts his bane ashore and afloat. What the world wants to know about ships is this: Who are the most inventive and skillful builders? Who are the most liberal and the wisest owners? Who are the bravest and most proficient mariners? And last but not least, which power is it that shall eventually

rule the nations with a ship of iron? A very good answer to these questions at the present time may be found in the comparative waste of property at sea. The following table will exhibit this waste through losses to ship, cargo, and freight of the different fleets engaged for four years: —

A FOUR-YEAR TABLE OF COMPARATIVE PERFORMANCE OF FLEETS, CARRYING GRAIN AND FLOUR FROM SAN FRANCISCO TO PORTS IN EUROPE, FROM JULY 1, 1881, TO JULY 1, 1885, GIVEN IN PARTS.

Part Fourth.[1]

Description of Vessel.	Number of Ships.	Property Losses.			
		Vessel.	Cargo.	Freight.	Total.
American wood	418	$157,250	$237,566	$47,300	$442,116
American iron	5	300	800	285	1,385
British wood	198	249,267	312,445	89,748	651,460
British iron	761	414,350	513,890	129,792	1,058,032
German wood.	39	11,500	9,418	11,240	32,158
German iron	41	1,250	—	—	1,250
Norwegian wood . . .	20	1,000	—	—	1,000
Norwegian iron	2	—	—	—	—
French wood	16	41,280	65,624	21,988	128,892
French iron	7	—	—	—	—
Italian wood	12	20,000	35,000	12,000	67,000
Dutch wood	1	—	—	—	—
Russian wood.	1	2,000	—	—	2,000
British steamers. . . .	11	245,000	95,726	34,586	375,312
French steamer	1	1,000	—	—	1,000
Total	1,533	$1,144,197	$1,270,469	$346,939	$2,761,605

There is nothing like a test of dollars and cents to cut down commercial conceit, and correct our impressions of intrinsic value. Underwriters frequently publish statements of "losses paid," together with "net premiums," and "margin of receipts," intended to show whether insurance rates are remunerative or not; but as insurers do not cover fully all the property at risk at sea, and on hulls write only against loss or damage above a fixed percentage of value, their statements come far short of full testimony for a just judgment of the merits of different types of ships, or dissimilar systems of shipbuilding. We must go beyond underwriters' accounts for the

[1] Parts First, Second, and Third given in preceding pages.

full data of shipping economy. To decide rightly the question of superiority in type and construction, the performance at sea, and all the expense of wear and tear of voyages, must be included and considered. The losses by wear and tear, and through the minor accidents, never find a place in underwriters' statements. A ship is a machine. What it costs to build a vessel is of much less consequence to the owner than what it will cost to run and keep her in good condition. A ship may cost, relatively, high or low, but her value for work and her durability are the true tests for economical character. These tests never form the study of the political economist. All ships, good, bad, and indifferent, are alike to him. He judges by *first cost*, and is necessarily in error. The survival and efficiency of ships, their performances and economy in use, — sciences yet undeveloped by naval philosophy, — to the wisest economist are quite unknown.

In the foregoing statement the value of ships lost, or amount of damages to hull or cargo, where not accurately reported, is expertly and fairly estimated from the tonnage of vessel, amount or extent of loss, and character of repairs. Partial losses, so far as published, are taken from underwriters' statements. The value of cargoes and freights are known with certainty, and occupy columns in Part First of the Table of Performance. Wood and iron vessels have been appraised as of equal value, — fifty dollars per ton. Iron ships cost the most, but the table would seem to show, by the number and amount of losses, that for intrinsicality they are worth the least. If we divide the amount of losses under the headings of "hull," "cargo," "freight," and "total," we shall have the peril rate per register ton on the average ship of the different fleets in dollars, cents, and mills, as set forth in the following table, in which also is listed the number of lives lost by shipwreck (the British proportion of which is 88 per cent.) : —

COMPARATIVE PERIL PER TON.

Part Fifth.[1]

Description of Vessel.	No. of Ships.	Peril Rate per Ton.				No. Lives Lost.
		Hull.	Cargo.	Freight.	Total.	
		$ c. m.	$ c. m.	$ c. m.	$ c. m.	
American wood . .	418	23	34 $7\frac{1}{2}$	7	64 $7\frac{1}{2}$	—
American iron . .	5	5	13 3	4 $7\frac{1}{2}$	23	—
British wood . . .	198	99	1 24	35 $7\frac{1}{2}$	2 58 $7\frac{1}{2}$	18
British iron . . .	761	40 $1\frac{1}{5}$	49 $7\frac{1}{2}$	12 6	1 2 5	68
German wood . . .	39	24 6	20 $1\frac{2}{3}$	24 1	68 9	—
German iron . . .	41	3	—	—	3	—
Norwegian wood . .	20	5 4	—	—	5 4	—
French wood . . .	16	4 10 $7\frac{1}{2}$	6 53	2 19	12 82 5	15
Italian wood . . .	12	1 89 $1\frac{1}{5}$	3 31	1 13 5	6 33 8	—
Russian wood . . .	1	1 44 5	—	—	1 44 5	—
British steamers . .	11	12 64 6	4 94 1	1 78 5	19 37 3	25
French steamer . .	1	29 1	—	—	29 1	—

Here it is seen that for the cost of wear and tear, and losses of all kinds, the American wood leads the large fleets by a long distance, notwithstanding it also makes the speediest passages, and its wear and tear may well be considerable. Taking the peril on "cargo" as a standard of comparison, British iron hulls have 21.74 per cent. greater proportionate peril than American wooden ships. By the same standard it is worth 25.37 per cent. more, proportionately, to insure freight in British iron than American wood vessels. Applying the same test to British wood ships, we find them exhibiting a like proportionate inferiority of 20.62 per cent. in hull, and 43.1 per cent. in freight risk. Thus we see the American ship is, relatively, far superior to either the wood or iron under the British flag. The absolute superiority may be represented by the ratios of peril on hulls and cargoes in the following manner: —

	American superiority. Per cent.
On hulls.	
American wood is to British iron as 23 cts. to 40.12 cts.	74.43
American wood is to British wood as 23 cts. to 99 cts. .	317.39
On cargoes.	
American wood is to British iron as 34.75 cts. to 49.75 cts.	43.16
American wood is to British wood as 34.75 cts. to 124 cts.	256.11

[1] Parts First, Second, Third, and Fourth, given in previous pages.

Of the smaller fleets experiencing perils and meeting with accidents, the Norwegian and German fleets had the best success. The fleets having few or no mishaps are probably too small to depend upon for an average rate of eventful risk. The British iron steamers, the French and Italian wood, make a bad showing indeed. The following is a list of fleets, with average speed and total peril rate in the order of superiority for four years: —

Description of Vessel.	Number of Ships.	Number Voyage Days.	Total Peril Rate per Ton.
			$ c. m.
German iron	41	136.7317	3
Norwegian wood	20	127.25	5 4
American iron	5	124	23
American wood	418	125.5471	64 7½
German wood	39	135.5263	68 9
British iron	761	130.6911	1 2 5
British wood	198	131.7644	2 58 7½
Italian wood	12	141.9166	6 33 8
French wood	16	139.5206	12 82 5
British steamers	11	83.7	19 37 3

From this showing, the German and Norwegian navigators and their ships seem to have had unexceptional good fortune. There is no doubt these nations deserve great credit for prudent management and good seamanship. They will keep the sea, or at least would deserve to, long after the French and Italians shall have been driven off. By the same indications, the British nation should ultimately strike colors to the United States. The only difficulty in the way is the dispute on the question of "free ships," and that old ship-scuttling heresy that these States are not a nation, but a provincial band of sovereignties, without a single national interest belonging to the whole lot; and, consequently, shipbuilding, navigation, and commerce are only "private interests," not worth a public thought, let alone protection.

Comparison of British and American Fleets. In this connection, however, it may be of interest to review the expectation of the merchant fleets under the American and British flags, if they both be put upon equal footing. We name this condi-

tion, because the British flag has had the advantage for forty years, and for all this time Congress has neglected and refused to promise our own flag fair play. Forming the American and British ships into opposing fleets, this is how they stand in a comparison of the flags: —

Description of Flag.	Number of Ships.	Number Voyage Days.	Total Peril Rate per Ton.
			$ c. m.
American (sail)	423	125.5287	64 3½
British (sail)	959	129.8825	1 33 1⅙
British (steam)	11	83.7	19 37 3

Proportionate economy of British flag, 48.32 per cent.

This result indicates a superiority in shipbuilding and navigation so deeply marked as to entitle our country to confidence in our mechanics and mariners in all time to come. But the truth of the matter may be shown in another way. If American wooden ships were no better than British, French, and Italian, there would seem to be good enough reason for "substituting iron for wood" in Europe, as we hear so much, from the thoughtless and uninformed, should be done in the United States. But if wooden ships are inferior to iron in every country but our own, there must be a reason for it. And if our wooden ships can beat the fleets of the preëminently "iron country," there must be a substantial reason for that significant fact. The cardinal causes are simple enough, namely, superiority of model, goodness of materials, excellence of construction, and admirable navigation. These capital qualifications are just as marked in our iron steamers as our wooden ships. And these are facts that our statesmen should consider before they resolve to substitute the shipyards of Europe for those of our own country, whereby we shall exchange greatness for mediocrity, and superiority for shortcoming. Doubtless some of our countrymen will be surprised to learn that such was the redeeming excellence of the American wood fleet that, putting all the wooden ships in one fleet, and all the iron vessels, including steamers, into another fleet, the

total peril per ton was an *eighth* of one per cent. less for all the wood than for all the iron. Here is the comparison: —

Description of Vessel.	Aggregate Tonnage.	Aggregate Losses.	Peril Rate per Ton.
			$ c. m.
Wooden	1,024,116	1,324,626	1 29 $3\frac{2}{5}$
Iron	1,109,523	1,436,979	1 29 $5\frac{1}{8}$
Total	2,133,639	2,761,605	
Average of the aggregate, wood and iron			1 29 $4\frac{1}{3}$
Average of British iron alone			1 33 $1\frac{1}{6}$
Average of American wood alone, only			64 $3\frac{1}{2}$

As we have shown elsewhere, only 32 per cent. of the aggregate of the tonnage for four years was American wood. The British, French, and Italian portions of the aggregate wood was decidedly inferior, while the American, German, and French portions of the iron were as decidedly superior. The result both demonstrates and illustrates, lucidly, the wrong and evil inflicted by the British Lloyds, and all underwriters following their lead, in driving our wooden ships out of business, by a policy of charging, indiscriminately, higher insurance rates on wood than iron tonnage. The British underwriters first initiated this distinctive policy, to encourage iron shipbuilding in the United Kingdom. Having firmly established the new trade by their timely protection, they continue and repeat their master-stroke as a force well calculated to destroy the wood shipping of foreign nations.

Unjust Underwriting Rates. In the California grain trade the Lloyds made a difference in rates on cargoes, ranging from 25 to 40 per cent. greater for wood than for iron, sail or steam. In other words, when iron rates were 2 per cent., the premium for wood ranged from 2.5 to 2.75 per cent., or more. American wood ships per register ton got no better show than British wood ships, whose average peril rate was 124 cents; or Italian wood ships, whose average peril rate was 331 cents; or French wood ships, whose average peril rate was 653

cents, per ton. On the average British iron sailing ship the cargo peril rate was 49.75 cents per ton, which, as we have seen, is 143.16 per cent. of that for the average American wooden ship. That is to say, if cargoes in British iron ships were worth but 2 per cent., then cargoes in American wooden ships should have been written for 1.4 per cent. But the Lloyds of London, for the protection of British interest, set up a double rate, and every insurance company at home and abroad enforces the unjust and exterminating discrimination. Is it any wonder there are no ships and few steamers building for foreign trade to-day in the United States?

The Comparative Turnout of Cargoes. Lest it be thought possible that discriminative rates of insurance on cargoes may have some justification from relative condition on arrival, the following table is quoted from the report of the Commissioner of Navigation, 1886: —

TABLE OF RELATIVE PERFORMANCE OF 100 GRAIN VESSELS LEAVING THE PACIFIC COAST FOR LIVERPOOL IN THE YEAR 1883–84.

Condition of Cargo.	American. 40 Wood Ships, with Cargoes of 1,500 to 3,000 tons.		British. 60 Iron Ships, with Cargoes of 1,500 to 3,000 tons.	
	Number.	Per cent.	Number.	Per cent.
In perfect order	21	52½	31	51.7
Slightly damaged	8	20	7	11.7
Damaged 100 to 500 bags	5	12½	6	10.0
Damaged 500 to 1,000 bags	4	10	5	8.4
Damaged over 1,000 bags	2	5	8	13.2
Damaged by heating	–	–	2	3.3
Totally lost	–	–	1	1.7

While it is admitted these statistics, collected by the State Department, are too crude to be perfectly satisfactory in regard to accuracy, it is indisputable that the showing is greatly in favor of our position, that there is no warrant whatever for the killing British policy that is studiously applied to American ships. In the first place, as appears in my annual Table of Performance for the year 1883–84, the average size and carriage of American and British ships in above table would be as follows: —

Register of American wood ship	1,632.12 tons.
Register of British iron ship	1,411.64 tons.
Carriage of American ship	3.260.74 lbs. per ton.
Carriage of British ship	3,269.54 lbs. per ton.
Cargo of average American ship	53,219 centals.
Cargo of average British ship	46,154 centals.

Whence it results that each American ship in the foregoing table carries 15.3 per cent greater number of centals, or bags, than her British competitor, and is by that proportion the superior in good delivery of cargo, if there was no other difference in the performance of the fleets. Manifestly, it is not fair to compare by numbers of vessels, but in preference by quantities of cargoes. The table approximately corrected stands as follows: —

CORRECTED TABLE OF RELATIVE PERFORMANCE OF 40 AMERICAN WOOD AND 60 BRITISH IRON SHIPS. GRAIN LADEN FROM THE PACIFIC COAST FOR LIVERPOOL, IN 1883–84.

Condition of Cargo.	American. 40 Wood Ships, with Average Cargoes of 53,219 Centals.		British. 60 Iron Ships, with Average Cargoes of 46,154 Centals.	
	Centals.	Per cent.	Centals.	Per cent.
Whole quantity carried	2,128,760	43.46	2,769,240	56.54
In good condition	2,121,710	99.668	2,707,486	97.98
Damaged	7,050	.332	15,600	.34
Total loss	—	—	46,154	1.66

Thus it results that the comparison may assume the following shape: —

	American superiority. Per cent.
On delivery in good condition	1.713
On delivery, damaged	0.039
On delivery, lost	1.666
Total loss	3.418

What has been Shown. It has now been shown by such an array of proof as was never before brought to the exposition of the subject, that American ships have no superiors in the

California trade to Europe, nor, indeed, is it likely they have in any other ocean trade. When compared in fleets with the best ships of all nations, they are found to excel in size, capacity, value of cargo, cheapness of freight, safe delivery, good condition, speed in sailing, efficiency in navigation, escape from disasters, preservation from loss both of life and property, and in reducing to a minimum the perils of the sea. What could we have more, what would we have better, by giving up our own superior building and becoming dependent upon Great Britain for her inferior iron ships? Manifestly we would not get from her the equals of our present fleets, nor vessels of less first cost, nor greater durability. Would we thereby secure what is now wanting, — protection for the *employment* of our ships? Could we any the better obtain living freights, in our own ports even? Not a bit of protection or advantage would we find. Whether of iron or wood, built at home or abroad, American ships would still have to wait till foreign vessels were first engaged at higher rates, or accept "private terms," just as our present ships do, so long as foreign merchants and underwriters are permitted to control the carrying-trade of the United States, solely to the advantage of rival nations. There is not a single benefit to be gained, but several sure to be lost, by substituting imported for domestic ships in American commerce.

The problem of the American ship is one of protection, or abandonment, of the sea. It is most disgraceful to our government that the only thing wanting to our ships is something which itself should supply. Let but the Stars and Stripes be hauled down, and the Union Jack of Britain take its place, and better freights with more frequent engagements will follow, right out of our own ports. For the want of protection in some of the various ways practicable, our ships do not receive fair play, nor compete on equal footing. With the stigma of "free-ship" bills pending in Congress, how can we expect foreign merchants to load our ships at standard rates?

Every free-ship vote in Congress is an impeachment of the good character of our ships. Naturally, every British subject indorses every such impeachment. Nevertheless, we have now a better average sailing ship than is built in Britain, of either wood or iron. We have in abundance, and use in every

instance, better iron and steel in all our metal steamers. And the additional cost of superior materials is the most economical expenditure in building a ship, as the added durability and increased safety abundantly compensate and prove. If Congress will act wisely the people will be patriotic. Our shipbuilders and our ships will not be cast away, but rather their work will be encouraged, shipowners will be protected, and our commerce done by a marine of our own.

CHAPTER XVII.

PACIFIC COAST COMMERCE AND NAVIGATION.

The Export of Grain, 1889. Having proved, in the preceding chapter, by the performances of fleets in the California trade, that American ships are superior to European craft, — that in safety, size, and speed, in efficiency and cheapness of carriage, they excel the world, — we will next consider the gain or loss of foreign freighting to the Pacific States.

In the calendar year of 1889 there sailed from San Francisco 234 ships, aggregating 387,091 tons, grain laden for ports abroad. This fleet carried 12,011,674 centals (536,235 tons gross), valued at $16,430,076. Of this export, 11,171,848 centals (498,822 tons gross), valued at $15,264,145, went to Europe, and the balance to other foreign parts.

The fleet to Europe numbered 213 sail, aggregating 358,205 tons: 167 ships, of 278,885 tons, were British; 30, of 58,601 tons, were American; 11, of 14,551 tons, were German; 3, of 3,277 tons, were Italian; 2, of 2,891 tons, were Swedish and Norwegian. The foreign shipping carried 416,697.05 tons, and the American, 82,046.16 tons gross of cargo.

The average rate of freight paid American ships was £1 10*s.* 6$\frac{3}{5}$*d.* ($7.423); the British rate was £1 15*s.* 3$\frac{1}{4}$*d.*; the German rate, £1 14*s.* 6$\frac{1}{2}$*d.*; the Norwegian, £1 18*s.* 3*d.*; the Italian, £1 16*s.* 8*d.*; and the rate of the foreign fleet, as a whole, £1 15*s.* 4*d.* ($8.58).

The average proportionate excess of rate over American, paid foreign shipping, was 15.65 per cent.

The freight-money paid foreign ships was $3,577,344.17. At the rate paid American ships, it would have been $3,093,-142.20, or $484,201.97 less.

As the measurement of the foreign fleet aggregated 358,205 tons, it is apparent that the excess of freightage apportioned to each ton of vessel was $1.35. It is also clear, that this

excess alone would have equaled the bounty proposed in the "Tonnage Bill"[1] (which called for $1.40 to the ton) to be paid to 345,858 tons of shipping. This amount of tonnage equals 89.34 per cent. of the entire grain fleet of 1889. It represents more capacity than we have had for years fit for the California trade with Europe, and as much tonnage as we had in 1889 eligible for bounty under the bill.

The figures above given show the average discrimination for the year. Attention will now be called to the figures for a single month of 1889, in which we find the greater extreme.

The Business of One Month. In December, 1889, there sailed from San Francisco 24 British ships, aggregating 40,221 tons; 4 American, measuring 8,722 tons; and 1 German ship of 1,178 tons, with grain to Europe.

The average British rate of freight was £1 15*s.* 3⅓*d.* (equal to $8.57) per ton; the average American rate was £1 7*s.* 1½*d.* (equal to $6.59) per ton; and the German rate was £1 12*s.* 6*d.* (equal to $7.77).

The British rate in excess of American was 30.04 per cent.; and the German rate (on a wooden ship) was 19.8 per cent.

As a British ship carries 1.4 tons gross of grain for each ton of register measurement, the excess of rate amounted to $2.72 for each ton of the British fleet. This is equivalent to a bounty rate of 38.85 cents per ton of vessel, for 1,000 miles sailed (the "Tonnage Bill" called for 20 cents), which manifestly was overpaid, or abstracted from the pockets of the California farmers, to enrich the monopolizing marine of England.

At 20 cents a ton per 1,000 miles, with a limit of 7,000 miles of voyage, the bounty proposed to be paid American ships by the "Tonnage Bill" amounts to one dollar per ton gross of cargo. As the British fleet of December, 1889, was paid in excess of the American $2.72, and the German ship $1.18, per ton of cargo, the rate of bounty is not extravagant; on the contrary, it seems too small to cover the average discrimination against our flag, and thus to save our Pacific coast farmers from the sacrifices now made on the altar of foreign greed.

The Export of Flour. Having shown that foreign shipping asked and received an excess of $484,202 for freightage

[1] Fifty-first Congress (1890). See Chap. XV.

on grain, it will be in order to see what additional excess was paid for the carriage of flour. Foreign tonnage almost monopolized the flour trade in 1889. An American ship took two cargoes to China for Chinese merchants, and another American vessel carried part of a cargo to Liverpool. The balance of the transport was by foreign bottoms, principally British.

In the course of the year there sailed 30 flour-laden ships, aggregating 37,974 tons, with 485,245 centals valued at $1,951,184.

Of this fleet 21, of 27,430 tons, were British; 3, of 5,160 tons, were American; 4, of 3,109 tons, were German; 1, of 1,233 tons, was Norwegian; and 1, of 1,036 tons, was Hawaiian in flag.

Of the flour carried, 429,654 centals, valued at $1,707,833, went to Europe, and the balance to China and Australia. Of the cargoes to Europe, the British flag carried 78 per cent., or 335,879 centals, valued at $1,330,733, at an average rate per ton gross of £1 14*s.* 8$\frac{1}{5}$*d.*; the German flag carried 15.88 per cent., or 68,250 centals, valued at $274,100, at a rate of £1 15*s.* 9*d.*; our own flag carried 1.39 per cent., or 6,000 centals, valued at $24,000, at a rate of £1 6*s.* 9*d.*; the Norwegian flag carried 4.54 per cent., or 19,525 centals, valued at $79,000, at a rate of £2. Thus, all but 1.39 per cent. of this conveyance was done by foreign craft, at an average rate of £1 15*s.* 1*d.* ($8.52), against an American rate of £1 6*s.* 9*d.* ($6.31), an excess of 31.12 per cent.

The freight-money paid foreign ships was $161,139.78.

The freightage for the same carriage at the rate paid the American ship would have been only $119,341.78. As the tonnage of the foreign shipping employed aggregated 29,135 tons, and the excess of freightage was $41,798, it is seen that each ton received a largess of 1.43\frac{2}{5}$. The bounty proposed in the "Tonnage Bill" to American ships was $1.40, or three cents less than the flour producers of California, in 1889, overpaid in the shape of tribute to the rulers of the sea, our own good ships going idle, or taking up inferior work.

If the bounty proposed in the "Tonnage Bill" was paid by the government, it would encourage our shipowners to increase their tonnage, and enable them, with superior ships, to cut down the extortionate foreign rates, perhaps to the full amount of bounty received.

Total Extra Cost of Foreign Freights. Adding to the excess of freightage on wheat the largess on flour, we have a total of $526,000.

The value of the grain and flour carried to market by foreign vessels was $16,947,978. The freightage was $3,728,384.

	The ratio of carriage. Per cent.
The ratio of freightage to value of products was . .	21.99
By American ships this would have been . . .	18.88
To value of wheat alone the ratio was	23.37
By American vessels it would have been . . .	20.19
To value of flour alone it was	9.57
By American vessels it would have been . . .	7.08

It follows, if American ships, instead of foreign, had carried these products to market, our credit abroad would have been 18.88 per cent. more than it was, to wit, $20,147,756, instead of $16,947,978, since export freights are always paid where cargo is landed. From these facts we learn that transportation by our own hands is the sister of production, but by foreign hands, an oppressor; and that the use of our own shipping is as beneficial to the country as the cultivation of our farms.

The features of the foreign trade and transportation of California, thus exhibited, are no new thing under the sun of that attractive region. The discriminative policy of the clever British, to them protective, but to us unjust, has not only killed our shipping competition in Pacific ports, but skinned the farmers of that fruitful coast from north to south.

It was clearly shown in Chapter XVI., that the average annual excess of freight-money for the four-year period, 1881–2 to 1884–5, was $363,796. By 1889, as we have seen above, the extortion had risen to $526,000, — at the rate of 10 per cent. a year, — while American shipping in the trade had fallen off proportionately.

Performance of Grain Fleets, 1889. The American fleet of this (calendar) year excelled all former fleets, particularly in speed. The average ship of the different fleets made the voyage from San Francisco to port of destination, on the basis of time to Cork, as follows: —

	Days.
The American fleet in	112.86
The British fleet in	131.32
The German fleet in	131.45
The Swedish fleet in	132.50
The Italian fleet in	157.33
The average foreign ship in	131.76
American superiority in speed	18.90
American superiority in percentage	16.84

Our superiority in speed, in the four-year period (Chapter XVI.), was only about 5 per cent. The British performance did not improve; the German did a little. Our gain was owing to the fact that only large and good performers could keep the trade. But look at the injustice of charging from 15 to 30 per cent. higher insurance on such ships as could beat the British 16.35 per cent. of voyage-time! Then, consider whether this oppression should always last? If our shipping interest should submit to outrage and ruin, for want of national protection, what shall be done about the wrong inflicted upon the producers of the country?

Producers Pay a Bounty to Foreign Tonnage. The question is practical, Who bestows the bounty that is extorted by foreign shipowners, when they take higher freights than American owners would be glad to get? In the author's judgment, our farmers pay it, our manufacturers pay it, our traveling community and all our people pay it. Our shipping carries now but 9.25 per cent. of export commerce. Why is this? Why are not more American, and fewer foreign, ships laden in our ports? This is certainly an interesting question to the producers of every State. The answer is easy. It is because we have been a simple people, too thoughtless to shield our ships. It is because foreign merchants, shipowners, underwriters, and their governments are too cunning for our statesmanship. It is because foreigners have not been kept at bay, but by free trade permitted, without check or hindrance, nay, with approbation, to impose upon our ships and their defenseless owners. The cheapest, safest, and best entitled carriers — our own good vessels — have been driven from the sea; because, for eighty years past, Congress has not moved protection for them, but given away or suspended what they had, in

pursuance of the paralogism that "ours is a free government." If freedom should abound at sea, why not spread anarchy around on shore? If protection is wrong in principle, and government is protection, then anarchy is perfection, for that is no rule at all, but freedom wholly. Because of freedom, — anarchy in the carrying-trade, — our producers of every kind, dependent on foreign markets, are suffering now, and long have been, from the evil consequences of thrusting our shipping out upon the mercy and the cunning of rival nations, their shipping societies and underwriters' associations, their cunning merchants and crafty governments. Our people have noted that our ships have lost their business, but how it happened is not so clear to them; and they scarcely dream that the blight on navigation has touched the factory or reached the farm, or ever will.

Our merchants and our shipowners in foreign trade, and to a great extent our underwriters, shipbuilders, mariners, engineers, and seamen, have been driven from their business and employments, and they will look in vain who think to find any compensation to their country for this wrong and disgrace, — wrong to the citizen and disgrace to the government. The simple-minded economist may theorize that freights are the lower for foreign competition. But our statistics of the Pacific coast grain trade prove that foreign ships are the costliest carriers. Artificial and invidious distinctions have been set up, to trick our producers out of bounties and largesses to destroy our own and support foreign marines. The question is pertinent, Will our farmers, who have brought our interior railroads to book, always submit to the bestowal of bounties upon foreign tonnage? What American interest can contend on economical grounds against foreign monopoly of our trade and transportation? Not one can do it. It would involve a waste of capital. Besides, American competition has become *nil*.

The True Principle of Freighting Economy. The true principle of cheapening freights is improved shipbuilding. This means improvement of rivers and harbors, increased facilities of navigation, larger, stronger, safer, more efficient, and longer-lived vessels. It is a different principle, entirely, from that of calling upon the greed and poverty of the Old World

to fight for freights for fleets of inferior craft. In the one case we have science and skill working with labor-saving machinery; in the other case, there is dullness and rule of thumb, tricks of trade, subterfuges, and extortion. We might as well expect to obtain cheap cloth by reducing the wages of hand-loom weavers, as to get economical ocean carriage from the majority of foreign ships now monopolizing our transportation.

If our statesmen wish information on this subject, let them study the history of lake shipbuilding, navigation, and commerce.[1] At first only six feet of water could be drawn by vessels; accordingly the first built were small, and freights cost enormously. Improving the channels and harbors permitted the navigation of larger vessels; new fleets were built and freights cheapened. From a burden of 100 tons on 6 feet draft of water, lake vessels have been enlarged to a capacity of 3,000 tons, on 16 feet of water; and freight on corn from Chicago to Buffalo has fallen from an average of 15.75 cents in 1859 to 10.5 in 1861, thence to 7.5 in 1871, thence to 3.2 in 1881, and finally to 1.88 cents a bushel in 1890. The following statement is from a pamphlet on the "Twenty Foot Channel," by W. A. Livingston, Detroit: —

"The saving effected by the lake marine in a single season pays over five times the total cost of all government improvements to date.

"The ton-mileage of the lake marine for 1890 was 18,849,681,384 ton-miles. The average rate of freight by rail was 9.41 mills per ton-mile; by lake it was only 1.2 mills. Assuming the lake transportation to have cost 9 mills, at that rate the carriage of the lake cargoes would have cost $169,647,132, whereas the freightage was only $22,619,617, or a saving of $147,027,514 (in one year).

"From official figures given in the annual reports of the Saint

[1] Following is the protective statute, under which our lake traffic was prohibited to foreigners and reserved for the enjoyment of our own people: —

"SECTION 4. (Act of 1817.) That no goods, wares, or merchandise shall be imported under penalty of forfeiture thereof, from one port of the United States to another port thereof, in a vessel belonging wholly or in part to a subject of any foreign power; but this clause shall not be construed to prohibit the sailing of any foreign vessel from one to another part of the United States, provided no goods, wares, or merchandise, other than those imported in such vessels from such foreign port, and which shall not be unladen, shall be carried from one port or place to another in the United States."

Mary's Falls Canal, it is shown that the saving by water transportation over rail of the traffic through this canal was $46,138,512 in 1889, and $55,234,548 in 1890, or a total saving of $101,373,160 in two years."

Now, had there been no protection to the lake shipping interest, and foreign fleets been free to enter that navigation, it is as certain as anything that might have been expected, that our splendid lake marine would never have been built, but we should have been, now, thirty years behind, not only in lake navigation, but the development of the great Northwest. And yet the great public importance of the lake vessel, her harbors, her channels, and her lighthouses, has never fairly received the recognition of the country. Strange as it may seem, it has been assumed, even by presidents, senates, and houses of representatives, that the questions relating to all these matters have closely concerned the vessel interest only.

There can be no doubt, if protection had been continued to our shipping in the foreign trade, that our producers in every part of the country, especially of cotton and grain, would long ere this have had the benefit of American invention and skill for the reduction of freights, through such improvements in shipbuilding as the world has not yet seen, and never may behold. No country in the world holds equality with the United States in requirements for ships of great size and speed, with special qualities for the cheap dispatch of business; and no nation has the mechanical or nautical ability to provide better for its naval wants. All that is lacking is the opportunity, which a good government would wisely make.

If we had control of our foreign trade, as we have of our lake traffic, our vessel designs would be made with American interests in view. Such dimensions, model, propelling power, and means of handling cargoes would be chosen, and such organization of business effected, as would look to the perfecting of every quality and instrumentality of transportation. The conduct of our vessel business on the Lakes is the wonder of the world to-day; while, to-day, we are shut out from showing the world in our seaports how our commerce should be carried on for the advantage of our own people. On the contrary, every Tom, Dick, and Harry of foreign lands are laying us under tribute for doing our business in their own poky way.

Plainly, it is a tribute of a most offensive sort, since it is paid for acting ill our part.

The Export Trade and Transportation of Oregon and Washington. If there is one part of the country more than another that needs the resource of its own transportation, it is a coast community, but particularly one at a great distance from markets, like California, Oregon, or Washington. Considerable space having been given to California, we will now investigate the traffic of the other two distant States.

The following tables, A and B, exhibit the export trade of Oregon and of Washington in wheat and flour, with the sums paid for freight and the ratio of freight to cargo, for the year ended March 31, 1891.

TABLE A: OREGON GRAIN EXPORT.

Flag.	Number of Vessels.	Register Tonnage.	Cargoes in Centals.	Value in Dollars.	Freight in Dollars.	Ratio of Freight to Cargo.
						Per cent.
American . . .	7	10,509	332,466	436,057	143,635	32.94
British	51	72,239	2,476,803	3,488,681	1,120,628	32.12
German	2	2,962	866,674	132,443	39,183	29.43
Total	60	85,710	3,675,943	4,057,181	1,303,446	32.126

TABLE B: WASHINGTON GRAIN EXPORT.

Flag.	Number of Vessels.	Register Tonnage.	Cargoes in Centals.	Value in Dollars.	Freight in Dollars.	Ratio of Freight to Cargo.
						Per cent.
American . . .	3	5,137	171,210	219,349	74,349	34.19
British	32	50,825	1,726,280	2,419,435	744,031	30.75
Total	35	55,962	1,897,490	2,638,784	819,028	31.03

Attention is called to the sixth column, showing the cost of shipment to market. In the seventh column it appears that transportation is nearly one third of trade, a fact proving the

importance of shipbuilding and shipowning to the people of the Pacific coast.

The following table, C, exhibits the export foreign of lumber from the mills of Oregon and Washington, but, mainly, of the latter State, for the year ended March 31, 1891.

TABLE C: PUGET SOUND LUMBER EXPORT.

Flag.	Number of Vessels.	Register Tonnage.	Cargo in Fleet.	Value in Dollars.	Freight in Dollars.	Ratio of Freight to Cargo.
						Per cent.
American . . .	115	85,324	80,846,772	881,042	1,076,896	122.23
British	36	39,510	31,715,435	340,396	489,673	130.48
Chilian	28	26,929	20,855,019	234,973	277,977	115.47
Norwegian . . .	12	11,238	8,375,369	85,373	140,058	139.04
German	7	8,611	6,356,321	64,418	105,369	138.86
Hawaiian . . .	1	779	730,569	6,155	11,097	144.53
Total	199	172,391	148,879,485	1,612,357	2,101,070	130.31

Attention is again invited to the cost of shipment to foreign markets of the cheap but superior lumber product of the Northwestern forests. By the table, vessels engaged in foreign trade are seen to earn *thirty* per cent. more than the mills, but only fifty-four per cent. of the export (foreign) is carried by American vessels.

The foregoing tables may be combined as follows: —

TABLE D: OREGON AND WASHINGTON GRAIN, FLOUR, AND LUMBER EXPORT (FOREIGN).

Flag.	Number of Vessels.	Tonnage of Fleets.	Value of Cargo.	Amount of Freight.	Ratio of Freight to Cargo.	Freight earned per Register Ton.
		Tons.	Dollars.	Dollars.	Per cent.	Dollars.
American . . .	125	100,970	1,536,448	1,295,528	84.32	12.83
British	119	162,574	6,248,512	2,354,332	37.68	14.48
Chilian	28	26,929	234,973	277,977	115.47	10.32
Norwegian . . .	12	11,238	85,373	140,058	139.04	12.46
German	9	11,573	196,861	144,552	73.42	12.49
Hawaiian . . .	1	779	6,155	11,097	144.53	14.27
Total	294	314,063	8,308,322	4,223,544	50.83	13.44

It thus appears that the cost of ocean carriage to foreign markets of $8,308,322 of products was 50.83 per cent. of their value, for the year taken. Foreign ships carried much the most of the valuable articles, and earned nearly 69 per cent. of the amount paid for freights. The peculiar protection under which British ships are sailed secured for them, as may be noted, the cream of this, as every other carrying-trade.

The freight earned by each ton of vessel averaged $13.44. The time spent in this work, supposing the voyage back to be made in ballast, would not average to exceed ten months. The average ton would therefore "gross" $17.12 in one year, a sum probably equal to one third the cost of the newer vessels, and one half the value of the other ships.

In this connection it may be of interest to notice the building and ownership of Oregon and Washington. On the average for a period of seven years past, there have been built in Oregon 6 sail and 16 steam vessels, aggregating 745 and 2,101 tons, respectively. In Washington there have been built 9 sail and 11 steam vessels, aggregating 2,433 and 1,131 tons, respectively. So that some building is carried on for domestic trade. The number and tonnage of vessels owned in these States, respectively, will appear from the table following: —

TABLE E: VESSELS OWNED.

Fiscal Year.	In Oregon.				In Washington.			
	Sail.		Steam.		Sail.		Steam.	
	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.	No.	Tonnage.
1884	42	10,616	121	40,182	86	40,948	78	9,002
1885	55	16,565	129	42,626	87	40,352	79	9,424
1886	59	14,289	132	42,517	91	31,909	86	10,211
1887	51	13,564	137	38,698	79	39,068	86	10,392
1888	49	12,600	136	40,717	93	53,049	98	11,675
1889	48	11,695	148	39,543	94	50,991	120	18,548
1890	42	10,470	154	38,896	88	49,207	136	21,486

The State of Oregon shows no growth in the ownership of vessels, but Washington exhibits a moderate increase, both in sail and steam. It must be acknowledged with regret, how-

ever, that foreign vessels are gaining all the time in the freighting business of both States. The staple exports of wheat, flour, and lumber are increasing constantly, and so is the trade of foreign tonnage. It seems that we settle, govern, and develop our country for the benefit of the shipping of all countries but our own. With due protection from our government, — such a protection as we authorize it to give to manufactures and agriculture, and even to minor industries, — all the shipping employed by the Pacific States would, in a short time, be built, owned, insured, and manned by citizens of their own, chiefly. The costly carriage to markets would then be added to their export credit abroad, to increase their trade, if they wished; or be brought home in money to enlarge the currency volume and ease the dealings of the banks. The cheapest, safest, swiftest, and best carriers of grain from the Pacific coast have been American wooden sail ships. The finest timber in the world for building such vessels is of staple growth in Oregon and Washington. There, too, may be mined the iron ore and coals for steamship building and running, to make these two States great in maritime power. The day cannot be distant when a wise policy will bring about this grand result, greatly to their gain, but of greater consequence than wealth to the national weal.

CHAPTER XVIII.

THE MARINE INSURANCE BUSINESS IN THE UNITED STATES.

Reports from Collectors of Customs. In Chapter XV. reference was made to the unsuccess of American competition with foreign companies in the insurance business; it will be well to look further into this subject, since underwriting is just as much an instrumentality of commerce as a marine itself; and just as necessary to navigation as the employment of ships.

Desirous of collecting authentic information on the marine insurance business, not only in our own, but from other countries, the author, as United States Commissioner of Navigation, with the assent of the Acting Secretary of the Treasury, in 1891, asked for reports from collectors of customs; and, through the State Department, for accounts from our consuls abroad, for presentation to the public in his annual report. It having been the pleasure of the present Secretary of the Treasury, exercising or abusing authority, as the case may be, to suppress the printing of this information, the author will here supply such parts of it as happen to be at his command, prefacing the same with a few remarks.

The reports agree upon one point, that foreign insurance companies, for many years past, have been squeezing American companies out of business, and the pressure continues its ruinous work. British companies constitute the bulk of the invading army, but other nations, even to the Chinese, occupy places in its ranks. On the Lakes, within the last few years, not only British corporations, but the members of Lloyds' Exchange in London, are found issuing many policies, especially on cargoes and the hulls of steel steamers.

The constant breaking in and destruction of our insurance lines is one of the worst signs of the times for the restoration of our shipping strength. Foreign insurance companies, in our domestic trade especially, are like so many birds of prey,

here to-day and away to-morrow, never to be depended on in the time of need, uncertain always in the performance of their contracts, and watchful of opportunities to make advantages for their own nation. Capital abroad, wishing to operate in the United States, like labor, should become naturalized, join its fortunes with ours, and so strengthen instead of sap the country.

Foreign underwriters do, and always will, prefer to cover the commerce, and serve the interests, of their fatherland. Partiality goes with their allegiance. As clever rivals make unfit agents, so foreign underwriters cannot equally serve two nations. No wise nation will commit its commerce to the insurance powers of rival countries, because to trust foreigners, in place of our own people, is to be betrayed at last. We may as well have our shipyards closed, as our insurance offices shut up, since we should expect the same result to follow, namely, helpless foreign dependence in a vital branch of business. It is needful to know only the history of their hateful grasping of our trade and transportation to understand fully, if we become dependent on the British Lloyds or other English underwriters for marine insurance, on that day our competition with British shipping is at an end. Now, American hulls, at least, may have home insurance at fair rates, in our foreign trade; and our owners should be wise enough to place it here instead of abroad. If we had to trust to England, or go without insurance, by unjustly discriminating rates, she would soon lay up our vessels, as she now outrageously handicaps them for rival business.

On the Lakes we have been unable for several years past to cover both hulls and cargoes, in the immense traffic of that region, without the help of the foreign insurance companies whose agencies are numerous there. This failure of our underwriting strength was caused, in the first place, by the ruinous competition of foreign companies waged piratically in our coast cities, in which our original lake underwriters were located. Undercut and weakened in the ocean business, of course they abandoned the Lakes, and their rivals took their places, to the country's loss.

"*Free Trade*" *the Cause of Insurance Decay.* Our insurance decay is one thing, surely, that cannot be attributed by

foreign rivals to a "protective tariff." Manifestly it springs from nothing else than "free trade." Underwriting is one interest that never had protection, except as it drew it from the existence of a marine and a commerce which was once American in all its branches, prospered by protection. Underwriting has always been as free as air, and has to-day all the liberty it ever had, and yet, this boon of liberty cannot save it; on the contrary, it is ruining it, because liberty is a greater good to our rivals than to ourselves. The farmer's grass grows no better because his fence is down. Our unregulated foreign transportation it is that is blasting our marine insurance business. It is not that our companies do not meet the rates of foreign companies that they fail to succeed and survive, but the failure is in getting the business that is to be done. This failure is for the identical reason that our shipping cannot get employment, and that is, simply, because foreign merchants and their shipping agents control the movements of our commerce to foreign countries, and therefore their patronage is given to sustain and increase the prosperity of their own people. Flag, fealty, and favor act together in the getting, and taking away, of our underwriting.

A maritime nation's marine insurance business is an outgrowth, a development, a consequence of its shipping and commercial power. It is an important part of that power. Great Britain does seven eighths of the sea insurance of the world, in consequence of the fact that she carries five eighths and buys and sells half the cargoes upon the ocean. The United States has fallen behind in underwriting, not for the want of capital, but because American insurance business has been undermined through the decay of our marine, and the consequent extinction of American mercantile houses and genuine American commerce with foreign nations. It cannot be expected, as a practical thing, to have underwriters without merchants, merchants without ships, and ships without shipowners and builders, as these branches all belong to the same tree. When you admit a foreign merchant, you let in his ship, his underwriter, and his shipowner; and there is a great growl by all his friends, new as well as old, because the door is shut to his shipbuilder; for his desire is to employ all his own people, in preference to ours, even after he has grasped, and controls, our trade.

INSURANCE REPORT FROM NEW YORK.

CUSTOM-HOUSE, NEW YORK, COLLECTOR'S OFFICE,
August 13, 1891.

HON. WM. W. BATES, *Commissioner of Navigation*, Washington, D. C.

Sir, — Referring to your letters of June 30 and July 22, 1891, relating to marine insurance at this port, I transmit herewith a statement prepared by Mr. J. D. Jones, President of the Atlantic Mutual Insurance Company of New York, upon whose kindness this office was obliged to rely in order to obtain the information required. Mr. Jones requested that copies of your report be sent to him if the information furnished by him be deemed important enough to be incorporated therein.

Respectfully yours,

J. S. FASSETT, *Collector*.

STATEMENT OF PRESIDENT JONES OF THE ATLANTIC INSURANCE COMPANY OF NEW YORK.

Premium Rates on Hulls. The premiums charged by the Atlantic Mutual Insurance Company are reduced by the dividends which may be made; the company being a mutual one, insuring the interest of its dealers and returning to them the profits of its business in the form of dividends. These dividends are made on the terminated premiums each year, after deducting losses and expenses, thus reducing the insurance to actual cost, and have averaged 40 per cent. for the past ten years. To ascertain the cost of insurance with this company, deduction for such dividend should be made from the rates of premium herein named: —

RATES FOR STEAMERS.

Between Atlantic U. S. ports and ports on the Caribbean Sea and Gulf of Mexico	Gross, 9 per cent. per annum.
In past years cost reduced by dividends as above to about	5¼ per cent.
Between Atlantic ports of the United States and Great Britain . .	6 per cent. per annum.
Cost reduced as above to . . .	3½ per cent.
Coastwise between Northern Atlantic ports of the United States . .	10 per cent. per annum.
Cost reduced as above to . . .	6 per cent.

Wooden steamships have almost entirely given place to those

constructed of iron and steel. There are a few built of the former material, but they are not engaged in foreign trade, being mostly confined to short coastwise passages. Insurance on those would necessarily be higher on account of age, etc., say at least 2 per cent. higher.

Rates on Sail Vessels. The difference observed by American underwriters between sailing vessels built of wood and iron or steel, as a rule, is not so marked as might possibly be supposed. Few sailing vessels have been built in the United States of the latter materials.

There are at present three sailing ships built of iron and steel sailing under the nationality of the United States, — one of which was built in Scotland, and condemned and sold in San Francisco; the two others were built in Pennsylvania in 1883. British underwriters have usually discriminated in favor of iron and steel vessels, and have, as a rule, given a decided preference to vessels built and owned in Great Britain, whether built of wood or iron; but their discriminations have been quite marked with respect to the latter for the obvious reason that underwriting interests there are largely controlled by shipowners of that class of vessels.

Rates per annum of the company named on wooden ships having the highest rating and entitled to the fullest confidence	10 per cent.
Cost reduced by dividends of profits as named .	6 per cent.

Of Rates on Cargoes. There are so many different elements entering as factors to be considered in determining the value of risks on cargo, that it would be exceedingly difficult to give in a brief summary correct rates of premium to and from different ports of the world.

Such rates can be given approximately only.

As before intimated, there are few, if any, wooden steamships engaged in foreign trade, hence the rates named will be predicated upon risks by approved iron or steel steamships; and respecting these it may be said that quite recently there have been built in Great Britain steamships of a peculiar style of construction technically known as "web-framed," *i. e.*, without beams in the holds and below the decks, the structural strength of these ships depending on the belt frames and longi-

tudinal girders which are continued from one end of the vessel to the other, thus giving a much larger carrying capacity because of the large space allowed for cargo, that is usually obstructed by the beams.

Steamships of this character have been engaged in carrying heavy and bulky cargoes from Europe, East Indies, South America, and West Indies.

The value of risks of this kind is far greater than on general cargo laden on steamships of approved construction, such as the regular mail steamers in the transatlantic business.

Rates of Premiums on Cargoes.[1] These are approximate rates charged by the company named (the Atlantic Mutual). If the dividend of profits made, as before indicated, be taken as a basis of deduction, the net rates would be about 40 per cent. less.

	Approved Steamers (iron). Per cent.	Approved Sailing Vessels (wood or iron). Per cent.
To and from West Indies: —		
Cuba	½ to ¾	1 to 2
Jamaica and Haiti	¾ to 1	1½ to 2½
Windward Islands and Porto Rico	¾ to 1	1¼ to 1¾
Venezuela and Caribbean ports in South America	¾ to 1	1½ to 2
Brazil	¾ to 1¼	1½ to 2
Argentine Confederation, Uruguay, etc.	⅞ to 1⅛	1¼ to 2½
West Coast South and Central America, *via* Panama and Colon	1 to 1¼	
Via Cape Horn or Straits of Magellan	1½ to 2½	2½ to 4
East Indies: —		
British India	1 to 1¾	2 to 3½
China *via* Pacific ports and railroad	⅝ to 1¼	1½ to 2
Japan *via* Pacific ports and railroad	½ to 1	1¼ to 1¾
Philippine Islands	1¼ to 3½	2½ to 5
Java and Sumatra	1¼ to 3	2½ to 4
China and Japan *via* Cape Good Hope	1¼ to 2	2½ to 5

[1] To obtain insurance on hull or cargo at the rates herein named it is required that the construction of the vessel, in materials, strength, and model, be equal to the requirements by the rules laid down in the Record of the American Shipmasters' Association, and classification in good standing with the company.

Europe: —		
Great Britain	$\frac{1}{4}$ to 1	1 to 3
Netherlands	$\frac{1}{4}$ to 1	$1\frac{1}{4}$ to 3
Belgium	$\frac{1}{4}$ to 1	$1\frac{1}{4}$ to 3
Germany not on Baltic	$\frac{1}{4}$ to 1	$1\frac{1}{4}$ to 3
Germany on the Baltic, Denmark, Norway and Sweden, Russia on the Baltic and Black Sea	1 to $2\frac{3}{4}$	$2\frac{1}{2}$ to $5\frac{1}{2}$
France not on Mediterranean	$\frac{1}{4}$ to 1	1 to 3
France on Mediterranean and Spain	$\frac{1}{2}$ to $1\frac{1}{2}$	$1\frac{1}{2}$ to $3\frac{1}{2}$
Italy, Greece, etc.	$\frac{3}{4}$ to 2	2 to 3
Coastwise United States: —		
New England States	$\frac{1}{8}$ to $\frac{5}{8}$	$\frac{1}{2}$ to $1\frac{1}{2}$
Southern Atlantic ports	$\frac{1}{8}$ to $\frac{1}{2}$	$\frac{3}{4}$ to $1\frac{1}{4}$
Southern Gulf ports	$\frac{3}{8}$ to $\frac{3}{4}$	$1\frac{1}{4}$ to $1\frac{3}{4}$
British Provinces: —		
New Brunswick or Nova Scotia not on Gulf St. Lawrence	$\frac{5}{8}$ to 1	1 to 3
On Gulf St. Lawrence	1 to $1\frac{1}{2}$	2 to 4

Many wooden vessels, notably a large number of those built in the British Provinces of North America, do not compare favorably with those built of iron or steel, nor are they entitled to the fullest confidence on account of the inferiority of the wood, the style of construction, and the imperfect fastenings.

(The term "approved steamers," or "approved sailing vessels," means either iron or wood. There is no discrimination against wood, or in favor of iron, but only in favor of steam.)

The Nationality of Underwriting Capital in New York. The question of the Commissioner of Navigation regarding American and foreign companies, it is assumed refers to the underwriting capital in New York, and will be fully answered by the accompanying tabulated statement giving the names of the companies, the amount of capital or assets, and the net amount of premiums on risks underwritten in New York by each in 1890.

It must be observed that the amount of assets noted in connection with the foreign companies represents available funds invested in the United States, and does not include capital of the corporations in use at home.

It will be thus seen that of the 22 organizations doing marine underwriting in New York, 8 are American (3 organized in

the State of New York, and 5 in other States), 10 British, 1 Swiss, 2 German, and 1 Canadian.

The total amount of assets of American organizations is	$28,311,828.93
The net written premium in 1890. . . .	7,767,946.16
Total amount of assets of foreign organizations is .	6,474,924.31
Net written premium in 1890	3,487,204.55

It is interesting to notice that while the amount of net written premiums of the American organizations equals only about one fourth the aggregate amount of their assets, the net written premiums of the foreign organizations exceed one half of the total amount of their assets available in the United States.

This may be accounted for in various ways, but the principal reason is undoubtedly the facility that the foreign organizations have for underwriting on large amounts based upon their home capital, while the smaller American organizations having assets equaling if not exceeding the amount invested in the United States by the foreign companies are limited in the risks assumed to the basis of their assets.

The foreign underwriters, with all the machinery of organization at home, are thus active competitors in New York with these companies; and, although not in reality possessing equal financial strength in this country, they have yet successfully crowded them into such narrow compass as to greatly curtail their business, and during the past fifteen years no less than seven American organizations have been forced into liquidation.

It may be necessary to note that, by legal enactment in many of the States of the United States, the minimum amount of capital required for companies insuring marine risks is provided, and in the State of New York the amount is fixed at $200,000.

Foreign companies, as a condition of doing business in the State, are required to deposit with the Insurance Department an amount equal to the minimum sum of capital provided in the case of local companies.[1]

[1] This provision of law is very short-sighted and unfair towards American companies, and gives a great advantage to foreign corporations. — AUTHOR.

The answer to the question whether American underwriters are gaining or losing ground in the business of New York is somewhat anticipated by the foregoing remarks, but it may be added that, as the foreign commerce of New York is largely conducted in British bottoms, whose interests are closely interwoven with the underwriting business, it naturally follows that whatever influence is possessed by the British owner will be used in behalf of the company in which he is interested; and this is found to be one of the important factors in the rapid growth made by these foreign agencies in New York.[1]

The accompanying list gives the American companies, seven in number, which have gone into liquidation during the past thirteen years by reason of the unequal competition thus experienced: —

COMPANIES, MEMBERS OF THE BOARD OF UNDERWRITERS OF NEW YORK, WHO HAVE DISCONTINUED BUSINESS DURING THE PAST TWENTY YEARS.

	Discontinued.	Assets at Time of Discontinuance.	
Union Mutual Ins. Co.	1878.	$1,236,789.36	Net premiums.
Mercantile Mutual Ins. Co.	1879.	828,786.92	
Pacific Mutual Ins. Co.	1880.	744,141.77	
Great Western Ins. Co.	1886.	910,156.33	
Orient Mutual Ins. Co.	1886.	976,946.33	
Sun Mutual Ins. Co.	1886.	520,541.67	
Commercial Mutual Ins. Co.	1890.	652,351.44	
		$5,120,442.32	$185,757.39 for 1890.

STATEMENT OF THE MARINE INSURANCE COMPANIES IN THE CITY OF NEW YORK.

	Assets.	Net Premiums.	Recapitulation.	
American Companies.				
Atlantic Mutual	$12,108,772	$3,486,211		
New York Mutual	607,283	225,826		
United States Lloyds	814,407	601,564		
China Mutual	501,868	401,989		
Boston Marine	2,666,461	1,020,436		
Delaware Mut. Safety	1,504,386	250,262		
Ins. Co. of North America	8,784,102	1,413,747		
Providence-Washington	1,324,548	367,908	$28,311,829	$7,767,946

[1] In 1890 there were arrivals in New York from foreign ports: 2,868 steamers, of which 1,572 were British and 283 were American; 295 ships, of which 125 were British and 80 were American.

Foreign Companies.				
British.				
British and Foreign Marine Ins. Co.	$1,182,724	$858,407		
Thames and Mersey	587,714	198,000		
The London Assurance Corporation	529,351	286,048		
Indemnity Mutual	248,879	120,033		
Reliance Marine	260,565	53,368		
Union Marine Ins. Co.	451,784	311,275		
Marine Ins. Co.	540,743	290,926		
Sea Ins. Co. (Ltd.)	321,597	295,994		
Standard Marine	228,785	110,965		
Universal Marine	250,728	127,159	$4,602,869	$2,652,175
Swiss.				
Switzerland Marine	175,739	238,389	175,739	238,389
German.				
Mannheim	365,985	175,009		
Genl. Ins. Co. of Dresden	218,219	61,960	584,203	236,969
Canadian.				
Western Assurance Co.	1,112,113	359,671	1,112,113	359,671
			$6,474,924	$3,487,205

INSURANCE REPORT FROM SAN FRANCISCO.

CUSTOM-HOUSE, SAN FRANCISCO, CAL., Collector's Office, *July* 16, 1891.

THE COMMISSIONER OF NAVIGATION, Washington, D. C.

Sir, — I respectfully acknowledge receipt of your letter of 30th inst. requesting this office to report in full the premium rates of marine insurance companies prevailing at this port for the year past, to and from different parts of the world, separately on hulls of various kinds of vessels and on cargoes of same.

In reply, I am pleased to be able to place in your hands the full and complete report of the Secretary of the California Insurance Company, Mr. Wm. H. C. Fowler, which it is thought will give you the desired information, and which he kindly prepared at my request.

I am, respectfully,

T. G. PHELPS, *Collector*.

LETTER OF SECRETARY FOWLER OF THE CALIFORNIA INSURANCE COMPANY OF SAN FRANCISCO.

SAN FRANCISCO, CAL., *July* 15, 1891.

COLLECTOR OF CUSTOMS, San Francisco, Cal.

Dear Sir, — I have your letter from the Treasury Department dated June 30th in reference to marine insurance, and respectfully beg to give you the following desired information.

It is difficult to give the current rates of our market for insurance on hulls and cargoes, as they are based upon the construction and age of the vessel, the nature of the cargo carried, and the season. I give the following rates on first-class vessels only, viz.: —

On Hulls and Cargoes. To and from Atlantic ports of the United States and the Pacific coast ports of the United States with cargoes of general merchandise: —

	Per cent.
On hulls of steamers (iron)	$2\frac{1}{4}$
On their cargoes	$1\frac{1}{2}$
On iron hulls, sailing vessels	$2\frac{1}{2}$
On their cargoes	$1\frac{1}{4}$
On wooden hulls, sailing vessels	3
On their cargoes	$1\frac{1}{2}$

To and from ports of the United Kingdom and the Continent, between Havre and Hamburg and the Pacific coast ports of the United States, barring coal or iron cargoes: —

	Per cent.
On hulls of iron sailing vessels	$2\frac{1}{2}$
On their cargoes	$1\frac{3}{4}$
On hulls of wooden sailing vessels	3
On their cargoes	2

To and from ports of the west coast of South America and Pacific coast ports of the United States: —

	Per cent.
On iron hull steamers	$1\frac{3}{4}$
On their cargoes	$1\frac{1}{4}$
On iron hulls, sailing vessels	$2\frac{1}{4}$
On their cargoes	$1\frac{1}{2}$
On wooden hulls, sailing vessels	$2\frac{3}{4}$
On their cargoes	$1\frac{3}{4}$

To and from Australia and New Zealand and Pacific ports of the United States: —

	Per cent.
On cargo per iron steamer to a direct port	$\frac{1}{2}$
On hulls, wooden sailing vessels	$2\frac{1}{2}$
On their cargoes (lumber)	$1\frac{1}{2}$
On their cargoes (coal)	$1\frac{3}{4}$

To and from the Sandwich Islands and Pacific coast ports of the United States: —

	Per cent.
On cargo per iron steamer to a direct port	$\frac{1}{2}$
On cargo per wooden steamer	$\frac{5}{8}$
On cargo per sailing vessel	$\frac{3}{4}$

Our local owned vessels are insured for twelve months at the following rates: —

	Per cent.
Iron steamers trading foreign	6
Iron steamers trading coastwise	$6\frac{1}{2}$
Wooden steamers trading coastwise	8
Wooden steamers trading foreign	7
Wooden sailing vessels trading foreign	$7\frac{1}{2}$
Wooden sailing vessels trading coastwise	from 8 to 16

The following named marine insurance companies are transacting business on our coast: —

Name.	Head Office.
California	San Francisco.
Commercial	San Francisco.
Fireman's Fund	San Francisco.
Sun	San Francisco.
Union	San Francisco.
Alliance Marine	London.
Baloise	Basle.
Boston Marine	Boston.
British and Foreign Marine	Liverpool.
Canton	Hong Kong.
China Traders	Hong Kong.
Commercial Union	London.
Federal Marine	Zurich.
Foncière	Paris.
Frankfort Marine	Frankfort.
Helvetia General	St. Gall.
Indemnity Mutual Marine	London.
Insurance Company of N. A.	Philadelphia.
International Marine	Liverpool.
London	London.
London and Provincial Marine	London.
Magdeburg General	Magdeburg.
Mannheim	Mannheim.
Man On	Hong Kong.
Marine	London.
Maritime	Liverpool.

National Marine	London.
New Zealand	Auckland.
North China	Shanghai.
Ocean Marine	London.
On Tai	Hong Kong.
Providence-Washington	Providence.
Reliance Marine	Liverpool.
Sea	Liverpool.
Standard Marine	Liverpool.
St. Paul Fire and Marine	St. Paul.
Straits	Singapore.
Switzerland Marine	Zurich.
Thames and Mersey	Liverpool.
Transatlantic Marine	Berlin.
Union Fire and Marine	Christchurch.
Union Insurance Society	Hong Kong.
Union Marine	Liverpool.
Universo Marine	Milan.
Yangtsze	Shanghai.

During 1890 their marine operations were as follows: —

Five local companies:

Amount written	$19,703,243
Premiums on same	395,543

Four companies of other States:

Amount written	$4,135,308
Premiums on same	77,268

Thirty-six companies of foreign countries:

Amount written	$110,410,533
Premiums on same	1,053,642
Total amount insured by all companies	134,429,084[1]
Premiums thereon	1,526,453

In 1877 our five (5) locals wrote $20,760,390, and received in premiums $511,468, an average of $102,293 for each company. The foreign companies, numbering twenty-two (22) wrote $60,908,997, with premiums on same amounting to $1,057,697, making an average for each company of $48,076.

Last year the local companies received an average premium

[1] Ratio of American to foreign business, 14.65 per cent.

income of $79,108; the companies of other States, $19,317 each, and foreign companies $29,267 each.

These figures prove conclusively that the bulk of our marine insurance business is in the hands of foreign capital, and that gradually, but surely, American capital invested in insurance is being driven to the wall through undue competition of foreign corporations. Local capital and its earnings are invested in buildings, mortgages, stocks, bonds, and manufactures of this State, and help to support the same through taxation on its investment; whilst foreign capital enters the State without any deposit or security to protect its policy holders, sends its earnings to the head-office, and does not contribute one dollar towards the expenses of our state and national government.

Under such circumstances foreign capital represented here is transacting business in our State upon more favorable and advantageous terms and conditions than our local capital; hence it is not to be wondered at that the following twelve California companies have failed or wound up their affairs and retired from business: —

COMPANIES RETIRED.

	Paid-up Capital.
Pacific Insurance Company	$1,000,000
People's Insurance Company	300,000
San Francisco Insurance Company	200,000
Occidental Insurance Company	400,000
Commercial Insurance Company	200,000
Western Insurance Company	200,000
Merchants' Mutual Insurance Company	500,000
Anglo-Nevada Assurance Corporation	2,000,000
Alta Insurance Company	200,000
California Farmers' Insurance Company	200,000
Alameda County Insurance Company	200,000
Builders' Insurance Company	200,000
	$5,600,000

The annual premium income (fire and marine) of these companies amounted to about ten millions ($10,000,000) per annum, and, as the majority of these companies were reinsured in foreign companies, this amount was naturally withdrawn from our taxable property and added to the immense volume

of business transacted by the representation of foreign capital, which does business in the United States *free of taxation.*

I am, dear sir,

Yours very truly,

WILLIAM H. C. FOWLER, *Secretary.*

Differential Rates and their Differences. The foregoing reports are from first-class authorities, one in the chief city of the Atlantic, and the other in that of the Pacific coast. A slight difference appears in the standpoints occupied. Mr. Jones sets forth the rates of his company, and Mr. Fowler gives those of the market for which he writes. American companies transact much the most business in New York, and the foreign companies in San Francisco. In both cases much the greater part of American work is for hulls and cargoes of American vessels, mostly in the coasting trade, as the greater part of foreign business is for cargoes of foreign vessels in the foreign trade.

Conformable to the circumstances of underwriting in New York and San Francisco, we find a considerable difference in the differential rates prevailing in the two ports. These concern steam and sail, iron and wood, hulls and cargoes. As between the three subjects of differentiation, and the two ports mentioned, a comparison may be set forth as follows: —

Differential Rates for Hulls.	New York.	San Francisco.	
	Wood or Iron.	Wood.	Iron.
	Per cent.	Per cent.	Per cent.
Wood steam in excess of iron steam . . .	—	16 to 23	—
Wood sail in excess of iron sail	—	20 to 22	—
Wood sail in excess of iron steam	25 to 100	25 to 200	—
Sail in excess of steam	15 to 40	30 to 34	11 to 28
Differential Rates for Cargoes.			
Wood steam in excess of iron steam . . .	—	25 to –	—
Wood sail in excess of iron sail	—	15 to 20	—
Wood sail in excess of iron steam	100 to 200	50 to 350	—
Sail in excess of steam	40 to 200	40 to 200	20 to –
Differential Rates for Hulls and Cargoes.			
Hull over cargo for sail	—	50 to 100	45 to 100
Hull over cargo for steam	—	—	40 to –

The rates for hulls at New York being given by the year, it is not practicable to compare them with those for cargoes. However, there is less difference than at San Francisco. The collector of Baltimore, reporting through Coale, Cunningham & Co., Lloyds' agents there, stated that "rates on hulls would be but slightly higher than on cargoes." The collector at Portland, Maine, reporting with authority from the Portland Lloyds, stated that "rates on hulls and cargoes are nearly, if not quite the same," of course, for first-class vessels. While it is the general practice of underwriters to ask more for hull than cargo risks, it will be seen that the British companies, controlling the rates at San Francisco, have saddled American hulls at that port with an unjust share of tax upon existence. British hulls are, of course, insured in England, and not in the United States, therefore American vessels, mostly, are affected by the hard discrimination. Where purely American conditions control the rates, as at Portland, Maine, we see that underwriting charges, as between shipowners and merchants, are fair and just, and consequently "nearly, if not quite the same." The cause for the difference between rates for hulls and cargoes is generally ascribed to the greater competition for the insurance of the latter, more particularly by the foreign companies in the United States. Whatever the reason may be, the differential practice injures our vessel interest.

Differential Rates on Cotton Cargoes. The collector at Norfolk was supplied by the Thames and Mersey (British) Marine Insurance Company with a printed list of their "Cotton Tariff" applicable to Norfolk and other Southern ports. From this list it appeared that the rates for sail are double those for steam, a discrimination intended, manifestly, to give a monopoly of cotton carrying to British steamers, since it has, at least, contributed to that effect. Another discrimination is, that "regular lines" are favored, without reference to class or character of hulls in Lloyd's, or other Registers. As for sailing vessels, they get cargoes sometimes, but must be "approved" to get a cargo covered at all. This provision secures the reference of all applications to cover cargoes by sail to the home office, where British interest is not likely to be overlooked, and American is never studied.

Of late it has become the practice in cotton insurance, not only to favor regular steamers, but to include the railway and dock risks, where cargoes are "billed through" from interior points of shipment to ports of destination in Europe. In all such cases, and they are common, an American vessel, sail or steam, would be barred from competition for the transportation. Accordingly our shipowners consider themselves shut out from the cotton business, and it is generally left, nowadays, to the monopoly of British shipowners and underwriters.

Since the formation of the British insurance pool or trust, for the monopoly of the Pacific coast trade in grain, flour, etc., an account of which has been given in Chapter XV., a suspicion has been awakened, that there may exist a similar pool or trust for the control of the Atlantic cotton commerce, carriage, and insurance. Several of the same great corporations are largely engaged in both Atlantic and Pacific trade underwriting. It is noteworthy, in this connection, that insurance charges on cotton are much greater in proportion to freightage than on any other merchandise intrusted to the ocean. There is everything English, but nothing cheap, about cotton insurance, and the freighting pays proportionately.

Insurance Dependency and its Evils. From the facts herewith presented, it must be clear enough that the United States are now, and long have been, drifting into a dependency upon foreign underwriting. Syndicates or rings of foreign companies already control, directly or indirectly, the covering of our exports to many parts of the world; and, also, as a matter of course, of our imports from most shipping points, especially when their transportation is by foreign vessels. Some of our commerce with the countries of our own continent is covered by underwriters of our own, but little, indeed, of any other foreign trade. Our insurance lines once extended around the globe. They have been driven in everywhere. We are losing ground in every part of the field, and time alone may bring the closing of the last office.

It will bear repeating that the loss of our underwriting power is of national concern. Marine insurance is a necessity of commerce and navigation. It is a force for the government, as well as the protection of trade, and the British so use it. It is needful in peace, but in war essential, if traffic is not to

cease. The underwriting of an enemy is not to be thought of; that of a rival is never to be depended on. In case of war, the former will go forth in a day to fight for his own flag; while the latter will raise the rates so the ships of his own nation may capture the work of ours.

Foreign capital employed in underwriting, like that used in banking, cannot be counted in the sum of our national strength. It can be locked up by its owners, withdrawn, or taken away, at the very time it would do our country most good to continue in use. In this regard it differs greatly from foreign capital put into railways, or like improvements of any kind. Whatever happens, these remain, reinforce, and strengthen.

These things seem never to have received the national attention. The political economists, even, have never dreamed of anything so practical as the functions and forces of marine insurance. Our statesmen have studied dues, duties, and prohibitions; bounties, subsidies, and subventions; but the powers of marine inspection and insurance, and the protection that may be given, or attacks made, by underwriters, is probably a sealed book to them. We have treaties for "reciprocity" in trade and tonnage, but seem not to have learned yet the need of fair international dealing in marine insurance. As for this need we may refer to Chapter XV., and the boycott of the Liverpool Corn Exchange. The fact is, unless our Constitution confers on Congress the power to regulate marine insurance in the several States, our form of government facilitates the destructive work of our rivals through their underwriting policy. In several respects our government lacks strength. As now administered, our ships, our merchants, and our underwriters without protection, and each State at liberty to prescribe the terms, or make none at all, for the admission of foreign insurance companies, the total failure of American connection with our foreign commerce and navigation seems set down in the Book of Fate. Some of our States, with little or no underwriting capital of their own, and not apparently caring ever to have any, really give better terms to foreign than to American companies. Foreign companies are nowhere excluded, nor anywhere taxed equally with American. They are essentially predatory, and disloyal, but, strangely enough, seem to fare better for these facts. The suggestion is in order,

that Congress should make an effort to abate the evils and prevent the abuses of foreign insurance dominancy, or acknowledge its incompetency without delay.

The Regulation of Underwriting. It will not be disputed that underwriting is a branch of commerce. It is bought and sold, imported and exported as a species of property. The regulation of this international business is therefore undoubtedly within the scope of Congressional power. In paragraph 3 of section 8 of the Constitution we find this grant: "The Congress shall have power to regulate commerce with foreign nations." Mr. Benton, in his great work, says of this provision: "The power granted . . . has never yet been exercised by Congress," although it "was the potential moving cause of forming the present Constitution." Does he not, however, overlook the regulation which was applied to the coasting trade, first practically, and afterward actually, prohibiting it to foreign vessels? It seems to be just as clear that clause 3 of section 8 was invoked in this protection of domestic business, as that clause 1 of section 8, granting "power to lay and collect taxes," was applied to the protection of our foreign trade and transportation.

If Congress can prohibit foreign underwriting in the United States, and of this there exists no doubt, if clause 3 of section 8 of the Constitution means anything, then it follows that laws may be enacted for its regulation. Taking the words of the Constitution, to "regulate commerce," says Justice Field, is "to prescribe rules by which it shall be governed; that is, the conditions upon which it shall be conducted, to determine how far it shall be free and untrammeled, how far it shall be burdened by *duties* and *imposts*, and how far it shall be prohibited." Such being the case, it has long been the duty of Congress to put a stop to foreign discriminative underwriting, chartering and loading vessels in our ports. Our railroad transportation has been regulated, so let the ocean lines and bottoms be, whether owned at home or abroad. Our ocean trade and transportation has been ruined, by having freedom on the foreign side with inequality on our own; therefore let us secure fair play by constitutional means.

CHAPTER XIX.

THE MARINE INSURANCE BUSINESS AS CONDUCTED IN FOREIGN COUNTRIES.

The manner of conducting the business of marine insurance abroad, the discriminations practiced there, the protection given their own shipping by the insurers of different countries, what classes constitute the body of underwriters, who are strong or weak in underwriting power, especially what considerations control the making of premium rates, — these, and other matters closely related, seem to call for notice here.

As mentioned elsewhere, our consuls in foreign ports were requested in 1891, at the instance of the author, to investigate and report on these points. Some valuable contributions to public knowledge were thus brought out, sent from the State to the Treasury Department, and necessarily came to the desk of the Commissioner of Navigation for insertion in his report for 1891. In the exercise or abuse of a little brief authority, the Secretary suppressed the publication of these documents. Unfortunately, copies of these consular reports were not taken by the author, and he is therefore unable to make this chapter as interesting as it would have been but for this transaction.

The Report from Newcastle-on-Tyne, England. An excellent report, accompanied by valuable documents, was received from Newcastle-on-Tyne. It appears from it that there is considerable discrimination in the rates of premiums on cargoes by steam and sail to the United States. These are greater by sail than to the Danube and Sea of Azof by one third; or to the Baltic and Cronstadt by one half; or to ports in Brazil by 22 per cent. By steamer to the Danube or Sea of Azof, to the British East Indies, *via* Suez, and to the United States the rate is the same, and to Brazil 20 per cent. less. It is plain that steamers are favored and sail vessels discouraged in the trade to the United States; that trade to the British Indies and

Brazil is favored, and merchandise sent to the States unfairly taxed. The consul's idea, gently given between the lines, that prejudice and interest have much influence on rates of insurance in England, is proved plainly enough by his quotations.

The Report from Cardiff, Wales. Consul Jones, of Cardiff, in his report, seemed anxious to have it believed that the British people did not please sentiment in business, but he did not bear this bias in mind when he gave a list of British flag preferences, with American ships ranking third, "for reasons which are fairly on the surface," as he generously admitted. Nor is his denial borne out by his subsequent statement that "Insurance may be effected at a lower rate in Continental companies than in those of the United Kingdom," while the reason given for the English patronage of home companies at higher rates might just as well be referred to sentiment as to conceit. With the greatest conceit of any people on the earth, the British combine, not only an instinctive, but an enlightened selfishness, which teaches them, as a duty, to support and rely upon their own, whether it be insurance, ships, or government. They worship their own superiority, and feel offended if one rejects their faith. They preach the inferiority of everything "foreign," and give loud praise that what is theirs is perfect. They will pay more for their own than foreign productions of better quality. British-built, or British-owned, or British-insured makes a ship all right on the "Exchange." Witness the market reports; note the list of ships chartered and left unemployed; mark the higher freights paid to British than foreign ships in British trade; and take not only Consul Jones's word, but that of other consuls, and reports of British papers, that marine insurance *is* cheaper in Continental than British ports, but loyal Englishmen prefer to deal at home. They do well, save in denying so plain a fact. We should imitate their sentiment in respect to our own ships, underwriters, and owners.

The consul was mistaken, too, about the liberality of the British in letting foreign ships load as deeply as they please in British ports. That time has gone by. The "Load-line Rules" of the Board of Trade were enacted for, and are being applied to, ships of all flags. Fines have been imposed in several cases, one American. The lapsed liberality, when it

existed, did not compare with the freedom still permitted to the British underwriters in the United States, of dictating the load-draft of American ships in our own ports, at considerably less depth than British ships of iron or wood have liberty to draw.

The latest report from Consul Jones, of Cardiff, is that he has renounced his American, and returned to his British, allegiance, and is a candidate for Parliament. So his fealty and his politics now agree.

The Report from Havre, France. The French are systematic, if not scientific, in their underwriting regulations. Consul Williams sent several valuable documents, fully explaining their methods of business and matters in connection therewith, but only a few points can find place here.

The French now follow the British in discriminating, as to *hull*, but not cargo, insurance against wooden, and therefore American vessels. They also discriminate in hull insurance, to the extent of 5 per cent. of the premium rate, against either iron or wooden ships which are not classed in the Bureau Veritas Register. This book is called the "French Lloyd's," and originated in 1828, at Brussels, Belgium. It has professed to be "International," and really has upon its official staff inspectors of different countries, some of whom, at least, own stock of the company. Such was deemed the importance to France of having a French book of vessel inspection and classification, that many years ago the government made overtures to the directors with this object in view. It was understood then that no action resulted, but since that time five or six different shipping registers, belonging to different countries, have been instituted, of course with a view to protecting the different marines, and the underwriters doing their business, from the sentiment known to exist under the different flags. The British Lloyds' course, in making distinctions for the benefit of British vessels, has brought about this multiplicity of classification books, each with a national duty to perform. As nearly all our foreign-going ships are classed in the French Lloyd's, their 5 per cent. discrimination is not damaging, but it seems unjustified, especially as we have a register of our own, in which, of course, our ships should be classed; and inspection and classification cost money. Our ships went

voluntarily into the Veritas, when they were squeezed out of the British Lloyd's in 1870–76. Had they not received from the Veritas just treatment at that time, a much harder experience would have been their lot since then in the foreign trade.

The consul intimated that the idea entertained by wide-awake shipping-people in the United States, that English ships and cargoes receive favor from Lloyds, surprised the shipowners of Havre. Their surprise must have been without a shrug, for the wooden shipping of France has suffered severely with our own, from the adverse policy of Lloyds, for many years past. The consul would have better appreciated the surprise, however, if he had known that the French Insurance Tariff, a translated portion of which follows, establishes differential rates for "French," and for "foreign" steamers; the former having the lower rate by about 10 per cent., on account of flag, unless classed in the French Lloyd's, and then by about 5 per cent.

While the underwriters of France seem to follow those of England in a protective policy, now as heretofore, they are more careful in covering novel risks, than twenty years ago, when the offices of Paris competed with those of London for the insurance of iron steamers through the Suez Canal, sunk millions of francs, and ruined several companies. Then the Parisians declared "they would rather insure wooden ships around the Cape of Good Hope, than the best iron steamship" through the dangerous shortcut.

The French have now an *iron* marine of their own; its existence induced by their bounty policy; but, profiting by experience, they have devised what may be an improved method of dealing with iron vessels, though it is applied to wood as well, without apparent cause. They have regard to the class of hulls, but look sharply to *age*, increasing the premium rate according thereto, and limiting all risks to a term of one year. They have also a way of proportioning insurance, both for sailers and steamers, by the voyage, to the value of the merchandise carried, discriminating against hulls and in favor of cargoes from 50 per cent. upward. By both these methods iron vessels are favored. The tendency of this policy is to cause the building of a new iron steam marine, perhaps a laudable object, did it not, at the same time, discourage the building of dura-

ble and, necessarily, safe vessels. It results that this policy mistakes true shipping economy. Age cuts too great a figure in the French system, as materials and inspection do in the British.

(TRANSLATION.)

PART THIRD. — HULLS (HAVRE POLICY).

Preliminary Observations. — 1. The premiums hereafter fixed upon hulls supposes the insurance to be upon the conditions of the Havre policy, and to follow its application. 2. The insurance upon hulls on the conditions of the French policy can be made according to the premiums fixed in the tariff of Bordeaux, Paris, Nantes, and Marseilles. 3. Direct insurance according to the rates and conditions of the Havre policy are forbidden as to ships other than those belonging to the ports comprised between Dunkirk and Cherbourg, inclusively; others should be made exclusively upon the conditions of the French policy.

HULLS OF SAIL VESSELS BY THE VOYAGE.

The premiums upon hulls of wooden ships by the voyage will be equal to those upon the merchandise augmented by 50 per cent. upon ships under ten years of age, and by 100 per cent. upon vessels over ten years. The augmentation will be 50 per cent., whatever the age, upon iron ships.

FREIGHTS.

The premiums of insurance on freights shall be those of merchandise for the same destination augmented by 50 per cent.

The insurance on hulls by the voyage or upon freight of a French ship, belonging to a place having a tariff of premiums published in these categories of risks, shall be made only according to the rate of premium of that place.

HULLS BY TERM.

Wooden ships of first class for the voyage to which they are destined: —

ONE YEAR.

Coastwise, Atlantic, and Seas of the South to the Equator.

1st and 2d Year.	3d and 4th Year.	5th and 6th Year.	7th and 8th Year.	9th Year.	10th Year.	11th Year.	12th Year.
Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.	Per cent.
6½	7	7½	8	8½	9	9½	10
Indian Ocean and Pacific North of the Equator.							
7	7½	8	8½	9	9½	10	10½
China Sea.							
7½	8	8½	9	9½	10	10½	11

(For a term of six months, the proportionate rate is augmented from 5 to 10 per cent. For vessels above the age of twelve years no rates are fixed, but such cases are "for consideration.")

The premium fixed above for all ships over eight years old will be augmented by one half of one per cent., if the sheathing is over two years old.

IRON SAIL SHIPS (FRENCH OR FOREIGN).

Iron sail ships classed $\frac{3}{3}$ I. Division in the French Veritas, 100 A in the Lloyd's Register, and twenty years in the Liverpool Register:[1]—

	Per cent.
1st, 2d, and 3d years, per annum	6½
4th, 5th, and 6th years, per annum	7
7th, 8th, and 9th years, per annum	7½
10th, 11th, and 12th years, per annum	8

Above twelve years the additional premium will be considered (as for wooden vessels).

No insurance upon the hull can be underwritten for more than a year, except according to prolongation by usage, for return to Europe.

In case of refund for cessation of risks anticipated, the premium shall be 50 per cent. (at the minimum) of the premium stipulated in the policy.

One half of one per cent. reduction upon the above premiums, if the owner reserves ¼ of the real value of the ship, and if the policy forbids insurance of freight.

The same increased premium of 5 per cent. shall be due upon wooden or iron ships for absence of classification in the Bureau Veritas.

[1] Now a "Branch" of British Lloyds.

ADDITIONAL PREMIUM UPON WOOD OR IRON VESSELS FOR SPECIAL VOYAGES.

The premiums upon hulls of sailing vessels shall be augmented as follows: —

	Per cent.
"Rades de la Reunion," Antilles, in winter from January 1st to April 15th (by 15 days)	½
For each voyage to other points upon the west side of Africa or south of the river Gambia, Gaboon excepted (the coast of Guinea comprised to Cape Frio)	2
For each voyage to Gaboon	½
For each voyage to Cape Haytien	½
For each voyage to other points in Hayti	1
For each voyage to Moule	½
For each voyage to Santo Domingo	2
For each voyage from the Dominican Republic to Gulf of Honduras	3
For each voyage, transport of Chinese emigrants	4
For each voyage in the Indian Ocean and the Pacific north of the equator (when the augmentations are not comprised in the principal premium)	1
For each voyage to Vera Cruz and Carmen-Rio Grande	½
For each voyage to Pensacola, Darien, Pascagoula, etc.	2
For each voyage to Tobasco	3
For each voyage to Tampico	1
For each voyage to Mexican ports upon the Gulf, not mentioned	2
For two voyages to Mexican ports (one half more than the first increase)	3
For each voyage to Lamoo or to Maroim	3
For each voyage returning from ports east of the Gulf of Bengal	2
For a year's navigation coastwise to ports, bays, and islands of East Coast of Africa from East London and neighboring ports (reduced to 2 per cent. a voyage from Europe to Coast)	4
For one or more voyages to Algerian ports other than Algiers, Oran, Bougiah and Boné, or to the coast of Maroc from October 15 to April 15	1

For each voyage to Coast of Spain and Carmania from October 1 to March 31	1
For each voyage to Karradoche	3
For each voyage to New Caledonia	1½

NAVIGATION IN WINTER IN THE NORTH SEAS.

The voyage to these seas will cause no augmentation in insurance by the term, if the return is effected according to a guarantee of the same policy. In other cases, all ships which shall be entered in the Baltic after the 30th September must pay an agumentation fixed at 1 per cent. The augmentation is calculated from the date of the departure to the return, as follows: —

For departure from the White Sea after July 31st: ¼ per cent. for each eight days of August, and ½ per cent. for each eight days of September and the following months, run or commenced from July 31st to date of departure.

For departure from the Baltic after August 31st: ¼ per cent. for each eight days of September, ½ per cent. for each eight days of October, and 1 per cent. for each eight days of November, run or commenced from 31st of August to the date of departure, the calculation stopping November 30. The premium paid November 30th must be applied to all departures in December and January; reduction of 1 per cent. per eight days under the premiums of November 30th for departure from February 1st to March 15th, and ½ per cent. per eight days from the 15th to the 30th of March.

For departure from Norway, the Cattegat, and Denmark after August 31st: ¼ per cent. for each fifteen days of September, and ½ per cent. for each fifteen days of the following months, run or commenced from August 31st to date of departure, the calculation stopping November 30.

For departure from Canada, Nova Scotia, or New Brunswick after August 31st: ¼ per cent. for each eight days of September and October, ½ per cent. for each of the first two eight days of November, and 1 per cent. for each eight days following, the calculations stopping November 30th.

HULLS OF STEAM VESSELS (WOOD OR IRON) BY THE TERM.

FRENCH STEAMERS.

Conditions of the French policy on steamers: —

Coastwise: Principal premium 8½ per cent. per annum, with additional premium for special voyages. Reduction of 1 per cent. if the steamer is classed ⅗ I. Division, French Veritas, say 7½ per annum.

Reduction of ½ per cent. if the steamer is classed ⅗ II. Division of French Veritas, say 8 per cent. per annum. Atlantic and long voyages: Principal premium 8½ per cent. per annum. Reduction of 1 per cent. if the steamer is classed I. ⅗ 1.1, or A 1.2 for the navigation to which it is destined, say 7½ per cent. per annum.

The class of 100 A 1 of Lloyd's Register will be compared to class I. ⅗ 1.1 of the French Veritas for the first year of registration.

FOREIGN STEAMSHIPS.

Conditions of national policies under paragraph one of general conditions below: —

Principal premium 9 per cent. per annum. Reduction of ½ per cent. if the steamer is classed 100 A 1 in Lloyd's Register, 20 years in the Liverpool Register, or 1st class in register of its nationality, say 8½ per cent. per annum. Reduction of 1 per cent. on the principal premium, if it is classed I. ⅗ 1.1 French Veritas, for the voyage to which it is destined, say 8 per cent. per annum.

Reduction of ½ per cent. on French or foreign steamers, if the amount reserved uncovered by the insured is ¼ at least of the total value of the steamer. Reduction ½ per cent. on foreign steamers insured according to the conditions of the French policy.

Observations. — 1. The additional premium for special voyages will apply to all steamers, French or foreign. There is no reduction of rates for the clause "free average" on steamboats.

INSURANCE BY THE VOYAGE.

Premiums on hulls of steamers by the voyage cannot be less than that of the merchandise for the same voyage, augmented by 50 per cent.

Note. — The policies of Havre, Nantes, and Marseilles can be temporarily applied to ships in docks of those ports; but, in this case, the general conditions indicated below shall be rigorously obligatory. The first paragraph of these conditions shall be equally obligatory for all foreign vessels insured according to the conditions of the national policy.

General Conditions on Steamers: 1. Reduction of premiums for times of idleness cannot be accorded for a period of less than 30 days. (This condition is applicable in every case.)

No reduction for difference between old and new is made during the first two years. The reduction for the difference between the old and new is 10 per cent. during the third year, 15 per cent. during the fourth year, and 20 per cent. after the fourth year.

ADDITIONAL PREMIUMS FOR SPECIAL VOYAGES.

Baltic: 3 per cent., reduced to 2 per cent., if the steamer does not navigate the Baltic after October 30, and to 1 per cent. if it does not navigate after October 15th.

Black Sea: 1 per cent., reduced to ½ per cent., if the steamer makes but one voyage from October 1st to March 1st.

Red Sea: 1 per cent., reduced to ½ per cent., if the steamer makes but one voyage (going and returning).

Canada: 1½ per cent. by voyage in the St. Lawrence after October 4, additional premium of 2 per cent. by voyage, for transportation of Chinese Coolies.

East Coast of Africa: Additional premium 4 per cent. for a year of coasting to the ports, bays, or islands of the East Coast of Africa (reduced to 2 per cent. for a single voyage from Europe to said coast).

West Coast of Africa: Additional premium of 2 per cent. for voyages to ports comprised between the territory south of the river Gambia and the Gaboon, inclusive (reduced to 1 per cent. for a single voyage).

Review of Foreign Insurance Systems. The foregoing extract from the sea insurance system of the French shows the study which their underwriters have given, first, to the protection of their business; and, second, to the shielding of the national interest in the marine. They have doubtless succeeded in proportioning premiums to risks; and it is likely they will also succeed in the policy of laying up, or selling foreign, their old sailing vessels of wood and iron, and in forcing commerce into new French iron steamers. Up to 1880, for many years, France had not been a wood or iron shipbuilding country, supplying her own market with tonnage, but had offered a free-ship market to the world; and consequently, the marine, especially the sailing part of it, had come to consist mainly of second-hand vessels bought "cheap" from all flags. Great Britain, being a shipbuilding country, not only sold off her old craft to France, but had cut out French transportation with new tonnage. Had the French always protected their shipbuilding, their tonnage would have been younger, and would not now have needed the efforts of underwriters to reinforce the bounty of the government, to induce the use of newer, more efficient, and safer tonnage, either of iron or wood.

Their past free-ship policy, by stuffing their marine with the cheap, half-worn, and cast-off craft of other countries, was responsible, primarily, for their backward condition when the bounty system was instituted, to "rehabilitate" the marine twelve years ago. This experience should not be lost on the United States.

In reviewing the insurance systems of foreign nations, it is to be noticed, first, that every maritime power of consequence has its own means and expedients for protecting its navigation by insurance. The feebler nations, that have not the capital or skill to distribute their shipping losses in an economical manner, suffer from the rivalry of the richer and more enlightened. American underwriters, as a general thing, have deemed themselves debarred from insuring freely on the hulls of vessels sailing under foreign flags; first, because of the protective character of our navigation laws; and, second, of the sufficiency of the home field.

Second, marine insurance is made a means of controlling navigation, through inspection and classification of hulls, as well as by the fixing of premium rates. Insurance power is plenary. Give the underwriting of commerce, with the banking that is closely connected with it, into the hands of capitalists of a grasping foreign nation, free trade governing all their transactions, and ultimately the shipping of that nation will be found doing the ocean transportation of the world. Only the maintenance by all maritime powers, of all the instrumentalities of commerce and navigation for themselves, will prevent monopoly and preserve the liberty of ocean traffic. This maxim seems to be generally understood in Europe, hence the general view that each nation there should keep the sea, even if some of them have to buy instead of building their vessels. Every first-class power, however, has some way of encouraging, if not protecting the building of its own commercial fleets.

In the United States, where many generous, unsuspicious souls worship even monarchy in Europe, it is frequently denied that underwriting discriminations exist against American vessels, on the ground that it is "impossible." Let them read the testimony of these pages. The denial, and not the proof, is absurd. The discrimination alleged may be seen, first, in the *preference*, among merchants, bankers, and underwriters for

their own flag on the sea. This is general with Europeans, if not Americans. Second, note the distinctive inspection and classification rules, and these followed up by differential insurance rates. The course taken is perfectly natural. The rule of existence being self-love, every people rightfully cherish their well-being, national as well as personal. It is not to the interest of one nation to build up the shipping of another. Can an Englishman be expected to load a Frenchman's ship, or a Frenchman a German's, while one of his own flag may be found? Why should any foreigner load an American ship, insure her cargo, or do anything for her that the people of her own country neglect to do? There is really no reason for it, save the cheap sophistry of "free trade," and the dear deceit of "maritime reciprocity," resting on national abnegation.

The rule being that every nation should provide its own ship, its own cargo, and its own insurance, a foreigner applying for the one or the other is asked a bonus or advance, for reasons well known in trade; one being that it is worth more; and another, that more can be obtained for serving foreigners than one's own countrymen. Where it is otherwise, there is a want of inducement to deal, unless a surplus of capital or labor is in the market. Certain flags in the Mediterranean are openly discriminated against, by the underwriters of several western nations. The excuse for this may be "moral hazard," a term in ship insurance, used to cover many grounds for overcharging, or refusing business. Then, necessarily, certain trades are favored and others over-taxed to secure average profits. The favoring of steamers is at the expense of sailing vessels; the partiality shown to iron tonnage makes insurance on wooden ships dear; and the covering of cargoes at much lower rates than hulls is a patronage to merchants that is paid for by the owners of vessels. In Great Britain there appears more system in these discriminations, than in the adjustment of premium rates.

Our own country is not found far behind any other in the cheapness of marine insurance, either for hulls or cargoes. Mutual companies here, as elsewhere, afford the lowest rates. Nothing has yet been done towards the forming of associations of owners to insure their own vessels. In Europe, shipowners' clubs are more common than mutual companies. For cheap-

ness and reliability, Denmark seems to have an excellent system of the mutual sort. The northern Continental nations contribute the least of any to capitalistic underwriting, a form to the greatest extent prevalent in England and the south of Europe; while here we are being eaten up with it, of course, mostly by foreign companies, whose agencies swarm in our principal ports, chiefly engaged, as yet, in cargo business. On the Lakes, however, hulls are now quite generally taken, as well as cargoes, by foreign offices.

British ships seem to be the fullest protected of any by insurance. Some strong shipping companies and rich firms insure their own steamers, but all who make a practice of insuring their craft cover them and their freights for full value, and over that, if they can. This complete insurance is a great protection. It cannot be effected in several of the countries of Europe, nor in the United States. It is this facility for full insurance, partly, that causes the building in Great Britain of so many cheap iron ships, "tramp steamers," and such tonnage; also, it may be added, it helps no little to keep insurance rates above those current in some Continental countries; and, last but not least, it contributes to the fact, of record, that British shipping is not so safely navigated as American.

The first requisite for cheap insurance is *seaworthy and durable* vessels, *safely loaded*, only *fairly insured*, but intelligently navigated. The mutual insurance plan, under the conduct of experienced managers, seems preferable to clubs of owners, some of whom will be sure to have inferior vessels, and what is called "unlucky voyages," with heavy losses resulting. Clubs conducted upon the free-for-all principle never fail to come to grief. In the United States, the Atlantic Mutual, of New York, is a good example of an underwriting office well conducted and successful. Their annual dividend of 40 per cent. shows conclusively that the capitalistic or corporate system must be bleeding to death such owners in this country as patronize it.

It is greatly to be deplored that our foreign commerce in every root and branch has become the spoil of foreign nations. Had there been continued a due protection of all the interests concerned in our trade abroad, we would now possess institutions of our own ample to cover all our commerce and naviga-

tion and handle all its exchanges, without a dollar of foreign capital to play the autocrat in any of our ports, and betray our carriage to rival flags.

Comparative Safety at Sea. In justice to American interests, the superiority of our shipping is not so generally known and conceded as it should be. Untrue accounts, from unreliable sources, find circulation in our journals and magazines. The tables following, compiled and calculated from information in the Repertoire Général, a work issued annually by the Bureau Veritas (French Lloyd's), are instructive on this subject. The facts given refer to *sea-going* vessels inspected and classed in any of the following marine insurance registers: Registre Veritas, Registro Italiano, Lloyd's Register, Norske Veritas, Germanischer Lloyd, Veritas Austro-Ungarico, Nederland Vereeniging Van Assuradeuren, and Record of American Shipping. Dealing only with the classified tonnage, the figures represent to good advantage the comparative merits of ships and seamen of the different nations engaged, for the most part, in the carriage of valuable merchandise to and from all parts of the world. The statistics are for the past three years, 1889, 1890, 1891, both for sail and steam, and give the average for the period.

SHIPPING OF DIFFERENT NATIONS, AND COMPARISON OF PROPORTIONATE LOSSES AT SEA, 1889–91.

Steamers Above Fifty Gross Tons.

Flags in the Order of Safety.	Proportion of Fleet that was Lost.		
	Percentage of Number.	Percentage of Tonnage.	Average of Number and Tons.
1. Swedish	.8	.85	.82
2. Italian	1	1.45	1.23
3. Austrian	1.78	.97	1.37
4. German	1.78	1.28	1.53
5. Spanish	1.82	1.47	1.64
6. French	1.84	1.57	1.7
7. American	1.91	1.58	1.74
8. Russian	1.3	2.49	1.89
9. Norwegian	2.04	1.75	1.9
10. Danish	1.69	2.56	2.12
11. Belgian	1.82	3.03	2.42
12. British	2.71	2.23	2.47
13. Dutch	2.53	2.64	2.58

Sailers Above Fifty Gross Tons.

Flags in the Order of Safety.	Proportion of Fleet that was Lost.		
	Percentage of Number.	Percentage of Tonnage.	Average of Number and Tons.
1. Spanish	1.22	.39	.81
2. Greek	.8	1.05	.93
3. Russian	1.47	2.11	1.79
4. American	3.46	3.45	3.45
5. Swedish	3.39	3.73	3.56
6. Italian	3.53	4.15	3.84
7. British	3.8	3.89	3.85
8. French	4.61	5.22	4.91
9. Norwegian	5.04	5.18	5.11
10. Danish	4.72	5.61	5.16
11. Austrian	4.74	6.28	5.51
12. Dutch	5.02	6.15	5.58
13. German	6.67	5.13	5.90

It will be seen that Great Britain does not lead the world in safety at sea, but ranks as the twelfth flag in steam, and the seventh in sail; while the United States stands as the seventh in steam and the fourth in sail, of the thirteen foremost nations.

The Swedish, Norwegian, Russian, and Danish steamers are small, averaging from 400 to 800 tons; while the French and Spanish sailers are less than 200 tons, and Greek, Swedish, and Russian are but little above, and run on short voyages chiefly. As for the British and American sail, the former are mostly iron, and the latter all wood, with no advantage in the open seas navigated. In regard to steamers, while all the British are iron, many of the American are likewise metal-built. In the case of sail, there is a superiority of 11.6 per cent.; and in the case of steam, of 42 per cent.

Averaging the ratios of steam and sail, the five principal flags rank in safety as follows: —

The American, 2.59 per cent.; the Norwegian, 3.10; the British 3.16; the French, 3.30; the German, 3.71 per cent.

The American superiority over the Norwegian is 19.5 per cent.; over the British, 21; over the French, 27.36; over the German, it is 43.15 per cent.

CHAPTER XX.

IMPERFECTION OF OUR TONNAGE-TAX SYSTEM.

The tonnage-tax system, with its radical imperfections, as chief among the minor burdens of our foreign trade marine, deserves our notice here. To this subject attention was invited by the author in his report of the Bureau of Navigation for 1890. Bills for the correction of the evils then shown to exist were prepared and submitted to Congress for enactment.

Faults of Admeasurement. Briefly, the provision that "net" tonnage, instead of gross, shall be taken for the basis of assessment for dues or taxes works evil in three ways: first, to vitiate the survey itself; second, to do injustice between steam and sail vessels, and between steamers of large and small net tonnage; and third, it operates to the advantage of foreign shipping, since net-tonnage rules are not international, but each country pleases its own people in the allowances that are made and deducted from gross tonnage to obtain net. There is really no practical way in any country of accurately finding net tonnage. The term itself is inexact and indefinite, since it is based, not on a proportionate allowance of space, as might be done; but, in steamers, particularly, the finding of net tonnage depends upon an arbitrary discount for boiler and engine-room, coal bunkers and shaft-alley; and in all vessels for the berthing of crews. The rules for *gross* tonnage, honestly applied, secure tolerably accurate results; and they are international. In Great Britain the Board of Trade, having the power, has changed the rules of allowance from time to time. It has resulted that there are British steamers, below 200 tons mostly, with little or no net tonnage at all. In very few countries are precisely the same allowances made.

Internationality of ship admeasurement is an important principle to secure in a tonnage law. It saves the time and cost of mensuration of foreign vessels in our ports, while it saves to

American owners the charges for admeasurement in foreign ports. It is, however, all one-sided to accept foreign net tonnage as the equivalent of American, because our net tonnage is larger than foreign, as will be shown.

Favoritism to Steamers and Foreign Shipping. By the present law our sailing ships are taxed upon their gross tonnage, minus 5 per cent. (for crew space), while our steam vessels are taxed upon their gross tonnage, minus from 30 to 45 (but not exceeding 50) per cent. There is no valid reason for this discrimination; on the contrary, since the tonnage tax is levied to support our marine hospitals, and steamers carry two or three times as many men per hundred (net) tons as sailing vessels do, justice requires the greater contribution to be made by steamers. Moreover, the cost of vessels, their value at any time, and their earning powers at all times, are not in proportion to their net, but gross tonnage, so here is another reason, just and weighty, for a change of basis of assessment. At the best, tonnage taxes on a home marine are most inequitable. A ton (gross) of sail may cost $50, and a ton of steam $150; and yet, by our law, the one will be taxed the same as the other. That is to say, if the dues are 30 cents per ton, annually, then the sail will pay 28.5 cents, and the steam will pay only 21 cents, on the average; but, at the most, might pay 15 cents only upon the gross ton. This injustice has been brought about by following a bad British practice.

The cost or value of a steamer is measurably proportional to her propelling power; which, again, is proportionate to the allowance or discount from gross, for net tonnage. The larger the allowance necessary, the more has been the cost, and the greater is the value. Owners of steamers in England, to avoid taxation, have claimed from the first an allowance of capacity, on the ground that the more machinery and power they have the less cargo they can carry. While that is true, it is also true that speed is a quality as valuable as capacity, or it would not be provided to take its place. Efficiency requires both speed and capacity, not only in steamers but in sailing vessels, and *efficiency* makes the money. It is, therefore, specious, if not evasive reasoning, that has advocated the basing of taxation upon a net tonnage, however obtained, and it should have no weight at all with Congress.

It is bad enough to do unjustly between our own fleets, but it is even worse to be guilty of favoritism towards foreign flags. While we collect tonnage taxes from our sailing ships in the foreign trade on the basis of 95 per cent. of their gross tonnage, on many foreign steamers we collect this tax on a basis as low as 32 per cent. That our statesmen thus burden our own struggling craft, and relieve foreign tonnage of taxes, has not the look of brightness about it.

The following statement of foreign and American steam lines engaged in our ocean trade, with their number, average, size, ratio of net to gross tonnage, on the average and for the minimum, will prove the charges we make against the present system: —

COMPARATIVE TONNAGES OF STEAM FLEETS.

Line.	Number.	Average Tonnage Gross.	Average Ratio of Net to Gross Tonnage.	Minimum Ratio of Net to Gross Tonnage.
French.			Per cent.	Per cent.
Général Transatlantique	54	2,639	48.31	31.83
British.				
Barrow	9	4,509	60.44	42.39
Cunard	21	4,019	58.06	45.44
Guion	5	4,292	57.09	51.27
Henderson Brothers	29	2,810	64.65	54.54
Inman	6	6,879	57.91	52.20
Ismay & Co.	13	5,243	58.19	43.82
British fleet	83	4,065	59.90	42.39
Merchant cruisers	10	8,240	49.07	45.44
Italian.				
Nav. General Italian Sec.	69	2,018	62.96	53.92
German.				
North German Lloyds	61	2,683	63.83	49.70
Austrian.				
Lloyd Austriaco	55	2,012	64.22	59.97
American.				
Sea-going fleet	104	2,549	69.27	55.25

Comparing the average ratios, it appears that our tonnage-tax assessments favor the different foreign flags as follows: —

	Per cent.
The Austrian, in general	7.29
The German, in general	7.85
The Italian, in general	9.10
The British, in general	13.52
The British "merchant cruisers"	29.16
The French, in general	30.25

Admeasurement Allowances. When our present tonnage system was adopted, the gross was the "register" tonnage. There was no allowance to vitiate the measurement or the assessment. In 1880 complaint was made at a shipping convention held in Boston, that British steamers in our ports paid taxes upon net, whereas American steamers paid upon gross tonnage, and a resolution was passed to have our law modified to meet the situation. At the next session of Congress this was done. It was mistaken legislation. It was unfair to sailing vessels; and, as may be seen from the foregoing table, the change did not effect justice as between our own and British steamers, but the steamship interest was pacified.

The difficulty arose in this way: Wishing to avoid frequent remeasurements of tonnage of foreign vessels in our ports, and save our own vessels from remeasurements in foreign ports, the State Department had agreed with foreign countries to accept their "register" tonnage, which was net, if they would accept ours, which was gross. It was not a masterpiece of diplomacy on our part, though no more unadvised than our usual foreign deals in behalf of shipping. It was this unstatesmanlike agreement that should have been overruled and set aside by Congress, and the law made explicit, that gross tonnage should be the only basis for taxation. If the taxes were too high, they should have been reduced, not dodged by allowances; and this is the remedy now, unless we abolish tonnage as a basis and introduce an equitable principle in its place.

In the recent Pan-American Conference this question of basis for tonnage taxes was considered at length; and it was settled that, as between American nations, tonnage taxes should be levied on the gross admeasurement. Our nation is, therefore, already a party to an intended reformation of net tonnage abuses, and it would be quite in order to pass the bill referred to in the beginning of this chapter. That measure provides

for taxing all foreign vessels upon gross tonnage, and our own upon net, if we choose. In relation to so doing, there is nothing in our reciprocity laws or treaties to prevent it. The stipulation in those laws is for charging no higher rate of tonnage duty. In point of fact, for many years — 1865 to 1882 — foreign nations, with our consent, assessed tonnage dues to our shipping on the basis of gross tonnage. This was simply because we called it "register" tonnage; and, in the author's judgment, it is competent for foreign nations to do so again, without valid objection from us, even if we did not so call it, so long as the rate of duty charged upon the net tonnage of their own vessels was not discriminative, but the same as charged to ours, on the gross. And the rule should work both ways.

Foreign Net-Tonnage Rules. A committee of the Second Northern Maritime Conference, in Europe, in a very full report, 1888, gives three different rules, which were then in vogue by different groups of nations, for estimating net tonnage.

The "British rule" is legalized in Great Britain, France,[1] Finland, Italy, and Austria-Hungary.

The "German rule" is followed in Germany, Sweden, Norway, Russia, and Belgium.

The "Danube rule" is adopted in the United States, and used in Denmark, Holland, Spain, Greece, Egypt, for the passage of the Suez Canal and the River Danube.

The net tonnage for steamers above 1,000 tons gross, estimated under the British rule, is stated by the committee to be, on the average, about 10 per cent. less than the same tonnage by the Danube rule (used by us); and about 16 per cent. less than after the German rule. It is stated on the same authority that net tonnage after the British rule is not recognized in countries having adopted either the Danube or the German rule. This statement is not accurate with respect to the United States. Here we are not nice about rules, but accept as true the net tonnage of all nations. What is stated by the authority mentioned is doubtless true of European countries. And this authority states further, "generally, it has been determined that only the gross tonnage for steamers shall be

[1] Judging from the foregoing Table, this cannot be true now of France.

recognized, and that the engine-room deduction in every special case shall be determined according to the rules in force in the respective countries."

But there are other than engine-room allowances that disturb the estimation of net tonnage. For instance, while Denmark has the Danube rule (the same as ours for steamers), that country allows from 5 to 18 per cent. for crew or forecastle space in sailing vessels, while we deduct no more, but in some cases less, than 5 per cent.

In the "British Nautical Magazine" for 1887, in an article on "Saving Life at Sea," a striking example of the absurdity of using the British rule for net tonnage is given thus: —

"The steamer Bournemouth, which went ashore in a passage from Torquay to Bournemouth, and was certified to carry at sea 372 passengers, was 232 tons gross, but, registered under 7 tons net, was free from inspection simply because her builders and owners possessed contrivance and ingenuity enough to avail themselves to the fullest extent of the vagaries in the laws governing 'register tonnage,' and brought that, in her case, down to below seven."

Here the blame is laid altogether upon the builders and owners, whereas it doubtless belongs mostly to the surveyors of tonnage.

At the present writing the "International Conference," sitting at Geneva, for the reform and codification of the law of nations, has had this tonnage question under discussion, and appointed a commission to submit definite proposals for its settlement.

A Test Office for Tonnage Surveys. In the second section of the bill, to which reference has been made, it is provided that all surveys for tonnage shall be verified and corrected by a supervising authority, before computations are made. Errors of all sorts now prevail.

The draft of the present tonnage law was prepared by the author, then a naval architect and editor in New York. The British had passed their model act in 1854. Profiting by experience under this act, the original bill provided for a "test office" at Washington, the same as existed in London, but the Committee on Commerce, inspired by economy, the country being at war, dropped this important provision, their

idea being "to pass the bill without the test section, and let its enactment follow in time to come, when the cost of accuracy would be no object."

The Bureau of Navigation, now in the Treasury Department, offers a convenient office for this test work, two or three qualified clerks that can make ship drawings and calculations being all the force necessary. The Bureau of Navigation is charged by law with the supervision of tonnage admeasurement, but has no means of exercising it. The situation is anomalous and discreditable, and calls for correction.

Evils of our Tonnage-Tax Laws. Our present tonnage-tax laws are the worst we have ever had; not only faulty, as most laws are, but prejudicial to our shipping and hurtful to our own people. They do not even satisfy some of the foreign nations most benefited by their enactment. Many complaints and protests, on the part of foreign shipowners and their governments, occupy the Treasury Department files, and engage the correspondence of the Department of State.

The attention of Congress was invited to this important matter, and corrective legislation suggested by President Cleveland, in a special message, January 14, 1889.[1] The law in question came in force June 26, 1884. It provided that, in lieu of the uniform tax of 30 cents a ton per annum, imposed at the beginning of the late war, a duty of 3 cents a ton, not to exceed in the yearly aggregate 15 cents a ton, should be assessed on all vessels entered from any foreign port in North America, Central America, the West Indies, the Bahamas, the Bermudas, the Hawaiian Islands, or Newfoundland; and that a duty of 6 cents a ton, not to exceed in the yearly total 30 cents a ton, should be imposed on vessels from all other foreign ports.

Upon the enforcement of this law, claims were immediately made by foreign nations that this neighborhood discrimination was in disregard of the favored-nation clause of their commercial treaties with the United States. The attorney-general, in 1885, declared it as his opinion, that the distinction set up in the act was "purely geographical in character, inuring to the advantage of any vessel, of any power, that may choose to fetch

[1] Differential Rates of Tonnage Dues, House of Representatives, 50th Congress, 2d session, Ex. Doc. No. 74.

and carry between this country and any port" situated as described by the act; and, consequently, there was no warrant to the claims made. This opinion, though not satisfactory to the powers complaining, seems to have been convincing to our own government. The claims and protests, however, continue to be made and filed away for future controversy and refunding, if the propitious time comes, as it may, when we shall be least prepared to deny the demand. But there are greater evils.

The act of 1884 contained a proviso which has made more mischief than the geographical discrimination. In 1886 it was amended in grammar, but not in policy, and now reads as follows: —

"*Provided*, That the President of the United States shall suspend the collection of so much of the duty herein imposed on vessels entered from any foreign port, as may be in excess of the tonnage and light-house dues, or other equivalent tax or taxes imposed in said port on American vessels by the government of the foreign country in which such port is situated, and shall, upon the passage of this act, and from time to time thereafter, as often as it may become necessary by reason of changes in the laws of the foreign countries above mentioned, indicate by proclamation the port to which such suspension shall apply, and the rate or rates of tonnage duty, if any, to be collected under such suspension :

"*Provided further*, That such proclamation shall exclude from the benefits of the suspension herein authorized the vessels of any foreign country in whose ports the fees or dues of any kind or nature imposed on vessels of the United States, or the import or export duties on their cargoes, are in excess of the fees, dues, or duties imposed on the vessels of the country in which such port is situated, or on the cargoes of such vessels."

It would not be easy to find in all our shipping statutes a more complicated or difficult piece of law for administration. It imposes on the government the duty of watching the legislation of foreign countries in respect to tonnage taxes, and of changing our collections to correspond with their charges, not with our need of revenue, a course which seems absurd and unbecoming.

The remedy suggested in President Cleveland's Message was, either the abolition or the equalization of the tonnage

duties on a basis of a uniform charge of 3 to 15 cents. Congress adjourned without action; and, the trouble with the law continuing, the author's predecessor as Commissioner of Navigation, and the Secretary of the Treasury, Hon. William Windom, in their reports for 1889, recommended an amendment of the law, by repealing the provisos inviting reciprocity in tonnage taxes with foreign nations, on the ground mainly that our statute had borne no fruit whatever in that direction. In the second session of the Fifty-first Congress (1890) Hon. Nelson Dingley, Jr., reported a bill of repeal, and it passed the House too late for action by the Senate. The law is therefore wrong, and known to be, but still it stands.

Discrimination against our own Shipping. There are two nations in Europe that for years past have laid no tax on tonnage in any of their ports. These are the Netherlands and Germany, where the "free ports" of history are situated; and theirs are the only governments that have accepted the provisos and had proclamations issued in their favor. All other nations, as remarked above, have declined our offers of reciprocity, and refused to change their tonnage-tax laws. The net reward of our liberality is the loss of tonnage taxes from all foreign vessels coming from Dutch and German ports, since no nation now collects discriminating duties. In return for this concession, our shipping gets — *nothing*. Foreign shipping gains everything. Before the passage of the acts of 1884–86 our vessels paid no taxes in Dutch and German ports, nor did the vessels of any other country, but the vessels of our own, and every other flag paid taxes on entering *our* ports. Since the passage of the law, our vessels returning from Dutch and German ports pay taxes as before, but all vessels of foreign flags are exempt. Thus a law of Congress has within a few years past set up a blundering discrimination against our own shipping, so far as it may engage in Dutch and German trade. Not only is this true, but the law, as it stands, holds out the offer of such discrimination against our own vessels, so far as each of the different nations of the world shall accept its terms; and if all foreign nations should consent to them, we would then have the shipping of the world, all but our own, if any remained by that time, entering our ports from most places abroad free of tonnage taxes. That would be a liberal

spectacle, indeed! By just such dreamy and unguarded acts has our shipping been swept away year by year, to make room for foreign tonnage.

We are now intending by postal subsidies to enable some of our steam shipping to run in the foreign trade. Suppose we put on lines to Dutch and German ports, in competition with those now under these or other foreign flags. The lines of such flags would be charged no tonnage tax at either side the ocean, but American lines would have to pay at our side. Our treaties compel us to tax foreign vessels no higher rates than our own. That is free trade enough, and reciprocity in plenty, but to have such relations with foreign powers as to tax no tonnage but our own is like running liberalism into paganism.

Origin of the Free-Port Provisos. Some of our people may wonder how it is that such legislation as described makes its way through Congress. Good folks, these provisos were in foreign interest. They would relieve the Dutch and German steam lines from tonnage taxes. These, and other foreign lines, with large interests at stake in our transportation, when they want advantages from our government, attend strictly to business in a practical way. Foreign ministers resident at Washington study the welfare of their respective nations. The mail steamer lines of all nations, running to the United States, are subsidized, and many belong to the naval service. Thus it is, each foreign government has an interest in the welfare of its steamers in our trade. The ministers attend to the diplomatic work, while for business purposes agents, attorneys, and lobbyists are employed. These, too, reside in Washington, attend to details, and put in their time where work is most advantageous, whether in social gatherings, the corridors and committee-rooms of Congress, the departments and bureaus of the government, or elsewhere. Thus it is that foreign business has special attention, grows and flourishes, while American interest, especially in shipping, scarce ever feels the sun upon its back. It has no minister at the seat of government, no attorneys preparing its papers or watching its case, not even an agent to visit the departments, smile on the messengers, make his best bow to the dignitaries within, and remind them of the cheapness of a ticket to Europe.

Refunding of Tonnage Taxes. If it was doubtful, in the

least, that foreign statesmanship mingled with American, in framing the free-port provisos of the tonnage-tax laws, it is quite certain that the administration of the law by the Bureau of Navigation brought down upon the commissioner the strongest censure and condemnation. The law, however, from its enactment, was justly construed, and only vessels coming direct from German ports were relieved from the payment of tax. The difficulty was, certain steamers arrived from Southampton, though they started from Bremen.

Their coming was like that of the Chinese from Canada, in which cases our courts held that Canada, and not China, was the country they came from. Coming from a British, which was not a free port, dues were rightly assessed and properly paid. But the foreign view of the question ultimately prevailed. It most always does. Under the pressure of legal and political opinions, the Commissioner of Navigation was obliged to direct the cessation of tax collection. This was done under the approval of Secretary Windom. The order was framed by the solicitor of the Treasury. While it was intended to apply to the Southampton steamers only, it was impossible not to make it exempt vessels from other ports of England, or of France, which might have stopped likewise on the way from Germany or the Netherland. It resulted, that to please the German government, the tonnage-tax-law provisos have let in free the vessels of all nations but our own, starting from free ports, whether they come direct or indirect. That is to say, the final construction of this law has widened greatly the scope of its discrimination against our own flag.

But the matter did not rest there. Demands were made for refunding the taxes, which amounted to many thousands of dollars appropriated continuously for the maintenance of hospitals for sick and disabled American seamen. It was the understanding of the Commissioner of Navigation that Mr. Windom never intended these disputed tonnage-tax collections should be refunded by the Treasury, but that the claims should go to Congress in connection with the question of repeal or change of the law. On his death, however, the acting secretary insisted on the Commissioner of Navigation ordering refunds made to the North German Lloyds Line, and refused to submit the matter to Congress; and the report of the Com-

missioner of Navigation, touching the defects and abuse of the law, has never been published. While such facts can make their own comments, it may be well to note that all the chances taken by the Treasury Department made interest for foreign shipping, and thus practically packed burdens on our own.

Pretenses for Tonnage-Tax Refunds. Many of the grounds, alleged in appeals of the owners and agents of foreign vessels for refunds of tonnage taxes, are absolutely frivolous, and others are untenable. The pretense usually is, that treaty stipulations with their nation make the collection illegal. In some of these cases there is no treaty at all covering the instance presented. Where no treaty right of exemption exists, it is often sought to show that Congress or the President is to blame, either for action or inaction. Appeals in many cases seem to be filed in the hope that something may possibly happen to give color to a right of exemption under a future act of Congress, or decision of the Commissioner of Navigation, or opinion of a court. The law provides that the President, in certain cases mentioned, shall issue a proclamation relieving foreign vessels from tonnage taxes. That the President has not, in pursuance of duty, issued such proclamation, has been made a ground of protest and claim for exemption of the tax; and this has been impudently done by the masters of British vessels.

Repeal of the Law. The remedy for these evils and abuses would seem to be the simple one of having no taxes at all on tonnage. While this would relieve our shipowners, it would be of more advantage to their foreign rivals, and there are eight of the latter to one of the former. In 1890 American vessels paid 44.68 per cent. of the geographical, or three-cent tax; and only 7.73 per cent. of the general, or six-cent tax; while they paid 13.3 per cent. of the total collected, which was $565,475. The flags paying above a thousand dollars of tonnage dues in 1890 are as follows: —

TONNAGE TAX COLLECTIONS, 1890.

Flags.	Amount Paid.	Per cent. of Total.
British	$340,134	60.15
American	75,208	13.30
Norwegian	32,908	5.82
German	30,962	5.47
Italian	16,949	2.99
French	13,109	2.32
Spanish	12,231	2.16
Belgian	11,686	2.07
Dutch	7,449	1.32
Swedish	3,728	.66
Austrian	2,884	.51
Danish	2,636	.47
Russian	2,343	.41
Portuguese	1,671	.29
Hawaiian	1,483	.26

Thus it appears that British tonnage, having displaced our own in a great degree, would be benefited most by freedom from dues. On the other hand, the tonnage of our own to be most relieved would be sailing vessels in distant trades, in which British tonnage would gain most on steam. The amount of taxes paid by American and British vessels, respectively, are derived from sail and steam in proportion as follows: —

Nationality.	Sail.	Steam.
American.	Per cent.	Per cent.
From tonnage in distant trades	38.48	9.87
From tonnage in near-by trades	35.50	16.15
Proportion of total	73.98	26.02
British.		
From tonnage in distant trades	18.85	71.59
From tonnage in near-by trades	4.36	5.20
Proportion of total	23.21	76.79

The taxes paid by Norwegians are mostly on sail, while those by Germans are on steam, in distant trades.

Under our laws and treaties, as these stand, tonnage dues are simply "revenue" taxes. There is no protection in them;

and, therefore, so far as our vessel interest is concerned, they might better be abolished. They only exist as to the foreign trade; but so long as foreign vessels do seven eighths or more of our carriage in that trade, it seems too generous, on our part, to give them all this business, through a free-trade policy, and besides this to relieve them wholly from the slight taxation needful to light our coasts and ports, buoy our channels, and maintain hospitals for seamen, necessaries largely used by foreign shipping.

There should be, surely, some way of taxing to rival tonnage in our ports, as there is for making our own pay in foreign ports, at least its share of these expenditures; and there should also be a way of relieving our own vessels of this tax, if Congress chooses so to do. Under the Constitution these ways exist, but under our maritime reciprocity legislation and treaties, the power of the Constitution is neutralized and repressed — in the interest of our rivals as it has happened. Now, what we would do for one American ton of shipping, in foreign trade, that we must do also for *nine* foreign tons. We could remove the tonnage taxes of the war-time from our shipping in the protected domestic trade, and this has been done; but we could do nothing for our suffering shipping in foreign trade, either to reduce or remove the tax, without helping foreign vessels equally with our own. The tax has been reduced, but the question remains, Why should our unprotected shipping be taxed and our protected go free, that we may make foreign vessels pay just dues for lights and the support of hospitals? We have appropriated millions of dollars for improving harbors and deepening channels for foreign commerce, and resigned these benefits to foreign shipping. Can we not go enough farther to give up, annually, half a million of tonnage taxes, that our own vessels may save $75,000? Why should we tax an interest that we refuse to protect, while we protect an interest that we refuse to tax?

The Principle of Just Taxation. Nearly all nations levy tonnage taxes. While they do so, the basis of assessment should be gross tonnage, as we have seen. But, as taxes on tonnage are inequitable, why should they longer be laid on this basis? Why not base taxation on *values*, rather than tonnage? When tonnage taxes were first laid, crudeness and imperfection

characterized all shipping relations. Vessels were small, and but little difference existed between a ton of one vessel and another, either in cost, efficiency, or carriage. All were propelled by sail. Now, there is a very great difference between new vessels; many are driven by steam, and others by sail; some are small, and others very large, with varying degrees of power; some carry merchandise, and others passengers; and transportation is so perfected and regulated that the most valuable vessels in business, as a general rule, are those that have cost the most per ton. It is upon the valuation, therefore, that taxes for revenue should be assessed. The propriety of this principle may be plainly seen in the cases of new and old vessels, that may have cost identically the same and were built to do the same work. A tax upon tonnage would be most unfair to old vessels; but a tax upon *valuation* could scarcely be unjust to any class.

A tax upon tonnage acts like a specific duty upon imported goods. It favors one quality at the expense of another. The only reason for it could be the impossibility of fair appraisals, but this is not good. Experts can be found to appraise every kind of property and all sorts of structures and machines. The "Inland Lloyd's Register of Lake Shipping" gives the valuation, as well as the class and grade, of all vessels inspected. The government could apply a proper system for accomplishing the same thing, and thereby do justice to every kind of tonnage — but our own, that can have only injustice from any system of taxation, while it runs in competition with the subsidized tonnage of foreign countries.

The Tonnage of Subsidy. The sea-going steam vessels of the world, over 100 tons, recorded in Lloyd's Register, 1890, measures 12,985,372 tons gross.

Of this shipping under British, German, French, Spanish, and Italian flags, there are 10,689,805 tons. Thus, the flags of these five principal powers of Europe, all of them subsidizers of steam, some paying bounties also to sail, cover 82.32 per cent. of the steam shipping of the world. The flag of subsidy — par excellence — the British flag alone, covers 63.42 per cent. of it, principally engaged in foreign trade. Comparing things small with great, the flag of the United States in foreign trade covers but the insignificant proportion of one and a half per cent. of the sea-going steam.

We have paid nothing to speak of to create and support a steam marine, and, in the nature of things, have received as we have paid — nothing for *nothing*.

British Tonnage under Subsidy or Subvention. Sometimes it is denied, but not by good authorities, that British steamers are subsidized. In the beginning, as shown elsewhere, every ton of steam sent to sea received Treasury support. Now, however, not one ton in five receives it. Excluding wooden steamers, which cut no figure in British foreign trade, the amount of metal steam foots up 5,775,132 tons. Not all of this is used in the foreign trade, but much of it takes part in that of other countries, our own included. The tonnage of steam lines under postal subsidy and admiralty subvention amounts to 1,030,196 tons, metal-built, classed at Lloyds. Manifestly, the support given by a subsidy or subvention is to the *line* and not alone to the ships engaged in earning it. All the subsidized lines have freighting steamers to catch the overflow business, and they are indirectly benefited by the payments made to others. The steamers of the lines owning subsidized ships number 396. These vessels are the cream of the British steam fleet. From them are selected "The Royal British Naval Reserve Cruisers," and "The Royal British Naval Reserve, under contract for transport service," commanded by naval officers, and manned in large part by reserve seamen. The former class of ships has an aggregate tonnage of 82,402 tons, the latter class of 160,000 tons, and in the total 242,402 tons.

Taking the tonnage of the steamers, earning subsidy or subvention, the proportion of the whole fleet is 13.75 per cent. Taking the tonnage of the *lines* receiving such support, the proportion of the fleet patronized by the government is 17.82 per cent. The steam fleet thus aided, amounting to 1,015,196 tons, greatly exceeds in tonnage that of any other than the British nation on the sea. It is equal to five times the tonnage of all the sea-going steam marine of the United States.

Germany ranks next to Great Britain in sea-going steam tonnage. The amount of iron and steel is 927,804 tons.

SUBSIDIZED GERMAN TONNAGE.

Name of Line.	Number.	Tonnage.
Norddeutscher Lloyd	64	169,129
Hamburg-Amerik. Packetfahrt Actien Gesellschaft .	40	117,976
Hamburg-Sudamerikanische Dampfschiffahrt Gesellschaft	26	57,497
Total	130	344,602

The proportion of steam tonnage assisted by government is therefore 37.14 per cent. owned by three corporations. Here is a fine example of imperialistic ship-protection.

As for France and Italy, all their steam tonnage is under subsidy or bounty, while that of several other countries is protected largely in a similar manner. It is against these fleets that we tax our ships in foreign trade. It is for these fleets and their flags that we stripped our owners of protection, and either refuse or neglect to restore it. Our proportion of the sea-going steam tonnage of the world is *one and a half per cent.* Do we deserve, at the hands of our citizens, to have a single ship ?

CHAPTER XXI.

THE LOAD-LINE QUESTION.

For years past the British government has sought to regulate the loading of vessels, and to that end freeboard[1] rules or tables have been applied to British ships. At first the object was to save the lives of seamen, by the prevention of overloading, and the law affected British ships only. Later it was found that foreign vessels, competing with British, sometimes loaded deeper, and consequently could carry cheaper. Then was it seen that equity required that all competitors should load by, at least, equivalent rules, and these, if framed and applied by British authority, could be made protective of British interest. Accordingly, a new act, passed in 1890, is now in operation as to shipping of all flags arriving at, or departing from, a port of the United Kingdom.

Our own government has not yet considered the load-line question, except in reports of the Commissioner of Navigation, and the preparation of a freeboard bill by the author, which was introduced in the House, February, 1891, and in the Senate in December following. Our rival's course has made it necessary for Congress to take this question up and settle it, by the passage of this measure, if our vessels are to receive fair play in British ports, or be protected finally in carrying a full cargo anywhere. By the terms of the British act, if our ships are inspected and marked by officials for their load drafts of water, according to proper rules enacted by Congress, they will be accepted by the British authorities as capable of carrying the loads designated; but if not inspected and so marked,

[1] The line to which a vessel is loaded is called the load-line. Freeboard is a name given to the emerged, out-of-water or "dry side," between the load-line and the sea-washed deck above it. The freeboard represents the reserve buoyancy of the vessel, and is always a considerable percentage of the entire "displacement," or vessel-body.

it follows that they may, and no doubt will be, imposed on by shippers, underwriters, and governments of foreign countries by restrictions as to loading.

Heretofore, in loading our ships in the foreign trade, no restrictions have been imposed by foreign governments, but only by underwriters. Hereafter, since Great Britain has led the way, we may expect other nations, as well as she, to enact loading rules; and through sharp officials make our shipowners pay dearly for governmental neglect. The extent to which this new discrimination may be carried can only be fairly judged from past experience of foreign bias regarding American ships.

Action of the Maritime Conference. The International Maritime Conference of 1889 was expected to adopt and recommend uniform rules for freeboard, but the committee having that subject in charge deferred action further than to report against taking it up then. Their report amounted to this: that the British Lloyds had a superior set of rules for shipbuilding and marine inspection, which turned out vessels of greater strength and better quality than other nations built or generally owned, hence uniform rules for loading, unless based on rules as good as Lloyd's for building and inspection, would do injustice to British shipping. It is clear, at a glance, that British sentiment must have ruled the committee. Their plea could not relate to buoyancy, but only to strength; and it has yet to be shown that Lloyd's rules insure the building of stronger ships than the rules of the Veritas, the Record, and other registers. The fact was, the British dominated the conference. Owning most of the world's shipping, on mature reflection, they were not anxious to recognize equality between British and foreign vessels. They preferred having loading rules of their own, which they could make protective to home-built tonnage. If discrimination resulted in their application to foreign vessels, that could only be the fault of such backward nations as did not themselves protect their shipping by loading rules and regulations of their own.

International Correspondence. Soon after the passage of the new act, the British government brought it to the notice of our own, and invited correspondence as to its adoption in the United States. A reply, prepared by the Commissioner

of Navigation, advised that a bill for American rules would be submitted to Congress for consideration and passage. This course was necessary in the interest of our marine, because the British tables of freeboard (rules were not enacted) are not based on science, or experience, but, seemingly, on theories of the superior seaworthiness of iron over wooden vessels, of steamers over sailers, of sharp ships over full ones, and of narrow vessels over wide ones. The English interest in metal shipbuilding and steam navigation must have had undue influence in shaping the tables. If certain kinds and sizes of vessels are pinched of cargo, others are permitted to load too deeply. Besides, the British tables do not provide for loading lumber vessels, which again are craft peculiar to American trade. Then, the British law puts the whole matter of loading rules or tables into the hands of the government Board of Trade, and this body may, and doubtless will, make changes from time to time. Our government has no body corresponding to the Board of Trade. Congress cannot enact a lot of tables, and he would be a poor American who would take his current law, or amendments thereof, from a department of the British government. We must, therefore, frame, enact, and apply our own rules and tables, improving upon the British where we may.

Comparison of Freeboards.[1] It may be stated here that the rules of the bill proposed for congressional action have been submitted for examination to the New York Board of Underwriters, and received their unqualified approval. They may, therefore, be referred to as American, in the discussion of points of difference with the British, now to be noted.

Table I. — Steam Vessels. The American rules provide a little more freeboard up to a size of vessel of 26 feet depth of hull, at which point the British tables give a little more for winter. At the depth of 30 feet, both summer and winter freeboards are a little greater by the British tables, and at 34 feet a considerable difference appears.

Table II. — Sailing Vessels. The American freeboards are

[1] In the Appendix will be found a copy of the freeboard bill, prepared by the author, as introduced in the Senate. Also tabular comparisons of British and American freeboards as adopted and proposed, with an explanation of the load-line problem, and the principles of freeboard rules.

the same as for steamers of equal depth. As steamers are longer than sailers, in proportion to depth, and there must be additional freeboard for overlength, it results that sailers carry more freeboard than steamers, by both sets of tables. The British provide for sailers a little more "dry side" up to a depth of hull of 26 feet, where a change appears, and the American rules require more freeboard for iron vessels.

Discriminations. For wood and composite[1] sailing vessels, the British tables stop at a size having 27 feet depth of hull, and do not provide for summer freeboards, which are less than winter. Iron sailing vessels have freeboards assigned up to, and including, the size of 31 feet depth. They are given less freeboard than composite ships, and they, in turn, less than wooden vessels. But a stranger discrimination is made. While iron steamers are given less freeboard than iron sailers, below a size of 28 feet depth, at that limit a change is made, and the steamer, with a "coefficient of fineness" of .76, is required to have half an inch more dry side than a sailer of the same sharpness; and, for a depth of 31 feet, 3 inches more freeboard. At a depth of 20 feet, with a coefficient of .74, the difference of freeboard is 3.5 inches greater for the sailing ship. Such changes and differences as these between sailers and steamers are neither reasonable nor consistent, and cannot accord with science. They seem to be mere arbitrary distinctions to favor steam at the expense of sail, for such sizes of ships (not the largest) as must naturally do the greater part of ocean commerce, just as the distinction of less freeboard for iron than for wooden vessels is intended, probably, to induce a shipowning preference for iron ships, and, therefore, of British-built tonnage.

A just distinction in favor of steamers is made in the standard for proportionate dimensions, where they are allowed twelve, but sailers only ten, depths for length, beyond which the freeboard is increased for overlength. By the American rules a sail ship of 20 feet depth would have 2.1 inches more freeboard than a steamer, but by the British tables 3.5 inches more if iron-built, 4 inches if composite, and 4.5 inches if wooden. By the American rules a sailer of 26 feet depth

[1] Composite vessels are framed of iron or steel, but planked with wood, calked, and coppered.

would have 2.4 inches more freeboard than a steamer, but by the British tables she would have 1 inch, if iron-built, 2 inches if composite, and 3 inches, if wooden. By the American rules a sailer of 31 feet depth would have 2.62 inches more freeboard than a steamer, but by the British tables she would have 3 inches *less* instead of more, if iron-built; but about the same if wooden.

Table III. — For Spar-Deck Steamers. For the depth of 23 feet the British tables give a little more freeboard than the American rules, both for winter and summer. At 27, and up to 35 feet depth, the American rules require a little more freeboard for winter, and considerable more for summer. At 37 feet depth the British tables give a little more for winter, but less in proportion for summer. Thus, it is seen, the British tables favor the deeper loading of medium-size vessels.

The American rules are based on hydrostatics, therefore they cannot favor any depth or class of vessel, but must be fair to great and small.

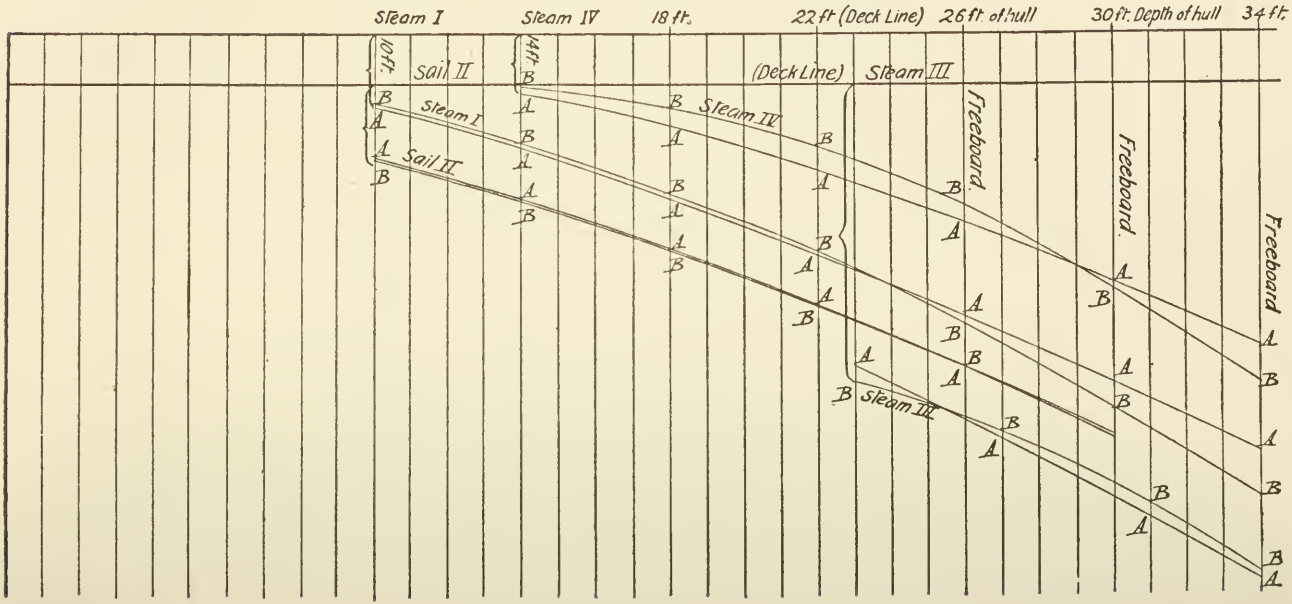
Table IV. — For Awning-Deck Steamers. It will be seen that the British tables give less freeboard for the smaller, and more proportionably for the larger vessels, than the American rules. Comparing the freeboards of awning with those of double-deck steamers, it appears that the British tables restrict unduly the loading of the larger awning-deckers. We may test this by supposing the awning-deck removed and the rules for single or double deck to be applied. In that case the freeboards for extreme sizes of vessels, expressed in inches and tenths, would compare, for the winter season, as follows: —

	Depth 14 ft.	Depth 34 ft.
(British Tables.)		
Freeboards, awning-deck on .	12.0 to 13.5	82.0 to 88.5
Freeboards, awning-deck off .	25.5 to 28.0	109.0 to 118.0
(American Rules.)		
Freeboards, awning-deck on .	13.5 to 15.4	75.5 to 79.0
Freeboards, awning-deck off .	27.5 to 28.9	101.8 to 103.1

Thus we see, in awning-deck steamers, the American rules require slightly more freeboard for the smaller vessels, but considerably less than the British for the larger.

Assuming the American rules give sufficient freeboard to the smaller vessels, we observe that building up the sides and

Curves showing gradation of Freeboard for vessels of different depths of hull, from 10 ft. to 34 ft. moulded. A, is for American rules. B, is for British rules.



covering with an awning-deck lessens the freeboard 13.5 inches, or 46.7 per cent., and for the larger vessels it reduces the freeboard 24.1 inches, or 23.3 per cent. By the British tables these reductions are, respectively, 14.5 or 51 per cent., and 20.5 or 25 per cent.; and the differences between the reductions only average 3 per cent. On the score of buoyancy, no good reason appears why so much more freeboard should be required, proportionately, for the larger vessels. If it be said it is on account of weakness in the larger ships that the difference is made, the plea is bad, as it reflects upon Lloyd's building rules for awning-deck steamers.

The American rules, based on the principle of proportioning freeboards to the pressure and motion of the sea, if correct for 14 feet depth of hull, cannot be wrong for a depth of 34 feet. However, the manifest distrust of the British tables may be fitting for such awning-deck steamers as are built for British service. If that is the case, Lloyds should look to the improvement of their rules.

One has only to inspect the curves of freeboard, in the accompanying cuts, showing the increase from small to large vessels, to perceive the regularity and symmetry of the gradation accomplished by the American rules; and to note, at the same time, the misproportioned and ill-formed curves produced by the British tables, particularly, in the cases of spar and awning deck steamers. A gradation that violates the laws of progression cannot lay claim to science, but belongs to the rule of thumb. It is simply impossible for the British tables to deal justly with all sizes and classes of ships. To steamers they are partial. To wooden ships unfair.

Sharpness of Hulls Considered. In the British tables sharpness of hull receives much consideration, and this without reference to the proportionate dimensions. Long and short, wide and narrow, deep and shallow ships, with equal coefficients, are treated alike and as analogous bodies, which, geometrically, they are not.

An inspection of the accompanying figures, I., II., III., Comparisons of Coefficients, will show at a glance that vessels of equal coefficients may have very unequal sharpness of form; that vessels of equal fineness of ends may have great disparity in coefficients of body; and that vessels of the same length may have different coefficients and degrees of sharpness.

In Figure I. we see that the body A, B, C, D has the same coefficient as the body E, B, F, D inscribed in the parallelogram 1, 2, 3, 4, but the one is blunt and the other is sharp. In Figure II. the four different bodies inscribed have the same angle of sharpness and the same length of bow, but the shortest body has a coefficient of 50 per cent., the next longer body of 75 per cent., the next of 83.33 per cent., and the longest body of 87.5 per cent.

In Figure III. there is the same length of body with different angles or sharpness, but a difference of 27.5 per cent. in the coefficients of fineness of ends.

What is also strange, the British tables give the least freeboard, and, consequently, the greatest draft of water to the sharpest body, which could not fail to be the one that would descend the deepest, and be the wettest in a storm at sea. There is no experience to warrant the loading of sharp vessels deeper than full ones. Nor is there any proving that sharp vessels are stronger built than full ones of the same dimensions. Nor is there any sound basis for this discrimination. It is wrong in all respects, and should have no recognition in the United States. It has long been a common error with naval architects to compare the fineness of vessel models, of promiscuous dimensions, by coefficients of body, whereas only vessels of similar, or strictly proportionate, dimensions, can be so compared with accuracy and fitness.

Imposition on Wooden Vessels. The discrimination against loading wooden vessels so deeply as iron or composite (iron frames and wooden planking) is another characteristic of the British tables that has no basis in practical knowledge. To reason that metal, as a material for ships, has buoyancy in excess of wood is absurd. Any difference existing between these materials is in favor of wood. The favoritism shown cannot stand on the ground of greater strength, for, whatever may be said of iron, as against wooden vessels, the mask falls when composite is also set against wood, since it is well known that composite construction is rarely the equal of either wood or iron. Good mechanical reasons explain this fact.

But affirmation is not made that wooden vessels are not strong enough to carry loads as great as buoyancy in due reserve will determine. That would reflect upon the Lloyd's

Comparisons of Coefficients.

Fig. 1. Vessels of equal coefficients may have very unequal fineness of form.

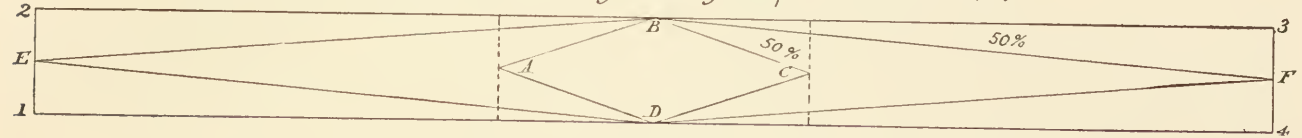


Fig. 2. Vessels of equal fineness of ends may have very unequal coefficients of body.

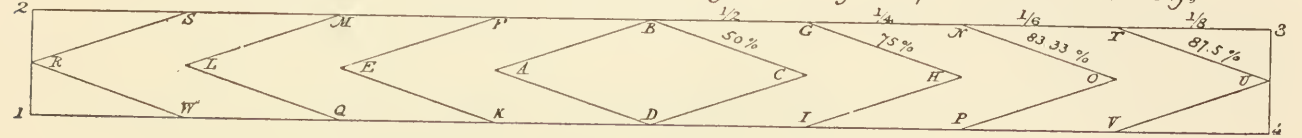
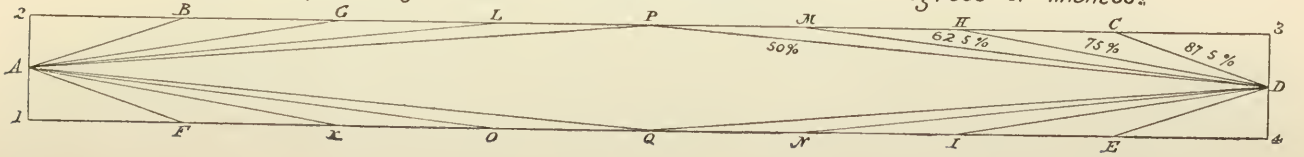


Fig. 3. Representing vessels of different coefficients and degrees of fineness.



Register Society, whose business it has been to make and enforce rules for obtaining strength, as well as buoyancy, in sufficient reserve for safety at sea. It may be stated as a maxim in shipbuilding, that a vessel must be strong enough to carry a full load, and any one not so built is a failure as a transport, whatever her material may be. There can be no such thing as a first-class vessel that cannot carry a full load, — one limited only by the requirements of safety in flotation. A mechanic knows of no excuse for building vessels of deficient strength of any materials proper to be used. Nor is it a practice to build such vessels in the United States. Besides being dishonest constructions, they would not pay to use. In short, the object of discriminating against wooden ships in their loading cannot be concealed from American shipbuilders. It is, without doubt, to handicap their skill and discourage their trade. In a preceding chapter we have shown the comparative service and survival of British iron and American wooden ships, and that the latter do the more work in their greater period of existence. This could not be the case if they were weaker.

Proof from Experience. If confirmation of this view of the distinction set up in England is needed, we have only to refer to the tables of ship performance in the California trade with Europe, given in preceding chapters. There it is shown that the British rules for loading iron ships gave them about six inches less freeboard and more draft of water than American wood ships were allowed. In consequence of this advantage, the British iron fleet carried 72.82 pounds more to the ton of vessel capacity, or .227 per cent. more cargo than did American wood. But note the increased peril per ton which resulted. This was 37.75 per cent. above the peril rate of the American wooden fleet. In other words, in consequence, mainly, of their deeper loading, if it was worth 2 per cent. (the rate then current) to insure cargoes by British iron ships, then cargoes by American wooden ships, equitably written, would have been only 1.6 per cent. (but the current rates were 2.5 to 2.75, with freights much lower in consequence). This testimony is experimental, and not theoretical or political, and should settle the question of parity of freeboards for wood and iron ships, at least as they have been, and will be, built in the United States.

Valid Reasons for a Freeboard Law. We have remarked upon the need of enacting rules for loading, to protect our vessels from foreign interference, but there are other reasons that may be offered. It will be in order, first, however, to inform the reader that the British Board of Trade have examined the freeboard bill proposed and expressed their satisfaction with it. If enacted, the British authorities will respect it. So much has been gained already.

The increased safety of life and property at sea, that will doubtless attend the enactment of the law, are objects worthy of attainment. We have no idea that American shipping is inferior to any in the world on the score of safety, but progress in this direction will be beneficial to our shipping interest, and honorable to the national character. Great Britain for many years has been endeavoring to improve her merchant fleets in seaworthiness, the appointment of several royal commissions testifying to its necessity and importance. The fact that marine insurance is higher in England than on the Continent is of itself an indication that she should lead in Europe in reducing the dangers of navigation. If she succeeds in this, other nations cannot, without disadvantage, decline to follow her example. And the British law is working successfully.

A return has been made of all ships ordered by the Board of Trade or its officers to be provisionally detained as unsafe, in pursuance of the act of 1876, from July 1, 1890, to June 30, 1891, giving the names of the owners of ships that have been dismantled, broken up, or converted into hulks. It appears that the whole number of vessels detained during the year was 44; of these 21 were found unsafe on account of alleged defects in hull, equipment, or machinery; the remaining 23 were cases of overloading or improper loading. These were either lightened or reloaded, and then released. Those with defects of age or condition were either broken up, converted into hulks or lighters, or are still detained. Since the passage of the act of 1876, of which the law of 1890 is an amendment, the total number of vessels reported as defective has been 722, or 48 annually. The number held for illegal loading has been 585, or 39 annually.

When we estimate the number of British vessels loading in the ports of foreign countries, where British law is not in force,

and consider how many unsafe vessels, but for the law, would annually proceed to sea under the British flag, it will be seen what need there was for saving legislation. It cannot be doubted that its effect is, and will be, to raise the reputation of the British marine.

This effect will be felt by American shipping. Its place for seaworthiness is in the van. We cannot afford to lose this place. The application of load-line law will increase the present repute of our marine for safety, and, consequently, its chances for employment. It will tend to reduce marine insurance. It will improve the *personnel* of our seamen. It will help to equalize conditions of competition for freights, by giving owners of character fair play with those, if any there be, who abuse the strength of their vessels and imperil or sacrifice the lives of their crews. Finally, the course of Great Britain, possessing as she does more than half the tonnage of the world, is bound ultimately to prevail, and the safe loading of vessels to be regulated in the future by every nation that keeps the sea. We have nothing to gain, but much to lose, by neglecting this opportunity, as we have others, to advance our shipping interest.

CHAPTER XXII.

THE COST AND ECONOMY OF SHIPPING.

Advantage Governs Trade. As in trade two elements regulate all transactions, so in mechanism two principles settle the utility of all machines. These are money and time on the one hand, and power and speed on the other. It is not the cheapness, but the fitness and advantage of vessels that demand the shipowner's thought. A ship is a tool of trade. As the best quality of a tool is adaptation, and the most valuable, efficiency, and the most important, profitableness, the cost cuts but a catchpenny figure. It will pay to throw away a poor tool and get a better one.

Shipping history is full of caution to all who read it, and learn the fact that a new type of vessel has been demanded in every decade of our commercial life. Thirty-five years ago, when American shipowners seemed to insist on keeping both trade and travel in sailing vessels, it was our fortune to share in publishing the following observations:[1] —

The Principles of Transportation. "Hitherto it has not been regarded as inexpedient to perform two kinds of service with the same ship. But a higher degree of trade development is in progress, and a greater subdivision of employment becomes necessary, both on land and sea. It is of less consequence to detain merchandise than persons, in the railway train or the ship. The business man will wait a while for goods, but the traveling public wish to start immediately and arrive speedily. This disposition has induced improvement in transportation; first, the harnessing of the iron horse, next of express trains for light freight and passengers. Although this change was opposed, we have now four classes of carriers on the railroads, viz.: The freight, accommodation, express, and

[1] The *Nautical Magazine and Naval Journal*, Griffiths & Bates, Editors and Publishers, New York, August, 1857.

lightning trains. Those who wanted but a single train have disappeared.

"The principles of transport by ships at sea are the same as for cars ashore. While a month's voyage may not lower the value of staple cargoes, it does take from the traveler both money and time, happiness and opportunity. Even the emigrants are not so ignorant as to take passage in a sailing ship, when they can cross the Atlantic in a screw steamer in much less time. That passage costs less by sail, than steam, goes for naught with them. Our packet-ships return home with empty steerages and cabins, their weighty and expensive topsides a mere bill of expense. Can the merchant shipowner longer doubt the propriety of building a different type of vessel, and of supplying two types in place of one, to meet the wants of European trade? . . .

"When ocean steamers first became passenger carriers, their type and design had unskilled hands. Their plan was little better than placing engine, boilers, and a pair of paddle-wheels upon a packet-ship. Being adapted to no special service, unadapted to speed, and loaded with machinery and fuel, they could not be profitable, and were sustained by subsidy. Next came larger steamers, no better in dimensions, and but little improved in form. The depth was built up, whereas greater length and breadth should have given the size required. Then, unless the deep steamer carried large freights at high rates, she made no profit. On the other hand, if deeply laden, long voyages and loss of travel resulted. Such facts should have satisfied any manager that, in steam transit, freight and passengers must be separated. Yet our people learned but little from British experience. Steamers for transatlantic trade were built with three whole decks fitted with staterooms for first-class passengers, while below these a hold for freight existed. . . .

"A division of service and special adaptation is what is needed now for sailing ships and steamers. The former should be designed wholly for freighting, and suited to the special trades. The latter, where intended for freighting, should carry emigrants or second-class passengers only; and the highest type for speed should take no freight, but only first-class passengers, mails, express packages, and precious property.

Steam vessels as at present constructed are only superior to sailing vessels in the regularity of their trips. Sometimes sailers have proved the faster. But our clipper ships, like our packets, have been built with topsides too large for bottom. This operates against them in two ways: first, it gives too great a draft of water, and second, to obtain speed, undue and unprofitable sharpness must be given. Steam machinery must be vastly improved before sailing ships, if well designed, can be displaced by steamers in distant trades. . . .

"Fast steamers have not only come to be a matter of convenience, but of necessity. For passengers and mails, speed is the prime consideration, but the same principle which has operated to increase the size of sailing ships and steamers is not so applicable to this class of vessel. It is not the great bulk of passengers and mails which is to make the mail steamer profitable, but it is the rapidity of transit, frequency and regularity of passages, that will do it. A steamer that can accommodate but 100 stateroom passengers with the mail, and runs 450 miles per day, will make more money for her owners in a year; than the 5,000-ton steamer can make, with double the investment of capital; and no intelligent shipbuilder or engineer will doubt the feasibility of attaining an amount of speed equal to this performance, and that on a steamer of 2,000 tons. Four of such steamers would carry more passengers than any one of the transatlantic lines now carry through the year, and could secure the mails at even increased rates." [1]

The Slow Teaching of Experience. Since the time of making these observations, it might be supposed that experience has settled the question of steamer service, yet we find it as necessary now, as then, to insist on a further subdivision of employment, and declare for special tools for particular uses. We see Congress passing a bill for establishing mail-steamer lines, consisting arbitrarily of four classes, with fixed minimum sizes as follows: —

"The first class shall be iron or steel screw steamships, capable of maintaining a speed of 20 knots an hour at sea in ordinary weather, and of a gross registered tonnage of not less than 8,000 tons. No

[1] The writer of this article was Mr. John W. Griffiths, marine and naval architect, shipbuilder, author, and designer of the "Six-Day Steamer," 1853.

vessel except of said first class shall be accepted for said mail service under the provisions of this act between the United States and Great Britain.

"The second class shall be iron or steel steamships, capable of maintaining a speed of 16 knots an hour at sea in ordinary weather, and of a gross registered tonnage of not less than 5,000 tons.

"The third class shall be iron or steel steamships, capable of maintaining a speed of 14 knots an hour at sea in ordinary weather, and of a gross registered tonnage of not less than 2,500 tons.

"The fourth class shall be iron or steel or wooden steamships capable of maintaining a speed of 12 knots an hour at sea in ordinary weather, and of a gross registered tonnage of not less than 1,500 tons."

As might have been expected, the rigid terms of size and speed, quite as much as the inadequate compensation offered, has partially defeated the purpose of the act. It would have been wiser to have given freedom to build steamers of improved adaptation, increased efficiency, and lower cost, and thus to have aided the building of a new type of vessel, instead of perpetuating an old one of primitive design. Eight thousand ton steamers, or none at all under our flag, to carry mails to England was unstatesmanlike; but to carry freight in the same ship at 20 miles an hour was rash and uncalculating. And freight would have to be carried when passengers could not be had; light or loaded, the high speed would have to be made, as the compensation was only paid for the outward voyage. The subsidy offered by the Senate bill for 8,000-ton and 20-mile steamers was $6 per mile. The House, aiming to be economical, let us suppose, cut this down to $4 per mile, but forgot to reduce the tonnage or speed in proportion. It goes without saying that such unskillful legislation is not in the public interest.

A similar failure was provided for in the second class of 5,000-ton, 16-knot steamers. A line of this kind was intended for mail carriers to Brazil and Argentina, though why they should be of the size named no expert could explain. The mails would be light, few passengers would travel, and the bulk of business would be freight. The subsidy offered was cut down from $3 to $2 per mile, but the tonnage was untouched. If the promoter of this bill in the House had con-

trived "how not to do it," he could not have been expected to make a greater success. No lines of postal steamers, of the first and second classes are running under his act.[1] It has taken a special bill to induce a first-class service to be started.

The Brazilian Trade. We may now take notice of the Brazilian trade. In 1883 a mail line, consisting at first of two steamers, was put on from New York to Rio de Janeiro, touching at ports on the way. The scheme was to carry the mails, passengers, and freight. Concerning its success, Senator Frye, in a speech on the "Postal Bill," July 3, 1890, made the following remarks: —

"Take the American line from New York to Brazil, three or four steamers sailing, I think, once a month, from 2,500 to 3,000 tons each. That steamship line is kept on the ocean to-day by the Brazilian mail pay, and in no other possible way. Let Brazil withdraw that pay and that line stops, the same as John Roach's did. That line lost $277,000 the first four years it ran. It never has paid a dividend from the day it was put on down to now. The United States pays it nothing for carrying its mails — not a cent; and refused to pay it enough to reimburse the actual cost of handling the mails. If we do nothing, how long will that line stay on?"

Confiding in the prospect that the "Tonnage Bill" would be enacted, and protection be given again to our foreign freighting, the company put on lately two new steamers, unfortunately of the old type, each above 4,000 tons gross register. But "the cause was more confident than the event was prosperous." The "Tonnage Bill" failed to pass the House; the substitute mail-subsidy measure (which we have referred to) took its place, and, as intimated, has proved unadapted and inapplicable to this line, under the first advertisement. In a heedful effort to sustain its enterprise, the company has resorted to "time charters" of foreign steamers, and the laying up of their smaller ships. In other words, it is announced that this unprotected line is dropping its American tools and taking up foreign. But that is not the way a mechanic sees it. To his view, the company is seeking now the adaptation and efficiency

[1] And a line having the speed of the third class failed to get a contract (under the first advertisement) because the vessels lacked a few tons in size. No absurdity like this controls a Spanish subsidized line running in opposition.

which it should and might have had from American shipyards in the beginning. If it be said that these tools would have cost more for being American built than foreign, — it may be answered that cheapness depends only conditionally and apparently on cost, but intrinsically and really on efficiency and durability.[1]

Strange as it may seem, the Brazil mail line was projected by a shipbuilder, who built what he supposed were good tools for the trade, which was then in the hands of sailing vessels. The mistake seems to have been quite recently discovered. In testimony recently given before the Senate Committee on Commerce, the president of the company is reported to have stated: —

"One of the things from which we suffer is due to our own fault. We made a mistake in putting on two new, large, expensive, and handsome passenger and mail steamships. That is our own fault. They cost us $900,000, or $450,000 each, whereas I can get the same tonnage-room in a ship of equal (cargo) carrying capacity for $125,000; in fact we have such an offer to build at this time. We already had more high-priced passenger ships in the service than it paid to run, in view of the character of the trade; for the only real business with Brazil is in cargoes, not passengers; and a fleet of boats to carry both cargo and passengers is, in my judgment, an unprofitable one."

In other words, the lesson of thirty-five years ago was practical, but this line had never learned it until now, at great expense, the president acknowledging that for fifteen voyages their losses on passenger-cargo steamers aggregated $185,000; and for eight months prior to April 1, 1891, when foreign steamers were first chartered, they amounted to $142,000. His summing up of the situation is this: —

"Since we have not the tonnage of our own, and cannot build it at present American prices, in order to compete with the English bottoms, there is nothing left, as a matter of salvation, except to charter English ships."

As we shall see presently, the principal saving in this scheme is in the operating expenses, — smaller vessels carrying the same weight of cargo, running at a lower speed, using less fuel, fewer officers and men at lower wages, and the captain

[1] See Chapters XIII. and XIV.

provisioning the ship at 34 cents a head. As for the steamers, if the company would build them, and they should cost a trifle more, the excess should be returned by greater durability.

The Unpopular Steam Tramp. When steamers came upon the ocean it was a common thing for sailing vessels to visit ports seeking, *i. e.*, looking for employment. At first, steamers were so costly to run, they had to be formed in lines, have a regular route, a large passenger traffic, and a subsidy from government for carrying the mails. It is only since the near perfection of the screw-propeller engine that vessels under steam, fitted for cargo-carrying alone, dared to venture forth on irregular voyages, trusting to luck for engagements. Necessarily, the utmost economy and the deftest skill were requisite in their design, build, outfit, and management, as their competition would be against the regular subsidized lines, on the one hand, and the cheaper-run sail ship on the other. Moderate success attended the enterprise, which was, for the most part, started, and since then followed up by British builders, who have become accustomed to carrying a stock account of such vessels. They are vulgarly known as "tramps." Many have been recklessly built and worked off on the market to keep shipyards a-going in dull times. Parsimony and dishonesty have sometimes taken the place of economy and skill. The very poorest ship material goes into tramps. The very lowest of job wages are paid for their construction. They are sold for almost any price that can be obtained, since, in many cases to more or less extent, they represent an output of odds and ends of material and labor that could not be converted into money in any other way. In other words, steam tramps, as a general thing, are not custom but slopmade. They are built by all classes of builders, the good, the bad, and the indifferent. They receive Lloyd's highest class in many instances, but are often classed in some Continental register. These are the cheap ships of the United Kingdom. President Ivins states in his testimony: "I understand there are six hundred and forty tramp steamers now lying up in England." A score or more may now be on the stocks, as dull times promote their building.[1]

[1] Tramp steamer building has been overdone. The increase of the British marine for 1891 was in sailing vessels, which formed 25 per cent. of the total construction, against 9 per cent. in 1887.

These are the ships that it is lamented that American shipbuilders are not able to build in competition with British. It is clear enough to a mechanic, however, that our country loses nothing by this inability. What it loses is lost by the management that puts a passenger steamer to perform the work of a tramp.

The tramp type of steamer is correct in design. It has come to stay, and it is going to do a large share of the world's transportation. Sail only can do that work cheaper in distant trades. But there is a type of steamer that is ahead of the tramp. It is American, too. That is the tow-barge type with consorts. Of this type there is a new model, both for steamer and consorts, which is also American. This is the McDougall "whaleback," so called. All three of these types of cargo-carriers exist in numbers on the Great Lakes, where they have been perfected. Managers of American ocean lines of transportation have no need to look abroad for examples in types of vessel for economical transport. The best of these can be found in their own country, and on fresh water at that. We may declare with pride, that the shipbuilding, the navigation, and the management of transportation on the Lakes may challenge the world for equality.

The Lake, Versus Ocean, Cargo Steamers. Some extracts from an interesting paper on American shipbuilding and lake transportation, by a competent authority,[1] brought up to iron shipbuilding and engineering in England, may be quoted here. The object of the writer was to institute a fair comparison between the design, construction, efficiency, and cost of lake and foreign freight-steamers.

"*Dimensions and Dead Weight Ability. Lake Steamer.* As a type of the ordinary lake cargo-steamer, I will describe the Brown S. S. Company's Castalia. The dimensions are: Length, B. P. — as per British Board of Trade rules — 300 feet; breadth moulded, 40 feet; depth moulded, 24.5 feet; sheer forward, 3 feet; sheer aft, 2 feet; dead rise of floor, 5 inches; tumble-home at upper-deck, 2.5 inches; camber of beams, 9 inches; height of bulwarks, 2.75 feet; displacement

[1] Joseph R. Oldham, C. E., of Cleveland, Ohio, naval architect, surveyor to the Record of American and Foreign Shipping, agent of the British Lloyds.

at 16 feet (mean draft), 4,750 net tons (fresh water, 32 cubic feet to the ton), gross register tonnage, 2,513; net, 1,841 tons. The deck is flush, with low topgallant forecastle, pilot-house and texas, and the usual deck houses for accommodation of the owner, his friends, captain, and crew. She has two large dining and mess rooms, five spare staterooms, and three bathrooms, exclusive of those for the crew. There are three pole masts, and she carries 3,000 tons of cargo on 16 feet mean draft, with a freeboard of fully 8.5 feet. Average speed loaded, thirteen (statute) miles per hour. . . .

"*British Steamer.* The British cargo steamer with which I shall compare the Castalia is quite a representative vessel, nearly new. The length and breadth are identical, 300 by 40, but she has 3 feet greater depth (27.5 feet) with finer lines. Her sheer is exactly double, and the coefficient of displacement .70, against the Castalia's .81. The total dead weight (carrying) ability of this vessel is 3,817 tons, on a mean draft of 23 feet 11.5 inches, which would leave 5 feet .5 inch freeboard from the top of wood deck, in accordance with Lloyd's rules.

"Now, if the Castalia were loaded down to a proportionate freeboard (21.5 feet draft) she would carry 4,366 tons, against 3,817, or 12.58 per cent. more than the British steamer, and then she would draw 2.46 feet less water. As to fullness of model, the lake steamers are largely in excess of the tramps, for the coefficient of .81 is rather below the average. The average coefficient of tramp steamers is about .74.

"*Strength.* There are steamers doing good work on these lakes over 300 feet in length, 40 in breadth, and 25 deep, without metal decks, and with light stringer plates only double riveted, having four or five large gangways, which cut 5.5 feet in depth out of the top-side plating, and which reduce the sheer plates about twelve inches in depth, and all this without anything like adequate compensation, and yet they go on year after year carrying dry and perishable cargoes of 3,000 tons dead weight, without giving any cause for complaint from underwriters or merchants. But the class of vessels we are now discussing forms a bold contrast to these, for the latter "Globe-built" boats have either one or two steel decks, the sheer and stringer plates double strapped and triple riveted, and all weakened

plates thoroughly compensated. . . . Decks have been swept in steamers having nine feet of freeboard, and yet the bilges, topsides, and stringers never have shown indications of straining. In stranding, rocks pierce the bottoms of our lake steamers, but such damage is limited always to the plates and parts where contact occurred. This is more than we could say in favor of the ordinary tramp steamer.

"Here I may quote some figures illustrative of the strength of these American steamers, the calculations having been recently made by the writer and published in the 'Iron Trade Review.' They show that the Castalia and the Tuscarora are about the strongest vessels of equal length on these lakes, or, perhaps, elsewhere. The greatest tensile stress to which the Tuscarora is liable when afloat is seven tons per square inch at the gunwale, which gives her a factor of safety of 4.25. The Castalia, being a little longer, with larger hatchways, is subject to nearly 7.5 tons tensile strain.

APPROXIMATE MAXIMUM STRESSES AT GUNWALE AND FACTORS OF SAFETY.

Name of Steamer.	Length in Feet.	Depths to Length.	Ashore Strain.	Afloat Stress.	Factors of Safety.	Neutral Axis above Keel in Per Cent. Depth of Hold.	Materials.	Where Built.
City of Rome	560	14.07	38.57	7.717	2.723	45	Iron.	Barrow.
Germania . .	455	12.81	38.70	7.740	2.713	40	Iron.	Belfast.
Castalia . . .	300	12.12	36.80	7.360	4.076	43	Steel.	Cleveland.
Cayuga[1]. . .	297	11.60	35.22	7.044	4.260	42	Steel.	Cleveland.
Thornhill . .	245.5	11.60	20.48	4.096	5.130	42	Iron.	Jarrow.

"We do not hesitate to give it as our opinion that there are no vessels in Europe, as a class, so strong as the large steel steamers constructed on the northwestern lakes. In making this statement, we may say that we are by no means without experience of British-built steamers, nor yet of the building of the British type of steamer on these lakes.

"*Workmanship and Durability.* As a proof of the excellent workmanship on our steamers, our ballast tanks (in the

[1] Also Tuscarora, Seneca, Saranac, etc.

double bottom) are always quite water-tight, without the assistance of cement, none being used in these vessels for any purpose. Never until I reached these lakes had I seen bottoms and double bottoms perfectly water-tight under such pressures as 60 pounds, with nothing but metallic calking to prevent leakage.

"*Cost, etc.* It will have occurred to many that the great point is the financial one. The greater cost of our steamers, as commonly quoted, is misleading; and, indeed, incorrect, when a proper comparison is made between the *freight-earning* capabilities of American-built and foreign steamers. Nothing is more common than to hear wild statements made about the extra cost of production in this country as compared with Europe; and the extra cost of steel vessels is said to be anywhere between 20 and 50 per cent. Such statements, we believe, are utterly at variance with the facts. But it should cause no surprise to the initiated if our steamers should cost more than the "tramps," for the wages of laborers and mechanics are certainly higher in this country than in Great Britain, where wages are the highest in Europe. It is clear to the writer, however, that our day workers do more work for the higher pay, and that fact may partly account for the cheapness of our ships, considering their good quality. . . . Although they say, 'We cannot build so cheaply as the British,' I shall show that in the *first cost*, *even*, we do build quite as cheaply.

"Now, the British vessel we have quoted has a dead weight (carrying) ability of 3,817 tons, and her first cost in dull times was £32,000; but there were a few extras, as she was built for "stock," which I estimate at £500 only, so her price complete was not less than $162,000, and this sum, divided by her dead weight ability in tons, gives $42.50 per ton, while our lake steamers built to order, in our busy times, cost $43.20 when loaded to the same draft of water in proportion to depth.[1] This comparison shows a difference of less than 2 per cent. in favor of the foreign-built steamer. But the price we have

[1] Steel screw steamers of about the same principal dimensions as the Castalia, and also having two steel decks and otherwise about as expensive, have been built this year (1892) at less cost than $35.50 per ton dead weight ability, if loaded to 21.5 feet mean draft of water. Like steamers are not built anywhere for less money, even at the present date. — J. R. O.

quoted for British vessels is much below the average, for such vessels range from £8 to £11 per ton dead weight, and, therefore, if £9 be accepted as their average price, it would seem that they are higher in cost than ours per ton of dead weight ability. . . .

"I will only add that the writing of this paper has caused an investigation which has utterly surprised the author; for, though I felt certain that the accommodation we provide on our freighting steamers was quite unequaled in any other vessels, I had not before now the assurance to say that in cost, structural strength, speed, and finish, our steel lake steamers are the compeers, if not the superiors, of any cargo steamers that float."

Whalebacks Compared with Tramps. In support of the contention that American skill in shipbuilding is fully a match for British, in point of the cheapening of cargo-carriers, we will compare whalebacks with tramps. The whaleback, so called, is the invention of Captain Alex. McDougall, of West Superior, Wis. The American Steel Barge Company, of the same place, owning the patents and having their own yard, have built many of these peculiar vessels, mainly for use on the Lakes; but they have established a yard on Puget Sound, and will soon be turning out tonnage there for the navigation of the Pacific Ocean. Desiring to have authentic information in relation to the cost of building and running these vessels, the author has received from Captain McDougall recent letters from which extracts will now be made: —

"In reference to the steamers we are building, I will state that we offered one of three that are alike for $150,000. They are 322 feet extreme length, 38 feet beam, and 24 feet deep, with 1,200 (ind.) horse power. On 14 feet of draft they will run 13 (statute) miles in smooth water. They are built quite full, so as to be great carriers for their size. On 14 feet draft they will carry 2,500 gross tons, carrying nearly 300 tons to the foot thereafter up to 18 feet. On 17 feet draft they will carry about 3,600 gross tons, and then have about 25 per cent. reserve buoyancy.[1]

"Being built for lake trade, the scantling and some of the

[1] This type of vessel may safely load deeper than any other. Twenty per cent. of buoyancy in reserve would be a large allowance.

plating of these steamers is a little light of Lloyd's requirement. In order to make them up thereto it might add to their cost $10,000. It is, therefore, safe to say, that we can build sea-going ships of that capacity, in the lake country, for $160,000, to carry 3,600 tons of cargo, with a reserve buoyancy of 25 per cent.

"I calculate that, for a sea-going cargo-steamer, filling Lloyd's requirements, for a speed of 12 knots at sea, it will need one ton (displacement) of ship for three tons of dead weight cargo, and the same should be built on the American coast for $45 per ton of her capacity."

If, however, the load draft is fixed at 18 feet instead of 17, with 20 per cent. reserve buoyancy instead of 25, this steamer would carry 3,900 tons, and therefore cost but $41 per ton. Then, the British steam tramp is not generally built 100 A, at Lloyds, nor is she able to run at a 12-knot rate. Captain McDougall adds: —

"In regard to our consorts,[1] a vessel of the same size as the steamer would carry 300 tons more, and cost $50,000 less; and in the same ratio as you increase the size. If, however, you diminish the size to a 2,000-ton vessel, the cost would be more in proportion."

Cost of Steamer and Consorts Together. A steamer as above described can tow two consorts of equal tonnage, on the ocean as well as on the Lakes. The three together could move 11,400 gross tons of freight at an average of seven-knot speed on most ocean routes. Their average cost per ton of dead weight ability would be $33.33 per ton.

The Cost of Running Whalebacks. The auditor of the Steel Barge Company states as follows: —

"Answering your questions; for a first-class 3,000-ton steamer on the lakes, the pay-roll per month is as follows: Master, $200; mates, $80 and $60; engineers, $115 and $75; stewards, $55 and $20; watchmen, wheelmen, firemen, and oilers, each, $37.50; deck-hands, $20. We carry 2 watchmen, 2 wheelmen, 4 firemen, 2 oilers, and 4 deck-hands — 21 souls in all. On a consort there are seven people. The captain gets $100 a month, the mate $60, the steward and donkey-engine-man $37.50, and three deck-hands $30 each. Sometimes we

[1] "Consort" is the name given to a vessel that makes voyages under tow of a steamer.

pay the donkey-engine-man $5 more. These wages are much higher than those paid on the coast; the shortness of the season and the fact that they are constantly on soundings requiring more careful handling, and really a superior class of men for the officers. The cost of feeding the crew is, per steamer, about $260 per month (41 cents daily per man); and per consort, about $110 (52 cents daily per man)."

Lake Traffic Management. It may strike the reader that the lake traffic managers are to be congratulated that they have such well-adapted, efficient, and really cheap tools. They must be satisfied with them, for their voices are never heard running down American-built steamers and praising the virtues of British-built. They know exactly what kind of steamer to build for the freighting, or the passenger business, and they make no mistakes that the employment of British tramps can correct. Their management has never scandalized, but always honored, American reputation.

Lake managers would doubtless deem it unfair to take a passenger-cargo steamer of 4,033 or 4,115 tons that would carry no more cargo than a purely cargo-built vessel of 2,963 tons, and compare the former as American with the latter as *foreign*. The nationality of vessel cuts no figure in the case, yet the testimony of Mr. Ivins was worked up for all it would bear by the prejudiced against American shipbuilding. If a tramp steamer put into the passenger trade proved a failure, would there be any sense in denouncing her as a British humbug? It would be as absurd as to make the implication and admission contained in the following reported question and answer: —

"In reply to a question asked by Senator Vest as to the reason why an English-built ship could be operated more cheaply than one built in American shipyards, Mr. Ivins said: —

"'One reason is because they are built more cheaply. They cost less.'"

We commend this new wrinkle in shipping economy to the lake steamship managers. Verily, cheapness must be the god of dullness.

Comparative Cost of Manning British Cargo and American Passenger Steamers. Mr. Ivins's testimony, as reported, contains the following information: —

"On our ships we have from sixty-five to eighty-five men, according to the size of the ship. The English ships which we can use for cargo equally well have from twenty-eight to thirty-five men. . . . Take the Glengoil and Seguranca for instance. The Glengoil (tramp), which carries the same cargo as our Vigilancia or Seguranca, has a crew of thirty all told, officers and men. It consists of a captain, two officers, chief engineer and three assistants, eight sailors, a carpenter, a boatswain, nine firemen, a donkeyman, a cook, a steward, and a boy; fifteen in the deck department, and fifteen in the engineer's department.

"The captain receives £20, say $100 per month (most tramp captains do not receive over £15, say $75 per month); the chief officer £9, say $45; second officer £6.10, say $32.50; chief engineer £16, say $80; second engineer £12, say $60; third engineer £8, say $40; fourth engineer £6, say $30; sailors and firemen get £5, say $25 per month, and as a matter of fact they can now be shipped for $20. We are shipping sailors at from $20 to $25.

"The captain provisions the ship, and the owners allow him for the entire crew 1*s.* 5*d.* per head per day, say 34 cents. The wages per month of the Glengoil are, therefore, in round figures $950 per month, as against $2,392 for the Seguranca, when she is run as a cargo vessel, and $2,877 when she carries a steward's department as a passenger boat.

"The provisioning of the Glengoil is $306 per month, as against $1,036.50 for the Seguranca as a freight boat, and $1,666.50 when she carries a steward's department."

As showing the cost of manning British cargo and American passenger steamers, the foregoing information is valuable, but used for comparison of cost of manning British and American built steamers, it is misapplied and useless.

A Fair Illustration. Senator Frye, in advocating his Postal Bill, July 3, 1890, made a fair statement of the situation respecting the competition of not-subsidized American and subsidized foreign passenger steamers. Said he: —

"Now, I will illustrate our position in this ocean conflict by taking one ship of our line between New York and Brazil, the Alliance, 2,985 gross tons, and a Spanish ship her exact counterpart: —

Items of Comparison.	American Steamer.	Spanish Steamer.	Difference in Favor of Spanish.
Steamship Alliance, cost	$382,378.00	—	—
Spanish, exactly similar	—	$344,140.00	—
Difference of cost in favor	—	38,238.00	11.11%
Equal in interest per month	—	—	$191.19
Cost of crew, wages per month	2,500.00	1,750.00	750.00
Cost of crew, food per month	1,152.00	691.20	460.80
Mail service, Brazilian government; distance, 11,490 miles; time, two months, $4,750, or per month	2,375.00	—	—
Mail service, Spanish government with Spanish company of Nov. 1, 1886, article 285, clause A, distance 10,230 miles, at 10.18 pesedas (or $1.99) per mile, amounting to $20,307.50; difference of mileage compared with Brazilian steamers, 1,260 miles, at $1,992,-501.10; total 11,490 miles, at $22,-808.60 per month	—	11,404.30	9,029.30
Ship chandlery	450.00*	500.00	—
Coal about equal	—	—	—
Engine-room, stores, oil, waste, etc.	250.00	180.04	70.00
Insurance, 5¼ per cent. per month.	1,673.00	1,505.00	168.00
Wear and tear, 2½ per cent. per month	796.62	716.95	79.66
*Difference in favor of American, $50.			$10,748.95

"Total difference per month in favor of Spanish ship, $10,698.95.

"Total difference per annum in favor of Spanish ship, $128,387.40.

"Ten thousand six hundred and ninety-eight dollars and ninety-five cents per month in favor of Spanish ship enables same to carry cargo 33 per cent. less than United States ship same tonnage.

"Eight thousand seven hundred and seventy-three dollars and thirteen cents per month in favor of Italian ship enables same to carry cargo 29 per cent. less than United States ship same tonnage.

"Nine thousand and ninety-four dollars and twelve cents per month in favor of French ship enables same to carry cargo 31 per cent. less than United States ship same tonnage.

"Eight thousand and twenty-four dollars and twenty-one cents per month in favor of German ship enables same to carry cargo 27 per cent. less than United States ship same tonnage.

"Seven thousand one hundred and thirty-two dollars and sixty-three cents per month in favor of English ship enables same to carry cargo 24 per cent. less than United States ship same tonnage."

Senator Frye continued: —

"These figures represent facts, not fancies, and show that if the American line offers to take cargoes from New York to Rio for $7.50 per ton, the Spanish ship can offer, for same cargo in our own ports, to carry at $5.03, and be on the same basis as the American. Am I not justified, then, in my assertion that American ships cannot compete successfully with those of these other countries in the foreign carrying-trade, even though the first cost of ours was merely nominal? Clearly, then, neither a reduction of the cost of an American ship of 15 or 20 per cent., by the admission, free of duty, of all the materials, machinery, etc., entering into her construction, nor the admission of foreign-built ships to an American registry, will secure to us our fair proportion of the carrying-trade of the world. What legislation will? In my deliberate, carefully considered opinion, only such as for a term of years will provide for the payment to every American vessel, of sail or steam, of wood, of iron, of steel, *a navigation premium* of so much a mile for every mile such vessel sails and carries freight in the foreign trade, and that premium sufficient to make the terms between foreign ships and ours about equal."

Wages and Living of Foreign and American Crews. The wages paid to American crews are, on the average of the fleet in any trade, much higher than to crews of foreign ships, and they always have been higher since we had a merchant marine. This difference in wages has not been due to duties on foreign goods, but mainly to the activity and skill of our seamen, and the opportunities existing for a livelihood ashore. To this difference in wages must be added a difference in provisions and stores. The character and intelligence of our people forbid, on the part of owners or crew, the mean, cheap, and scanty living that obtains on board of nearly all foreign ships. Again, to these differences must be added the general undermanning of foreign ships, in consequence of sharp competition for freights. These circumstances, once of little or no disadvantage, have grown adverse in degree year by year since the war, and have now become hard to contend with. The average ship of all nations, with which our vessels must compete, is able to save, certainly 25, and perhaps 35 per cent. of every dollar that an American ship would pay for crews, provisions, and stores. When steady employment and full cargoes could be commanded, as was the case under protection, foreign shipping

seemed to have no advantage over our own. The removal of protection has developed the present state of things, when foreign advantage casts its shadow from keel to truck and from cask to pot. When this happens ashore, protection is reinvoked; when it occurs afloat, our statesmen seem to take no interest in it.

Formerly, with the aid of protection, our people in nautical pursuits were able by skill and strength to overcome foreign cheapness of all kinds. But the spread of knowledge in modeling, propeling, and navigating vessels has reduced our old-time superiority, so that inferiority in building, manning, and sailing is not the heavy drawback that it once was with European nations. And while competition is not international, as it was forty years ago, but ships are chosen by national preference, it is much easier than formerly, when American merchants controlled our trade, for foreign ships to command the carrying of American commerce. In our palmy days and for a time afterward, we carried our exports to foreign countries in shipping of our own. Now, the vessels of those foreign countries come here with cargoes from every part of the world, and return with our products. The only chance to make employment for our vessels seems to be, under present laws, in sending merchandise to countries destitute of ships and steamers; but this, even, requires protection, for in this trade all flags compete to lower freights.

To illustrate the changes made by all the nations in the manning of their marines, reference may be made to the course pursued in England.

Reduction in Crews of British Sail Ships. From tables printed in the report of the Bureau of Navigation for 1889, it appears that in 10 years, 1877 to 1887, the shortening of crews of 25 ships (representative of the British marine) was 95 out of 698 persons, a decrease of 13.61 per cent. Besides this change, there was an increase of 5.06 per cent. of foreign seamen; and yet a third decrease in expense, fewer petty officers. These ships, averaging 1,188 tons each, now carry only 2 men to the 100 tons. Thirty-five years ago, when American shipping was thought to have a chance to keep the sea, carrying from 2 to 3 men to the 100 tons, British ships of equal size carried 3 to 4 men to the 100 tons, and other nations from 4 to 5 men.

Reduction in Crews of British Steamers. From the tables referred to, it also appears that in 10 years the shortening of crews in 28 representative steamers, averaging 1,614 tons each, was only 1.34 per cent.; but the officers were reduced 9.14 per cent.; able seamen, 17.33 per cent.; and ordinary seamen, 64 per cent. The manning was further cheapened by increasing the proportion of foreigners in general 5.95 per cent., and of Lascars in particular 5.61 per cent. The proportion of men to each 100 tons, exclusive of master, is now 3.79 per cent., — about the same as carried by American ocean-freighting steamers of equal tonnage. But 4 of these 28 steamers are in the passenger trade, and necessarily carry more men than the 24 in the freighting business. Computing for these alone, the shortening of crews was as follows: —

SHORTENING OF FREIGHT STEAMER CREWS.

	Per cent.
For all on board but master	7.52
For decrease of officers	6.57
For decrease of able seamen	18.48
For decrease of ordinary seamen	64.00
Number of men to the 100 tons	3.14
In the case of the Glengoil, chartered tramp, referred to, 2,963 tons, run by 30 men, the number to the 100 tons	1.01

Thus, it appears that British freighting steamers have stripped for competition, and really carry fewer men than British sailing ships did 30 years ago, or even now in the smaller craft. And it is intelligence, not ignorance on shipboard, that suffers the reduction.

In 1890 a British tea steamer from Hong Kong arrived in New York with 17 Chinese sailors forming her crew in the deck department. The average pay for such help does not exceed $8 per month, and their food is cheap, of course. The number of Chinese coming to the United States as seamen on foreign ships is increasing every year, and Asiatics of different countries are gradually displacing Caucasians of all nations in the forecastles of the ships of all having East India colonies.

We may, therefore, conclude, in view of all the odds and advantages of foreign nations in keeping down the manning expenses of their ships, how utterly idle and sinister it is to talk about buying vessels abroad, as a cure-all for our present

unequal and ruinous footing. Suppose we buy our ships in Liverpool, shall we get our sailors from Hong Kong? The one measure fits the other. The one would bring about the other. Buying foreign ships, to be sailed by foreign seamen, will give us foreign owners as well as foreign builders. We now have alien merchants and foreign underwriters, and, on this line, whence will come an American marine? And what interest can the American people have in any other?

Tables of Wages. The following tables of seamen's wages are fairly representative for the present time. They are 50 per cent. higher than 50 years ago, and from 50 to 100 per cent. above the wages paid by foreign nations now competing for our trade.

NEW YORK AND WEST INDIA TRADE.

Monthly Wages out of New York, Steamers.

Class of Service.	Number.	American Passenger-cargo Steamer.	Number.	British Cargo Steamer.
Master	1	$200	1	$100
1st officer	1	70	1	45
2d officer	1	50	1	32.50
Carpenter	1	40	–	—
Boatswain	1	30	1	—
Quartermasters	3	(2) 30–15 (1)	–	—
Seamen	12	25	8	25–20
Boy	1	12	1	—
Chief engineer	1	125	1	80
1st assistant engineer	1	75	1	60
2d assistant engineer	1	65	1	40
3d assistant engineer	1	50	1	30
Oilers	3	45	1	—
Firemen	9	35	9	25–20
Coal passers	6	25	–	—
Purser	1	75	–	—
Steward, 1st and 2d	2	60–30	1	—
Stewardess and assistant	2	20–12	–	—
Cooks	4	50–40–25–12	1	—
Baker and spare cook	2	45–30	–	—
Pantryman and assistant	2	25–12	–	—
Waiters	10	20	–	—
Porter	1	25	–	—
Messman and boy	2	25–12	–	—
Donkeyman	–	—	1	—

WAGES OF SEAMEN AT ATLANTIC PORTS.

Month and Year.	New Bedford.		Baltimore.		New Orleans.		Charleston, S. C.	
	Foreign.	Coastwise.	Foreign.	Coastwise.	Foreign.	Coastwise.	Foreign.	Coastwise.
July, 1889	$18	$25	$17	$22.00	$25	$25	$25	$25
August, 1889	18	25	17	22.00	25	25	25	25
September, 1889	18	25	18	23.50	25	25	25	25
October, 1889	18	25	18	22.50	25	25	25	25
November, 1889	18	23	18	22.50	25	25	25	25
December, 1889	18	20	18	22.50	25	25	25	25
January, 1890	18	18	18	22.50	25	24	25	25
February, 1890	18	18	20	22.50	25	24	25	25
March, 1890	18	20	20	22.50	25	25	25	25
April, 1890	18	25	20	22.50	25	25	25	25
May, 1890	18	25	20	23.50	25	25	25	25
June, 1890	18	25	20	25.00	25	25	25	25

The following table may be taken to represent the wages on first-class vessels on the Lakes generally.

WAGES OUT OF CLEVELAND, 1889.

Class of Service.	Adopted May 12, for Season.	Adopted September 5, for Season.
On steamers: —	Per month.	Per month.
Masters	$150 to $190	—
First engineers	95 to 115	$95 to $115.00
Second engineers	65 to 75	65 to 75.00
First mates	65 to 80	65 to 80.00
Second mates	45 to 60	45 to 60.00
Cooks	45 to 55	45 to 55.00
Helpers	10 to 15	17.00
Firemen	30	37.50
Wheelmen	30	37.50
Lookout	25	37.50
Deck-hands	15	17.00
On consorts and sail: —		
First mates	50 to 65	50 to 65.00
Second mates	35 to 45	35 to 45.00
Cooks	30 to 35	37.50
Seamen	30	37.50
Boys	15	17.00

WAGES OF SEAMEN OUT OF CHICAGO, SAIL VESSELS, 1890.

	Per day.		Per day.
May	$1.50	September	$2.25
June	1.50	October	2.50
July	2.00	November	2.50
August	2.00		

American officers have 83 per cent. higher wages than British. This applies to the ocean and the Lakes.

AVERAGE MONTHLY WAGES OF FARM LABOR.

Sections.	Wages.
Eastern States	$26.46
Middle States	23.83
Western States	22.61
Southern States	14.86

It will be noted that the highest wages paid are in the protected lake and coasting trades, and that the wages in the unprotected foreign trade are the lowest given. In the Southern ports, however, where we have but little shipping in foreign trade, the wages are about the same for all trades, and higher than in the Northern cities visited most by foreign ships. The best American seamen are doubtless those who sail in the best paid domestic trade. The aliens, as a class, number most, proportionately, in the foreign trade.

While the facts thus far given clearly establish the unequal footing and disadvantage on which American vessels are obliged to run in competition with foreign shipping, there is further testimony to be presented in other chapters. The evidence is overwhelming that American ships and seamen must receive governmental care and encouragement, if they are to exist in numbers sufficient for mercantile economy and maritime defense.

CHAPTER XXIII.

A DEPARTMENT OF COMMERCE.

Having considered the principal obstacles and difficulties which have arisen and surrounded our navigation in foreign trade, it may be next in order to indicate the measures necessary for their removal. Some of these seem to suggest themselves. It has not been shown, however, that our government itself has a *want* that should first be supplied. As a preparation and support for all measures proposed or adopted, it is needful that a department of government be established, to take in special charge the general shipping and commercial interests of the country. The magnitude of these interests far transcends that of some others now presided over by separate cabinet officers. We have a secretary of war, although we have no wars, and but a nucleus of an army; and a secretary of the navy, notwithstanding we have only a few fighting ships, and, without a marine of our own, really have no naval power; and we might as well have a secretary of commerce, as of war and the navy, even should we remain dependent on foreign shipping to carry on our trade with the world.

For a long time past has our government been wanting in eyes and ears and understanding of the needs of navigation and commerce. Interests not represented in the cabinet are not kept before the country, and soon lose importance. In our administrations the sea has never had representation proportionate with the land. Since the war, especially, it has been all for the land, and nothing for the sea, in cabinet and Congress. This want of voice for the interests of the sea has caused inattention to their failure and decay.

Governmental supervision of commerce and navigation should be as effective in the United States as where it now exists in all foreign countries that cherish naval and commercial power. A department of commerce would represent in its

work not only the national but the individual interest. It would do for the mercantile, the mechanical, the nautical, and cognate interests connected with the sea, what the Department of Agriculture does for the business of tilling the soil, in originating and promoting advantageous measures in the farming interest, and in removing obstacles to its success. Not only the administration of the laws of Congress concerning commerce and navigation, but the duty of watching and studying their operations, investigating the working of foreign laws and customs, and acquainting Congress with all the facts needed for improvement or defense, in our policy or laws, would devolve upon the department of commerce.

Many a matter of importance to our shipping or foreign trade has been overlooked or adversely settled in cabinet councils, for the want of an officer present, whose business it should be, at all times, to consider the effect of measures with reference to the great interests under his charge. A secretary of commerce would be chosen in view of his fitness and ability to advise upon questions of trade and transportation, as a secretary of state is chosen for his knowledge of diplomacy and international law; as a secretary of the treasury for his ability in finance; an attorney-general for his legal attainments, and so forth.

These, and other thoughts of a similar character have given rise in the past twelve years to the passage of many resolutions by Boards of Trade and Chambers of Commerce, and Conventions of Shipping in our principal cities, favoring a department of commerce in the administration of the government. It is felt by thoughtful citizens, everywhere, that our government is weak and wanting in its policy and attitude toward the sea. That it is not wise, but shortsighted and impolitic. That it is not thoughtful, but negleetful, of gaining maritime wealth and power. That it is not friendly to, but at variance with, naval and commercial development. In short, that it is behind the times with conservatism, in its want of sympathy with ships and shipping enterprises, and its lack of live Americanism seaward.

The Office of Secretary of the Treasury. If it be said that the Secretary of the Treasury administers the law relative to commerce and navigation, and, therefore, is charged with the

care of these great interests, it will not be difficult to show that the average Secretary of the Treasury has not taken care of them, but left them to shift for themselves. The study of taxation and the collection of revenue is the principal office of the Secretary of the Treasury. The reports of these officers are bound up in a volume entitled "Finance." When a Treasury officer thinks of a ship it is in connection with *revenue fees* or *fines*, and not at all for the purpose of studying and promoting the national interest in navigation. While a few secretaries of the treasury have advised Congress in the view of this interest, the greater number have said nothing for it, and some have recommended injurious legislation, as we may learn from the record, which will now be examined.

The Reports of the Secretaries. Alexander Hamilton, the first Secretary of the Treasury, in his reports to Congress, seems not to have mentioned any measures that would be advantageous to our commerce and navigation. Congress, under the lead of Mr. Madison, in the first bills passed, had well protected these important interests, and they were prosperous under his administration.

Oliver Wolcott, 1795–1800, had no occasion to propose measures in the interest of navigation.

Albert Gallatin, secretary from 1801 to 1813, called the attention of Congress to the need of legislation but once, and then it seems there was a lack of law to prevent our vessels in the coasting trade from violating the non-intercourse act with England and France. He advised: —

> "That either the system of restriction, partially abandoned, must be reinstated in all its parts, and with all the provisions necessary for strict and complete execution, or that all the restrictions, so far at least as they affect the commerce and navigation of the citizens of the United States, ought to be removed."

Except in the last clause, presented as an alternative, there was nothing in this statement favoring American commerce and navigation. Mr. Gallatin was willing that these interests should be extinguished by persistence in an evil policy.

A. J. Dallas, 1813–15, made no reference to the interests of commerce and navigation.

William H. Crawford, 1816–24, found nothing to communicate on these great topics.

Richard Rush, 1825–28, referring to the operation of the tariff of 1824, advised Congress that our foreign commerce for 1825 had not declined in consequence of higher duties. Concerning the preponderance of carriage in American bottoms, which was then at its zenith and destined soon to fall, he observed: —

"Considering that the vessels of those foreign nations with which the United States have the most extensive commercial intercourse are now placed upon a footing of equality, as to duties, and charges of whatever kind, in our ports, with the vessels of the United States, this heavy excess of American tonnage [1] is a signal proof of the flourishing state of our navigation. It may serve to show that the efficient protection extended to it by the laws of Congress, succeeded in establishing it in a manner to meet and overcome all competition. Before the era of those laws, it is known how this great interest languished; how little able it proved, before the auxiliary hand of government was stretched out, to support itself against the established superiority, and overwhelming competition, which it had to face in the world."

Since the time of Secretary Rush shipping experience has proved that what must be built up by protection must be maintained by it. "Equality as to duties in our ports," granted to foreign vessels, has undermined our preponderance of carriage, and built up that of our rivals, to a ruinous extent for us.

Samuel D. Ingham, 1829–30, was much concerned about the privileges of coasting vessels, and desired restrictions to prevent illicit trading. He also wanted the credit system, then in vogue for duties, improved, *i. e.*, made harder for the merchants. This credit system was a principal feature in the protection which they had had from the origin of the government. The Secretary was deeply concerned for the revenue, but, apparently, cared nothing about injuring American commerce.

Louis McLane, 1831–32, was the first Secretary of the Treasury to consider what Congress might do to help the navigating interest. He observed: —

"The burden to which the interests of navigation have been subject by the existing duties [tariff of 1828] on articles necessary in shipbuilding must not be overlooked, and while equitably adjusting other

[1] Then 95.2 per cent. of imports, and 89.2 of exports.

interests, this may require from the legislature particular attention. The great importance, both of our foreign and coasting navigation to the country, and especially to those interests now requiring to be cherished, cannot be doubted. In the competition which it is obliged to maintain with the commerce [shipping] of the world, everywhere the object of peculiar aid, it would seem to demand of the government a liberal support. It is believed that the expenses of building and fitting out vessels of every description, including steamboats, are injuriously increased by the present duties, and that a drawback of a large portion, if not the whole, of the duty on all the articles composed of iron, hemp, flax, or copper, whether of foreign or domestic production, used in the construction or equipment, might be authorized, under proper safeguards, with obvious advantage to other interests, and without material detriment to the revenue."

At the time of this report, as shown in Chapter VIII., the want of protection in the carrying-trade was coming to be severely felt. The tariff of 1828 considerably increased duties on iron, hemp, flax, and copper, but the price of tonnage had risen but little, because little or no demand for new vessels existed.

Roger B. Taney, 1833–34, did not refer to the subject of navigation, and doubtless felt no interest in it.

Levi Woodbury, 1834–40, is the statesman who engineered the passage of the final "shipping-reciprocity" act through the Senate in 1828. As secretary, in charge of commerce and navigation, he had nothing to say, though he could have advised Congress of the decline of the latter of these interests under his free-shipping policy. With all his political experience, he seemed ignorant of the uses of a marine employed in the foreign trade. In 1838 he stumbled on a mystery, which he thus stated and explained: —

"The history of our commerce, during the twenty years from 1818 to 1838, presents a singular change in the last half of that period, which tends strongly to illustrate the correctness of these suggestions. During the first half of it the excess of imports over exports was only about $75,000,000, or in the proportion of nearly $7,500,000 annually. But during the last ten years of it the excess was nearly $212,000,000, or over $20,000,000 annually; and thus more than 250 per cent. greater than it had been. Supposing that the $7,500,000 were composed principally of the fair profits and difference in valuation, the excess over that rate in the last ten years must constitute a debt either

mercantile, state, or corporate. It equals nearly $137,000,000 before 1839."

In the Secretary's view this debt arose, mainly, "from importations beyond our wants." He failed to note that the falling off in tonnage per capita had been from an average of 5.91 cubic feet, for the ten years of 1819–28, to an average of 4.62 cubic feet, for the ten years of 1829–38, a decrease of 28 per cent. in navigation. He also failed to note the falling off in American proportion of carriage, for the last term as against the first, from an average of 92.35 to 90.43 per cent. for imports; and from 86.39 to 79.17 per cent. for exports, an average decline of carriage of 5.11 per cent.; and this upon a per capita tonnage reduced 28 per cent. as a result of Senator Woodbury's free-shipping policy. Carriage in the export trade is itself an *export*. Our loss in this item, from one period to the other, was 8.35 per cent.

Thomas Ewing, 1841, did not refer to navigation.

Walter Forward, 1842, aside from tariff matters, had nothing to say on commerce or navigation.

John C. Spencer, 1843, recommended a lighthouse tax upon tonnage, and a "transit duty" upon imported merchandise on its passage to the dominions of a foreign state immediately adjoining the United States. He said: —

"Among the means of improving the revenue, the duties on tonnage and light-money, heretofore collected, have received consideration. In 1831 these duties were repealed, except as to vessels of those countries that impose duties on goods and tonnage, discriminating between their own vessels and ours. In respect to those nations counter-discriminating duties on our part still remain. They vary in amount, but their average for the past twelve years is about $60,000, although for the last year it was less than $30,000."

This duty he proposed should be applied to the marine hospital fund. Then he adds: —

"Considering the disadvantages under which our navigation now suffers from various causes,[1] the undersigned is not disposed to recommend the restoration of the tonnage duty."

This was something to be thankful for, but, being sorely pressed for revenue, he continued: —

[1] Mainly, the removal of protection, which gave foreign vessels a better footing than our own, for employment in our own trade. — AUTHOR.

"But it is deemed worthy of consideration whether the vessels enjoying the benefits of our very expensive lighthouse establishment ought not, in justice, to contribute to its maintenance. The light duty was repealed at the same time with the general tonnage duty, and it is believed for the same reason, — the abundance of revenue then existing. That reason has ceased to exist. Our revenue is not adequate to the ordinary expenses of the government. A duty of six cents per ton upon all vessels engaged in the foreign trade, to be paid upon each entry (but only one duty each month), and a like duty annually upon vessels engaged in the coasting trade and fisheries, would produce on the present tonnage about $230,000, — less than half the average annual light expenses."

These were dark days, with poor prospects for American shipping. A famous protectionist party had come into power, but not for the relief of commerce and navigation. This party "wished them well," but gave no help.

George M. Bibb, 1844, a sort of revenue reformer, wanted a very limited free list, but moderate duties from every article imported. He was the only Secretary in our history who ever broached the subject of accuracy in our admeasurement of tonnage. He said: —

"It is respectfully recommended that the mode of ascertaining the tonnage of any ship or vessel, as directed by 'an act to regulate the collection of duties on imports and tonnage,' approved March 2, 1799, be so far altered and amended as to require that the actual depth of the ship or vessel be measured; that the breadth thereof be measured at every perpendicular foot at the broadest part about the main 'whales;' that average of the breadth be made, and then the length and breadth as averaged, and depth as measured, be multiplied with the deduction as directed by that act."

This amendment would have improved the rule somewhat, but it was never passed. He continued: —

"This change has become important, because, in the modern times, models of ships and vessels have been so altered as that the mensuration directed by the act does not approximate the true tonnage, but makes it appear far less than the truth. By such short mensuration our ships' papers are brought into suspicion and discredit in foreign ports; the duties in our ports are lessened, and our tonnage and navigation appear untruly to have declined greatly."

It will be noted that the malformation induced by tonnage

taxes only applied to vessels in the foreign trade. As for thirteen years we had had no tonnage taxes, and the actual depth of single-deck vessels used in our coasting trade was required by law to be taken, the remark of the Secretary related wholly to tonnage in the foreign trade. In 1815 this was 854,295 tons; in 1844 it was but 900,471 tons, — representing a growth of 5.4 per cent. in 29 years, under a policy of protection removal for 13, and free-freighting disadvantage for 16 years. The notion that short measurement could account for the results of free trade was not a good one for a Whig to entertain.

Robert J. Walker, 1845–47, took notice of what many were observing, to wit: —

"American tonnage has not increased in the proportion as British tonnage, in the last ten or fifteen years.[1] Even in the ports of the United States there has been a great increase of foreign vessels in the last few years."

Well, what did we remove protection for? Senator Woodbury assured the country that free shipping would give us such advantages that soon all foreign flags would disappear in our ports. The foreign nations that suggested this free-shipping policy did not expect it to turn out differently. Secretary Walker continued: —

"It is unprofitable under these circumstances to own vessels, and there is no other way of accounting for the depressed state of the shipping interest than that the tariff, in the first instance, enhances the cost of vessels and then cuts off their employment by prohibitory duties, which diminish imports, and cripple commerce, while our great rival and competitor proclaims to the shipbuilder, Take free of duty all that you require for your outfit."

There was never a thinner piece of sophistry than this of Secretary Walker. It has done duty from his time to the present, as a false light of the first order, misleading the uninformed and credulous.

The influence of tariff legislation has been discussed in Chapter X., where it is shown that Mr. Walker's theory has

[1] That is, since our special reciprocity act of 1830, for the admission of British West India triangular trade, by which we were greatly cheated. — AUTHOR.

no basis in fact. The enhanced cost of vessels, from any cause whatever, does not hinder, oppose, or defeat their *employment*. It does not decrease freights, nor reduce their rates. It does not induce idleness, nor bring on hard times. On the contrary, enhanced cost, from any cause, is calculated to increase and sharpen competition, improve management, and stimulate invention. Nor does cheapening the cost of vessels realize any advantage for securing employment. All that cheapness of construction can do is to save interest on the investment, return first cost a little sooner, or slightly reduce the rates of freight.

Prohibitory duties, or those that cut off employment of vessels, have no special tendency to injure the business of American, and increase the carriage of foreign vessels. It is the presence and number of bidders for freights, the influence of flag or business connections, the dictum of underwriters or the consideration of "gratuities," [1] one or all to more or less extent, that control engagements outside of ownership business.

Secretary Walker experimented in 1846 with diminution of duties for giving employment to vessels. In the first year we lost more than 10 per cent. of carriage. Every reduction of tariff in our history has operated in some way in the interest of foreign shipping. Walker's theory of a tariff, which was to work wonders for American shipbuilding, navigation, and commerce, was soon put aside by practical events.

William M. Meredith, 1849, was another visionary character. He remarked that "commerce, in the machinery of exchange, is the handmaid of agriculture;" and further, that "it is never positively injurious." As for the carrying-trade, "by sea or land, it is necessarily profitable only to the carrier, and may be useful or not to others according to circumstances." And thus he illustrated his meaning: —

"The farmer finds the railroad a great convenience, but understands that it is better employed in carrying his crop than in carrying away his seed-wheat and manure."

[1] Gratuities is the name for the donations given to brokers, owners, or agents of cargo, or any one with influence enough to control the preference for charters. The same thing applied to procuring berths for sailors is called "blood-money." The loading of many foreign vessels in our ports in preference to our own is due to this corrupt circumvention.

He thought our present commerce was, "in fact, of the same nature with that above described." The object of his cogitation was an argument for working up our cotton crop at home, and giving vessels as little to do as possible in carrying it abroad. Raw cotton to the value of $66,000,000, exported, might be made into cloth; and, if then exported, would bring $264,000,000. By this policy he would dethrone Great Britain, and make the United States "the great centre of wealth, commerce, civilization, and political as well as moral and intellectual power."

The occasion came when Mr. Meredith could have served the interests he was supposed to have in charge, but he knew it not. In 1849 the British Parliament removed its restrictions on foreign vessels engaged in the indirect trades; casting off then, for the first time, this part of their shipping protection, as the United States had done, conditionally, 21 years before, and which had, since 1826, induced a loss of 13.6 per cent. of import carriage, and 20.7 per cent. of export, and given it largely to British ships. What did Mr. Secretary do? He should have recommended to Congress the repeal of our act of May 24, 1828, and thus made an effort to protect the navigation that he had authority to represent. He was a protectionist, — what did he do? The act of 1828 required the President to issue his proclamation before its provisions could be enforced in favor of any foreign nation. Did Mr. Meredith wait for the President to act? Not he. There was a favor that could be done for British shipping, and he hastened to issue a circular to collectors,[1] letting down the bars for the flag that was then backed by the British treasury to displace our own. In the first year after this show of servility we lost 3.6 per cent. of import and 3.4 per cent. of export carriage, and, of course, the British gained it. Of such material have been some of the Secretaries of the Treasury Department.

Thomas Corwin, 1850–53, was another protectionist, whose mind was absorbed with the "home market," and could see no field for advancement on the sea. However, he made a few minor recommendations, which were creditable. He observed: —

[1] See Chap. VIII. ("Mr. Meredith's Circular").

"In order to remove every unnecessary restriction upon commerce, and render the transaction of business at the custom-houses simple and economical, I would respectfully recommend that all custom-house fees be abolished, as well those that are chargeable upon the registering, enrolling, and licensing of vessels, as these relating to the entry, warehousing, and transportation of merchandise. . . . If we would promote foreign commerce, and secure for our vessels their full share of the freighting of our own products, and those of other nations, we should be careful to remove every impediment, and extend every facility which affects this intercourse."

Mr. Corwin's theory was sound, but he had no practical knowledge of the shipping question, so could not see any obstacles not appearing on the books.

James Guthrie, 1854–56. It was the fortune of this Secretary to administer the law at the time when our tonnage in the foreign trade was at its highest pitch, though we were losing proportionate carriage all the time. It seems he did not know this fact, and in consequence his views were shuffled together. Concerning the protection of our marine, he remarked: —

"When our navigation laws were first enacted, in 1789, the tonnage of the United States was secured against the protecting navigation laws of other nations[1] by countervailing or protecting provisions. Such provisions were from time to time extended, so as to countervail the prohibitory enactments of commercial nations with which we had intercourse. These commercial restrictions have gradually yielded[2] to the more liberal principle of free trade in the transportation of freight and passengers, until in that business we have free trade with almost all the nations of the earth, only marred by the charge of light-money to our vessels where we charge none."

Here we meet a statement startling, if not astounding, to our intelligence. He says: —

"This removal of restrictions in our commercial intercourse with other nations in the carrying business has not been prejudicial to our foreign commercial marine."

In thirty years of "free trade," we had lost 16.9 per cent. of carriage in the import, and 18.7 per cent. in the export trade. Three of his predecessors had noted more or less of suffering and pinching in the shipping business. After recommending

[1] Just as it should be now.

[2] But other means have been taken to secure the same end. — AUTHOR.

the removal of the burden of foreign light-money, the Secretary continued: —

"The coasting trade of the United States has, from the beginning, been strictly reserved for vessels built within, and owned by citizens of, the United States, to the exclusion of foreign-built vessels. The American tonnage in foreign trade, and in the coasting, has been American-built, and has had the absolute protection, in the carrying-trade on our coast, and in our own waters. The protection given to our foreign commercial, and to our coasting marine, has secured a large and efficient body of skilled officers and sailors, at all times ready for the defense of our cities and coast, for repelling aggression on our commerce, and for manning our ships of war. In the protection given to our shipping interests, for the purpose of having at all times the power to repel foreign aggression and protect our coast and trade, there appears to have been but little division of sentiment from the earliest times to the present, whilst the yearly increase of our tonnage[1] proves the wisdom of our laws in this particular."

Howell Cobb, 1857–60, was a great advocate of commerce, but had not a word to say about navigation; and about commerce he was concerned only so far as to frame arguments for free trade. He left the cabinet to secede with his State.

Salmon P. Chase, 1861–64, gave no thought to anything so foreign as the ocean and its navigation.

Hugh McCulloch, 1865–68, could scent salt-water with pleasure and think a little about ships. He observed: —

"No single interest in the United States, fostered though it may be by legislation, can long prosper at the expense of another great interest. Nor can another great interest, nor can any imporant interests, be crushed by unwise or unequal laws, without other interests being thereby prejudiced. For illustration: The people of the United States are naturally a commercial and maritime people — fond of adventure, bold, enterprising, persistent. Now, the disagreeable fact must be admitted that, with unequaled facilities for obtaining the materials, and with acknowledged skill in shipbuilding — with thousands of miles of seacoast, indented with the finest harbors in the world — with surplus products that require in their exportation a large and increasing tonnage — we can neither profitably build ships nor successfully compete with English ships in the transportation of our own productions. Twenty years ago it was anticipated that ere this the United

[1] There has been no increase since the time of his remark.

States would be the first maritime power in the world.[1] Contrary to our anticipations, our foreign commerce has declined nearly 50 per cent. within the last six years."

This was the period of the war, and a godsend to England, of course. Our government gave no protection, as it had no naval strength to give it from. Then the currency situation, as our Secretary could have seen, injured foreign trade, while taxes prevented shipbuilding and ate up the substance of our commercial people. As soon as the war was over, why did not the Secretary advocate full protection for our commerce and navigation? Instead of so doing, he gave an account of the futility of compelling Spain to abandon her shipping protection, — a contemptible policy on our part. He said: —

"Our commercial relations with Spain and her colonies, under the acts of July 13, 1832, and June 30, 1834, particularly, so far as they relate to trade with Cuba and Porto Rico, have been many years the source of much perplexity, and have given rise to frequent discussions. The acts above cited were designed as retaliatory measures to induce by a sort of coercion a relaxation of the extreme protective system adopted by Spain in relation to her colonial trade. Not only have they entirely failed to produce the desired effect, but their operation has proved, on the contrary, positively injurious to our interest in every respect. Their effect in connection with Spanish exactions has been to drive the greater part of Cuban and Porto Rican trade from our markets to others, where the same policy does not prevail. The countervailing system thus brings no benefit to our shipping interests, and largely curtails our commerce, which, considering the proximity of these islands, should include the greater part of their foreign traffic. It is therefore worthy of grave consideration whether sound, enlightened policy does not dictate the repeal, at least, of the act of 1834."

The Secretary's sensible suggestion was duly acted upon.

George S. Boutwell, 1869–72, a statesman from a maritime State, was the first of a long line to manifest any breadth of intelligence on the shipping subject. He observed: —

"One of the most efficient means of strengthening the country in its financial relations with other countries is the development of our commercial marine. The returns show that a very large amount of the

[1] We should be satisfied, now, that it never can become such, under our present system of non-protection. — AUTHOR.

foreign trade is in English hands. We are not only thus dependent upon a rival country for the performance of the business which should be in the hands of our people, but our ability to maintain specie payments is materially diminished. If the entire foreign trade of the country, both of exports and imports, were carried on in American ships, the earnings would not be less than $75,000,000 a year. At present the freights of the foreign trade in American ships do not exceed $28,000,000. Were the trade exclusively in American hands a large part of this difference of $47,000,000 would be due to citizens of the United States, and payable in other countries. This amount would be thus added to our ability to pay for goods imported from those countries.

"I, therefore, deem it essential to our prosperity that the shipping interest of the country be fostered, not only as a nursery for seamen, but also as an essential agency in enabling the government to institute and maintain specie payments. It is an interest, also, which, in its development, is as important to the States and people remote from the seacoast, as it is to the maritime sections. Every addition to our facilities for the export of the products of the interior is as advantageous to the producers as to the merchants and shipbuilders of the coast."

Then was the time for action, but our stock of statesmanship was too short for the occasion. Then we should have repealed every free-trade and free-shipping statute in our law books, and gone back to the protective system of the fathers. Mr. Boutwell, however, did not believe in such a course, but advocated bounties of different sorts, the country then groaning under taxation. The case seems to have been one in which the operation was put off, because the surgeon failed in pluck.

William A. Richardson, 1873, sought to have the tonnage tax abolished, but failed. Said he: —

"A tonnage tax is now levied on all American sailing vessels engaged in the foreign trade, and on all vessels of other nationalities. It is not imposed upon American vessels engaged in the coasting trade. Steamships of foreign flags in some cases are subject to the tonnage tax; in others they are exempt by old treaty stipulations only recently carried into effect. But all American steam vessels arriving from foreign countries are subject to the tax. In consideration of the fact that this was entirely abolished on all vessels for more than thirty years, and only resorted to as a war measure in 1862, and that those engaged in the coasting trade were again relieved from

this burden by recent enactments, I recommend that this tax be wholly abolished."

A statement accompanied this report to the effect that materials of all kinds imported free of duty, for the building and repairing of vessels under the act of 1872, had amounted in value, the first year, to $95,211. It has never been so great at any time since, experience proving that it is more trouble, under the regulations, to secure the drawback on most items, than the saving is worth.

Benjamin H. Bristow, 1874–75, said nothing on navigation worth noting.

Lot M. Morrill, 1876, shed no light on the pursuits of the sea.

John Sherman, 1877–80, has the distinction of being the only protectionist Secretary of recent times to favor free-ship (or free-trade) legislation for the solution of the shipping problem. In his report for 1877 he said: —

"The preponderance of foreign tonnage over domestic, in carrying on the foreign commerce of the country, is certainly not in accordance with the national desire. Such an increase in our shipping as will restore this commerce to American citizens should, as far as possible, without burdening other industries, be encouraged by legislation. The increase of the means and appliances for transportation, whether by shipping or land carriage, is a tax upon the industries that produce the commodities to be conveyed. Subsidies drawn from the revenue in support of the transit industries are charges upon the productive industries, and can be discreetly granted only in the sure prospect of a large expansion in the market demand for the commodities to be transported by shipping or railroads, or where the vital necessities of the country require free and speedy communications."

The thought here expressed seems to be that American shipbuilding would burden the country, though why foreign shipbuilding would not be equally burdensome it is hard to see. If transportation is a tax, to whom should we pay it, — to our own people or to foreigners? A farmer's team and wagon is not a tax, but a means of production. So are means and appliances of transportation. A product for *sale* must be put into the market before it is fully produced. The engine in the steamship and the engine in the mill are equally machines for producing wealth. There is, of course, a transportation that

is not a branch of production, but it is not that of sending products to market, and not in question here. If our market for cotton is in Liverpool, the carriage thither is a part of its production there. The work of the ship in taking the cotton to its market is a tax on the product in exactly the same way as the hire of a team to haul it from the field to the railway station, and of the charges of the railway company for running it to the wharf where the ship received it. The country growing the cotton should furnish the team, the railway carriage, and the ship transportation. It is a poor planter that has to hire his team; usually a dependent country that does not own its railways; and a nation without wealth, enterprise, or public spirit that wholly employs foreign ships. The Secretary continued: —

"The high price in our depreciated paper money of the chief materials for shipbuilding has rendered us unable, since the war, to compete with other nations in this great industry. The demand for iron in building railroads, and the diversion of capital and labor from other industries to that has, however, at present largely ceased. The appreciation of our currency to nearly the gold standard, the rapid falling off in the demand for railroads, will tend to direct capital and labor to shipbuilding.[1] Every encouragement may, at least, be given to the increase of commerce in vessels of American ownership, that can be prudently afforded, by modifying existing law in those respects in which it is a burden upon such commerce."

Here we have it at last, — "free ships"! American ownership in vessels bought abroad, by a few trunk-line railroad corporations, and similar bodies of capitalists, seems to have been Mr. Sherman's reliance for rehabilitating our commerce and navigation. American shipbuilding was to be turned down and snowed under for the benefit of watered stock.

This idea, so essentially selfish, and so unpatriotic, too, has had a great attraction for economists. The singular thing about it is the plain disregard for the national interest and the rights of the people. It is for the union, independence, and defense of the nation that we must be a shipbuilding people and build our vessels of every sort. It seems hard for

[1] A practical mind could not entertain this fallacy. The capital and labor that builds railroads has no genius for shipbuilding, and never displayed any. — AUTHOR.

some of our best citizens to comprehend this truth. It is the right of every citizen, equally with corporations, to follow any lawful pursuit, and to receive therein governmental protection. Shipbuilding is not a burden upon shipowning. The cause of failure in shipowning is the want of protection, not the higher price of vessels. The true burden upon shipowning is the refusal of the government to protect it. The remedy for the decay of our navigation and lack of tonnage is not, logically, the ruin of our shipbuilding, but the performance of government duty. All the industries of the interior, even to the vessel interest on lakes, rivers, and canals, are protected. Now, why cannot the industries of the maritime States be protected? Why cannot shipowning be protected on the ocean, as on the lakes, rivers, and canals? For a protectionist to propose giving up an industry because we "can't compete" — well, that is inconsistency and absurdity.

Secretary Sherman did not content himself with a single piece of free-trade advice to Congress. Here is another, of date December 1, 1879: —

"It is neither to the advantage nor the honor of the country that so immense a proportion of its foreign carrying-trade has passed to other nations (now but 23 per cent. in our vessels).

"The great decline in our tonnage, as is well known, was due to the war; and soon after its close it was proposed to facilitate the restoration to our merchant marine of vessels that had been transferred to foreign flags. But the effort at restoration failed, and a special prohibition against the return of such vessels was embodied in the statutes.[1] It may well be questioned whether the severity of the existing statute might not properly be relaxed after the lapse of so long a time, during which the privilege of registry has been denied to this class of vessels, and since the grounds for denial have, in a measure, lost their original force.[2]

"It has always been the policy of the law to restrict the privileges of American registry to vessels built in this country. The object was to further the shipbuilding and naval interests of the country; and

[1] This was done by the voice of interior senators, whose own property was well protected from the enemy. — AUTHOR.

[2] This was not a practical suggestion. The vessels sold and transferred to foreign flags were then from 20 to 40 years old, with few in existence, and probably not a dollar then owned in a single one of them by a citizen of the United States. — AUTHOR.

this policy was so successful as to advance the United States to the second rank among nations, as respects tonnage and the number of its ships. While wood was the article mainly used in the construction of ships, we had the advantage over foreign nations in the cost of material. Our shipbuilders could not only supply vessels for domestic commerce, but could successfully compete in the carrying-trade of the world. The use of iron in shipbuilding, in place of wood, is, however, steadily increasing, and in the cost of iron, and in the price of labor, other commercial nations have the advantage. It is a grave question of public policy whether the period has not arrived when the limited right of purchase, as under the English statutes, should be extended to vessels as well as to other commodities, and when admission to American registry upon the payment of duties should be allowed them upon importation. The recovery of our old position in the carrying-trade will more than counterbalance any disadvantage likely to ensue upon the right of purchase, while a moderate duty on ships imported will enable our shipbuilders to compete successfully in the construction of iron vessels of the largest class. The proper policy to be pursued is difficult to determine, but the great importance of considering the subject is respectfully submitted to the attention of Congress."

In this effusion the Secretary shifts his ground, but does not improve his position. The main, if not the only, argument used for sacrificing American shipbuilding, and becoming dependent on foreign, has been *cost*. Logically, the foreign ship must be a "free" ship. Duties added to cost abroad defeats a measure whose theory of operation is cheapness. If the duty is to protect the American shipbuilder fully, so that he can compete successfully, what advantage will accrue to shipowners from going abroad for vessels?

The mistake is in proposing legislation for shipowners as a *class*, instead of looking to the good and welfare of the country. The mistake is in temporizing. Granted, for the sake of the argument and that only, that American vessels cost more to build; do they not also cost more to *run?* And is not the cost of running vessels, in the course of their lifetime, from *two* to *ten* times the cost of their building? Import your vessels, break up shipbuilding, and then what? What next, Mr. Secretary, will you do for shipowners? The next measure, if one could be contrived on the same line, would be, — well, could it be any other than to abandon shipowning?

As for the "unlimited right of purchase" of vessels, as

against the national interest, it does not, and never did exist. It is an imaginary right, no better, if realized on a general scale against sound public policy, than the old, the once recognized right of piracy. *Vessels are different from other commodities.* As we have elsewhere shown, shipbuilding is a military art. The man who would destroy his country's power in this art has no claim to his liberty to do so. Nay, the man who refuses to build it up, — is he patriotic? It is for the national interest and safety, and not for shipowners, money-makers, or rivals, to say that our nation shall be stripped of its shipbuilding power, and that shipowning shall not receive such protection as other American industries enjoy, without which it cannot succeed, as a pursuit of the *people*, no matter where vessels may be obtained.

But the officer whose duty is supposed to include the charge of shipbuilding, as well as navigation and commerce, had to have a third throw at the American shipyard, shipbuilders then being the only force in the field endeavoring to "recover our old position." In his last report, December, 1880, noting the continued decline of American carriage, Secretary Sherman said: —

"The foreign carrying-trade in American bottoms is more than 50 per cent. less than it has been, or than it might be, and if it is desirable to save to the country the annual freightage on merchandise of the value of $1,200,000,000, the only course to reach that result would seem to be to increase our registered shipping. But while the ordinary demand for increased tonnage causes no annual increase in the building of vessels, the only method available, as a measure of public policy, of effecting such an increase, is either to allow American citizens the privilege of purchasing vessels of foreign build, to give a bounty on home-built vessels, or to await the increase of American-built vessels and their tardy substitution in the foreign trade for those of other nationalities. Doubtless the number of vessels of home-build will be adequate in time to take up the freightage lost to American bottoms in consequence of the war of the rebellion. At present, however, the demand for vessels to carry on our immense import and export trade does not seem to so stimulate the shipbuilding industry as to prevent an annual decrease in the number of ships built. The present facilities for freighting in foreign vessels appears to be a greater discouragement to that industry than would be the privilege of purchasing such vessels."

What appears a greater discouragement to the average shipping man is the want of information that has ruled official opinion on the shipping subject. Before the war, from 1826 to 1861, we had lost of import carriage 35 per cent., and of export carriage 17.5 per cent., of the total business. The average annual loss of carriage for the period, imports and exports taken together, had been three quarters of one per cent. At that rate, by 1880, had there not been a war of rebellion, we were bound to have lost an average of 40.5 per cent. of total business, making us entitled to 52 per cent. only; whereas in 1880 we had an average of 17.18 per cent., showing a loss by the war of 34.15. The unprotection of shipowning had been about 78 per cent. as destructive as the war, yet it was altogether ignored by Secretary Sherman.

It was doubtless to avoid giving a bounty on home-built vessels that this statesman, like others, proposed the purchase of foreign ships. Now, full information on the obstacles to American ownership of vessels disposes quickly of this quack remedy. It would be about as effective as reducing the price of board to cure consumption. If iron-making, wool-growing, sugar-production, or cotton-manufacturing, having no protection from the tariff, had been for many years declining and dying out, there would be no mistake in the diagnosis, nor error in the remedy of Secretary Sherman. The disease would be designated as *free trade*, and the prescription given, full protection.

Charles J. Folger, 1881–83, in two reports called attention to the fact that our proportion of carriage in the foreign trade was only 16 per cent. In his third report, while he seemed at a loss for a remedy, and had but a dim notion of the disease, he made one suggestion, which has led to the writing of this book. He remarked: —

"It will be seen from the statistical returns herein presented that for many years past, of the exports and imports of merchandise, no greater part than an average of 16 per cent. has been borne in American vessels. This is in a measure due to the facility and security offered for investments of capital in domestic and inland commerce, and particularly in land transportation by railroads.[1] The

[1] This is mistaking the effects of non-protecting our shipowning for the cause of its ruin. It was the capital saved from the wreck of the business that went West to help build up the country.

decline in the domestic tonnage of the Mississippi River and its tributaries may largely be set to this account.[1]

"It is not an agreeable reflection that the freightage on 84 per cent. of our imports and exports should be paid to alien shipowners. Can this be helped by the removal of burdens laid by law? Of those now directly imposed by statutes on our vessels sailing foreign, there remain, besides clearance, entry, and admeasurement fees, only the tax of 30 cents per ton, payable once a year on entry from a foreign port. Vessels in the domestic trade have for many years been exempted from tonnage tax. The income from this tax for the last fiscal year was $1,320,591. Of this amount $1,057.962 were paid by foreign vessels. Even though so large a portion is thus paid, it is well deserving of consideration whether it is not advisable to return to the policy adopted in 1831, and entirely abolish the tax. It presses more heavily than any other upon our foreign-going shipping."

The Secretary's proposal was to give up to foreigners 80 per cent. of the tonnage tax to save our vessels paying 20 per cent. A better proposition was made by a shipping convention held at Boston, October, 1880, to wit: —

(8) "Resolved that this body recommend to the Senate and House of Representatives the passage of an act to set apart all custom-house dues, including tonnage-tax collected from the vessels of all nations, including our own, in all ports of the United States, as a special fund which shall be appropriated exclusively to pay the bounty to American shipowners, as recommended in a previous resolution."

The bounty proposed was to be paid upon tonnage employed. The Secretary continued: —

"The burdens imposed by the States in the way of pilotage are considerable. Of this subject Congress has never taken control. The charges on shipping on account of pilotage vary with every port. The extent of the embarrassments arising to commerce from this cause can be fully understood and remedied only when Congress shall take entire control of the subject; as, it is believed, it has the power to do.

"Against the abolition of entrance, clearance, and admeasurement fees, there exists the objection that a portion of the wages of customs officers are at present paid from them, and their abolition would entail

[1] There is no analogy in these cases. The foreign traffic continued to be done by vessels, American giving way to foreign. The domestic traffic done by vessels gave way to railroads, but continued to be done by Americans. There has been no loss to the country. — AUTHOR.

the payment of fixed salaries in the place of payment by perquisites. If my recommendation in another part of this report for a discontinuance of these fees and for payment by pre-fixed salaries be adopted, this objection will cease.

"The removal of these burdens will tend in some degree to an increase in our foreign-going shipping."

The conclusion of the Secretary's remarks on this topic will be reserved for consideration in the following chapter.

Hugh McCulloch, 1884, also served as Secretary of the Treasury, 1865–68. He seems to have improved the interval in studying the shipping question, and arrived at the truth in many things. He observed: —

"In direct connection with the condition of our foreign trade is the condition of our merchant service. The causes of the decline of our shipping are so well understood that any remarks on this point are quite unnecessary."

The Secretary's view was that the war, conjointly with the advantage of England in the substitution of iron for wooden vessels, and of steam for sail, caused our shipping decline. He is credited with this declaration: —

"The deadliest blow to the shipping of the United States was in the substitution of iron for wood in the construction of ships."

If on our guard, this blow could not have hurt. But we had given up defense. Mr. McCulloch's sentence would show a better understanding of the subject if it read: The deadliest blow to the shipping of the United States was in the substitution of a certainty for an uncertainty, — of changing from protection, by discriminative duties on imports and tonnage, to free-freighting under one-sided reciprocity acts and treaties with crafty rivals; of putting it into the power of associations of merchants, shipowners, and underwriters of England to set up and enforce upon our vessels unjust discriminations in the inspection and classification of hulls, and the loading and insurance of cargoes, against which only government protection can avail; in short, of abdicating national control of our commerce and navigation, practically giving it up to any nation whose subsidies, subventions, bounties, or insurance managers shall take it captive.

The Secretary continued: —

"The humiliating fact stares us in the face, that while the United States not many years ago led all nations in shipbuilding, and was second only to Great Britain in ocean tonnage, it has ceased to be recognized as a maritime power; that nearly all of our agricultural productions and manufactured goods which find a market in Europe or South America, and the articles received in exchange for them, are carried in foreign ships; that the many thousands of Americans who annually visit Europe on business or for pleasure go and come in European steamers; that large foreign steamship lines are, in fact, supported by the people of the United States. All this is not only humiliating to our national pride, but it stands in the way of the improvement of our foreign trade. In his [my] report to Congress, December 3, 1866, the Secretary used the following language: —

"'It is a well-established fact, that the people who build ships navigate them, and that a nation which ceases to build ships ceases, of consequence, to be a commercial and maritime nation. Unless, therefore, the causes which prevent the building of ships in the United States shall cease, the foreign carrying-trade even of its own productions must be yielded to other nations. To this humiliation and loss the people of the United States ought not to be subjected. If other branches of industry are to prosper, if agriculture is to be profitable, and manufactures are to be extended, the commerce of the country must be restored, sustained, and increased. The United States will not be a first-class power among the nations, nor will her other industrial interests continue long to prosper as they ought, if her commerce shall be permitted to languish.'

"If this language was true then, it is certainly true now. Eighteen years have passed since it was uttered. There has been in the mean time an enormous increase of our population and national wealth, but no improvement whatever in our shipping interest. Not only does this important interest remain well-nigh lifeless, but the difficulties in the way of restoring its vitality have been greatly increased by the immense capital since then invested by foreign steamship companies, which control and practically monopolize the carrying-trade between this and other countries, and these difficulties will become every year more and more formidable until remedial measures are adopted by Congress.

"When the nature of the obstructions in the way of a revival of our shipping is fully investigated, the cost of building ships will not, I think, be found to be a serious one. I am convinced, that if the duties upon the foreign materials used in the construction and outfit of iron ships were removed, they could be built and fitted for sea as cheaply in the United States as in Scotland. Manual labor, it is true, is much cheaper in Scotland, but it is less efficient. Besides, most of

the work in iron-ship building is done by machinery, in the invention and use of which Americans excel. Scores of things are done in Glasgow shipyards by hand, which, in the United States, would be done by machinery."

It is wonderful how our statesmen have been led astray by cost comparisons, that amount to a drop in the bucket of shipping economy. A fox-hunter knows that every hole in the hills will not yield a fox, but the reader of fox stories thinks differently. Given a hole, there is a burrow, and, of course, a fox. So it is, given a difference in the cost of vessels, and the *dear* cannot compete with the "cheap." But England did compete with us, with iron vessels, too, when they cost from 50 to 100 per cent. more than ours. And the ships built in cities like New York, Philadelphia, and Boston, costing from 15 to 30 per cent. more than those built in country towns in Maine, competed with these easily enough. In actual business, new vessels, worth a quarter or a half more than old ones, compete with one another. So the fox is not in that old hole of cost. But we will hear the Secretary out: —

"Fifty years ago the United States excelled all nations in shipbuilding. Not only were we able to supply the home demand, but large numbers of ships were built for foreigners in the shipyards which lined the coast from Delaware Bay to Eastport. Our superiority in shipbuilding then was owing to the facts that our forests abounded in timber of the best qualities, and that our carpenters were skillful in the use of it (1). Since then iron has been substituted for wood in the construction of steamships (2). But are not our iron and coal-fields as productive and accessible as those of any other country? Are our machinists less skilled in the use of machinery than were our ship-carpenters in the use of the axe and saw? As far as materials for building ships and skill in the art are regarded, Great Britain has no advantage over us; on the contrary, is not the advantage on our side? Apprehended difficulties are magnified until they are encountered. When steel rails were in demand beyond the home supply at $75 per ton, and many were imported, subject to a duty of $28 per ton, who would have dared to express the opinion that in four years they could be made in this country at less than $30 per ton? — With a profit to the makers?" (3)

(1) Our superiority then was owing to the system of protection, which built up our wooden marine, and developed the skill of our mechanics. We have yet the woods and the workmen, but lack the protection in shipowning.

(2) Substituted by whom, and wherefore? By the British, because their timber gave out. Dependence on importations of timber or ships was impolitic; and, without materials from her own soil, sooner or later, England would cease to be a shipbuilding people. Why should we follow England in a change of ship-material? Her reasons did not exist with us. Why did she not change her material without her Lloyds disturbing us? Because, as she was ready, and we were not, it would benefit herself, and damage us, to handicap our shipping. Holding the cards, she could play them to beat the world; therefore she did it.

(3) This result was accomplished by protection, and so claimed to have been by protectionists. When Congress will do for shipowning, for long years the dupe of politics and victim to free trade, what it finds no difficulty in doing for iron-making, then we will have a merchant-marine, as we now have steel rails. Then, the question of shipbuilding will be left to the shipbuilders to answer.

The Secretary continues: —

"The obstacles in the way of a restoration of our foreign shipping will not, I conceive, be found in the cost of ships, which are to be built in the United States, but in the absence of demand for them. If our navigation laws were so modified that American registers could be granted to foreign-built ships for foreign trade there would be little, if any, improvement in our shipping interest. Such modification some years ago might have done something to prevent decline; it would now be insufficient to restore. The great, profitable carrying-trade between the United States and Europe has been permitted to pass into the hands of the shipowners of foreign nations. So complete is their control of it, so large is the capital invested in it, and so sharp and persistent would be the contest if we should attempt, without government aid, to share it, that our capitalists would not compete for it. There is, in my opinion, no prospect whatever that the United States will ever share to a considerable extent in the foreign carrying-trade without government aid.

"It is for Congress to determine whether this aid shall be granted, or whether our foreign shipping interest shall remain in its present death-like condition. The let-alone policy has been tried for many years, during which our ships have been swept from the ocean, and we pay every year many millions of dollars to foreign shipowners for freights and fares. Ought this condition of things to be continued?

"Entertaining these views, I do not hesitate to express the opinion —

"First. — That without government aid to United States steamship lines the foreign carrying-trade will remain in the hands of foreigners.

"Second. — That we ought to have an interest in the business which we create, and as the restoration of our shipping interest is important, if not essential, to the extension of our foreign trade, subsidies in the form of liberal payments for the transportation of the mails, or in some other form, should be offered as an inducement to investments of capital in steamships.

"The amount of necessary aid would be insignificant in comparison with what has been granted to manufacturers by protective duties, and nothing would be paid until the services were rendered. If the subject were investigated, it would be found that all the European steamship lines that led the way in the great traffic by steam power have received government aid. It is admitted that all protective duties and subsidies are inconsistent with the teachings of political economy, but, true as these teachings may be in the abstract, they are disregarded by all nations when they stand in the way of national welfare. No rules are equally applicable to all nations, nor to the same nation in the different stages of its growth. Political economy is not one of the exact sciences. It is rather adaptive than exact, and all nations so regard it.

"Protective duties were undoubtedly needed to induce investment in cotton, iron, and woolen mills, and what not, in the various lines of our manufacturing industry. Whether or not protection has been extended too long or too far, and to what extent it now stands in the way of other great interests, are questions that can only be settled by full investigation. Government aid is now needed to induce investment in shipping. To what extent and for what period this aid should be granted must be settled in the same way."

Daniel Manning, 1885–86, in his first report, said not a word about navigation; in his second, he quoted the plank of his platform, which recited that "under Democratic rule and policy our marine was fast overtaking that of Great Britain," etc., and in which it is charged that the tariff is the raw-head and bloody-bones of our shipping ruin. Our shipping has been under "Democratic policy" all the time since the inauguration of Andrew Jackson, to say the least; and four years of "Democratic rule," under Mr. Cleveland, left it worse than he found it.

Charles S. Fairchild, 1887–88, said nothing of navigation in his first report; in the second, he remarked: —

"It is useless to expect any material increase in the building of iron and steel steam vessels in this country for the foreign trade under present conditions. Were all the restrictions of the tariff removed, the business would still be hampered by the higher cost of the complete vessel, as compared with the expense of a similar ship built upon the Clyde or at Belfast."

Thus, Congress was to understand, free ship-materials were not worth having, so long as the labor in building a ship costs more here than abroad. Interpreted, this means "free ships," and no shipbuilding in the United States; and agrees with the prudence of the thoughtful mother, who charged her boys not to go near the water till they had learned to swim.

Remarking further, that the burdens upon the coasting trade imposed by federal legislation have been nearly removed, the Secretary recommended the abolition of compulsory pilotage. As this would be federal legislation for the overthrow of "Democratic rule and policy," it is strange that it was suggested.

William Windom, 1889–90, gave more and wiser thought to the shipping question than any other secretary. The selection of a commissioner of navigation being left to him, the writer can attest the care which he exercised to choose a candidate having a practical knowledge of shipbuilding and navigation, who had studied and discovered the true causes of our shipping decline, knew the difficulties to be encountered, and could indicate the obstacles to be surmounted in the work of "rehabilitation," which he rightly judged could be assisted greatly by his department. In 1889 Secretary Windom made a very full report on shipping matters. He recommended first, the discontinuance of bonds as a basis for the issuing of marine documents. Second, an amendment of the tonnage-tax law so as to do away with its reciprocity feature, which is of advantage to foreign vessels only. Third, additional legislation in regard to signals for ships at sea, on pilotage, and like subjects. On the shipping question he said: —

"It is but a few years since we stood first among the nations in shipbuilding, and were excelled only by Great Britain in the amount of ocean tonnage. Now, so far as foreign trade is concerned, our shipyards are comparatively silent, and our flag has almost disappeared from the high seas. Once 75 per cent. of our tonnage was carried in

our ships ; [1] now 87 per cent. is carried in foreign bottoms. Once our ocean commerce enriched our own countrymen ; now our immense tonnage of exports and imports gives employment, mainly, to alien labor ; and alien capital levies upon our people an annual tribute estimated at $150,000,000 for freights and fares. Nor is this tribute the only, or even the worst, feature of the case, for our farmers and mechanics are practically excluded from the markets of the world, except as they may be reached by circuitous routes prescribed for their own advantage and convenience by our great competitors in these markets. An overwhelming public sentiment demands that this humiliation and loss shall cease. If our industrial interests are to prosper, if our commerce is to be sustained, extended, and increased, we must cease to be dependent upon any other nation or people for access to foreign markets.

" Doubtless there are serious obstacles in the way, and they are greater now than they were a few years ago, on account of the immense capital invested by foreign steamship companies, with which we shall have to compete. These obstacles will constantly increase, for every year adds largely to the capital thus invested. Whatever is to be done must be done promptly. We have tried the do-nothing policy long enough. Its results are before us, and they are unsatisfactory. Shall we accept as inevitable our present humiliating and unprofitable position, or shall we use means at command to regain our lost power and prestige on the ocean ? Shall we give that protection and encouragement to our shipping interests that other nations give to theirs, and which we freely give to all our other great interests ? Or shall we, by continued neglect, suffer them to be utterly destroyed ?

" The lessons taught by the founders of the government on this subject may be read, just now, with great profit. The second act passed by the First Congress, July 4, 1789, was for the protection of American shipping, by the imposition of a discriminating duty of more than 100 per cent. on Asiatic trade, notably on teas brought in foreign vessels. The third act passed by that Congress, July 20, 1789, imposed discriminating tonnage duties on foreign vessels entering our ports as follows : —

American vessels, per ton	6 cents.
American-built vessels belonging to foreigners .	30 cents.
All other vessels	50 cents.

The same Congress on the 1st of September, 1789, prohibited any but American vessels from wearing the American flag.

" The men who had achieved the independence of the republic left no doubt of their purpose to protect its interests, on the water, as well as on the land. So great was the development of our shipbuilding

[1] 92.3 per cent., in 1826, was high-water mark. — AUTHOR.

and shipping interests, under the fostering influence of these acts, that we sold ships amounting to hundreds of thousands of tons to foreigners, and our merchant marine soon became the pride of every citizen, and the envy of the world.

"Voicing the national sentiment in 1825, Daniel Webster said: 'We have a commerce which leaves no sea unexplored, navies which take no law from superior force.' How like bitter irony these words would sound in 1889. The brilliancy of our achievements on the ocean begat over-confidence, and listening to the voice of free trade, Congress on the 24th of May, 1828, passed an act withdrawing all protection from our shipping interest, and opening our ports to the ships of all nations upon the same terms as to our own. Notwithstanding this, our merchant marine continued to be prosperous so long as wooden vessels were the only vehicles of commerce,[1] and other nations refrained from paying heavy subsidies to their ships. But where iron steamers took the place of wooden sail vessels, and European governments began to pour their contributions into the treasuries of their steamship companies, the decadence of American shipping began and has continued ever since. No other result was possible under the circumstances. When we opened our ports to the vessels of the world, upon the broadest principles of equality and free trade, other nations seized the advantages thus offered, and at once began the system of liberal subsidies, while this nation left her citizens to compete unaided against foreign shipowners, backed by the power and financial aid of their governments. The total amount which has thus been contributed to aid in sweeping our commerce from the ocean is not accurately known, but the following conservative statement will give some idea of what our people have had to contend with, in their heroic but vain efforts to maintain a respectable merchant marine.

"From 1830 to 1885, Great Britain paid out of her treasury to steamship companies for mail contracts and subsidies over $250,000,000, and since 1885 she has paid annually an average of $3,750,000.

"The Italian government pays an annual subsidy of $1,570,000.

"France pays a graduated bounty for construction of vessels, from $2 to $12 per ton, and also a bounty per mile run. The sums asked for in the French budgets of 1888 and 1889, under these heads, amounted to above $1,650,000; the annual outlay from 1881 to 1886 is stated at above $3,500,000.[2]

[1] This common error is fallen into from crediting the elusive statements of British writers. Wooden vessels would have remained prosperous but for the war waged on them by the British Lloyds, in the interest of British built and owned shipping. — AUTHOR.

[2] This was for the marine in general. France pays, in addition, subsidies for postal service. — AUTHOR.

"Germany contributes largely to the support of her steamships. Nearly a $1,000,000 a year goes to a single line, which has supplanted an unsubsidized American line, formerly running between New York and Bremen.

"Spain pays a bounty of $6 on the tonnage built in that country, in accordance with the established regulations, and provides for a rebate of duties on articles imported for the construction of vessels. Her annual compensation for ocean mails is said to be over $1,000,000.

"The United States alone, of the great commercial nations, while encouraging railroads by liberal land grants and subsidies, and protecting her coastwise and internal commerce, and all her home industries, has utterly neglected and abandoned her great foreign maritime interests, even declining to pay fair rates for services rendered by American steamers, although Congress had appropriated money for the purpose.[1]

"American merchants, shipbuilders, and shipowners ask no special advantages. Give them an equal chance, and they will hold their own against all competitors. But they cannot be expected to maintain the unequal contest against foreign capital, backed by foreign treasuries. Some of our broad-minded and patriotic citizens are still struggling to maintain a few lines by which direct communication is kept open, notably with South America, the West Indies, China, and Japan. The line to Brazil has to contend with the ships of England, Germany, Spain, and Italy, all of which are heavily subsidized for the purpose of extending the commerce of their respective countries. The lines to the West Indies come in direct competition with Spanish ships running between Havana, New York, Boston, and Quebec, and receiving governmental bounties amounting to $20,307 per round trip.

"American vessels running between San Francisco and Asiatic ports, and receiving mail compensation of only $14,446 a year, have to compete with the subsidized ships of England and other countries, and especially with the new line recently established for the express purpose of preying upon our commerce, both on land and sea. This latest and boldest attack upon our transportation interest is backed by subsidies of $300,000 per annum on the line between Port Moody, B. C., and China and Japan, and $500,000 per annum on the Atlantic line between Liverpool and St. John, N. B. The railroad, which forms the connecting link between these two steamer lines, and thus gives a through route from Liverpool to China, has been aided to the extent of $165,548,000, as stated in the annual report of the Canadian Pacific Railway Co.

"During the last fiscal year we paid to foreign steamers for carrying our mails $396,584, and to our own steamers only $109,828.

[1] This was done by Postmaster-General Vilas, 1886. — AUTHOR.

"Can there be any doubt how these unequal contests will end, if our government maintains its position of supine indifference?

"The evil and its cause are both apparent. What is the remedy? It cannot be found in a reënactment of the legislation of 1789, because treaties stand in the way, and it would not now be expedient, even if we had no treaties on the subject.[1]

"Granting American registers to foreign-built ships for foreign trade would have but little effect, and besides, it would not be in harmony with the principle of protection to American industries.

"The difficulty is not so much in the cost of building ships as in running them in competition with cheap foreign labor, supplemented by immense foreign bounties. So far as materials for shipbuilding are concerned, no nation has any natural advantages over us. Our iron, coal, and lumber are as cheap, abundant, and accessible as in any other country. Our mechanics are unsurpassed in skill, and the matchless genius of our inventors is the admiration of the world. If it costs somewhat more to build a ship in this country than in Europe, because American labor is better paid, fed, housed, and clothed, it is a cause for rejoicing rather than regret. If shipowning will not command the capital of our people as other industries do, it is because that business, being wholly unprotected, has gone into foreign hands, while the beneficent policy of protection has been thrown around our other industries. The same policy wisely applied to the shipping interest would produce like results as in our manufacturing industries. This statement is illustrated and confirmed by our internal and coastwise trade, which is thoroughly protected, and hence is in a most prosperous and satisfactory condition. While the number of vessels engaged in this trade has rapidly increased, the cost of transportation has decreased until our lake, river, and coastwise commerce is conducted as cheaply as like commerce in any part of the world.

"The causes of prosperity in our domestic shipping interests, and the causes which have brought our foreign merchant marine to its present deplorable and humiliating condition, clearly indicate the remedy necessary for the restoration of the latter. Firmly convinced that American steamship builders and owners cannot, unaided, compete with the governments of Europe; that without proper aid and encouragement from the United States we shall not only fail to regain our lost foreign carrying-trade, but even to retain much longer the small remnant that remains; and that the restoration of our marine is essential to the extension of our foreign trade, I do not hesitate to recommend that liberal and judicious aid and encouragement be given for the construction of steam merchant vessels suitable for use as

[1] The author thinks this is an open question.

cruisers and transports in time of war, that fair and liberal rates be paid to American steamers for transportation of mails to foreign countries, and that special aid, either in the form of mail pay or for mileage run, be made for the establishment of direct connection by American steamer lines with Mexico, Central and South America, and with China and Japan."

As an argument in support of the true remedy for the evils so ably indicated, this report of Mr. Windom is clear and cogent to a degree. Strangely enough, however, the recommendations made were partial and incomplete. But little more than the establishment of postal steamer lines was contemplated. The special aid for regular steam freighting service to South American and Asiatic countries was the only additional proposal. The aid to be given for the construction of steamers suitable for cruisers could apply only to the mail lines. Taken as a whole, it was a proposition to abandon the greater part of the field of ocean transportation, and to recover no portion that we have lost, except a few mail routes. Sail was abandoned altogether. The protection proposed was of a discriminative sort, limited by geography and confined to class. The argument was for full protection, the advice was for *partial*. Why relinquish any part of the field? Why abandon sail? Why should Congress assume to influence and direct the style of vessel that American shipowners shall use? The carriage of our foreign commerce last year was 30 per cent. in sail, and 70 per cent. in steam. Sail affords the cheaper transportation, and in many trades will be easier sustained than steam. Our rivals use both methods of propulsion, and are we to use but one?

The only explanation of the Secretary's course is that he was not at liberty in his report to make his recommendations entirely logical. His concluding words were these: —

"Persistent efforts have been made, from time to time, to break down the safeguards thrown around our domestic commerce, and expose it to the system of free trade, which has wrought such sweeping destruction in our foreign shipping interests. In the light of experience it is difficult to understand how any one, who is not more interested in foreign prosperity than in our own, can desire to see this protection withdrawn."

In his report for 1890, after presenting a table of propor-

tionate carriage in the foreign trade, Secretary Windom thus briefly disposed of the shipping subject: —

"It is impossible to present a stronger argument than is contained in the above figures for vigorous and efficient measures in behalf of our rapidly vanishing foreign merchant marine. They show that the relative decline in our foreign carrying-trade has been constant and alarming.[1] This decline has averaged $1\frac{3}{4}$ per cent. per annum since 1857, until in 1890 the percentage of imports and exports carried in American vessels was less than in any year since the formation of the government. These figures appeal alike to our national pride and our national interests. The folly and the danger of depending upon our competitors for the means of access to foreign markets need not be stated. The humiliation of witnessing the disappearance of our flag from the high seas without one effort to restore it to its former proud position cannot be expressed. Surely no subject is of greater importance than the enlargement of our foreign markets, and nothing will contribute more to that end than the command of ample facilities for reaching them. Aid to our merchant marine is not aid to a class,[2] but to the farmer, the manufacturer, and the merchant, as well as the shipowner. No interest is more thoroughly interwoven with all others, or more worthy of the fostering care and protection of the nation. None has been so vigorously and effectively assailed by foreign governments, nor so persistently ignored and neglected by our own. The reasons for our present humiliating position are well known. The remedy is plain, and easily within our power. In the Secretary's report for 1889 are stated somewhat in detail the causes of present conditions, and the practical remedy for them. These recommendations are now renewed and respectfully urged upon the prompt and favorable consideration of Congress." [3]

Charles Foster, 1891–92, has manifested no sympathy with the cause of the American ship. In his report for 1891 he said:

"The appropriation by the last Congress of a sum to compensate American-built steamships for carrying the mails will greatly encourage the building of ships in the United States of the class to which the benefits of the act are limited, namely, those of a speed in many cases of more than twenty statute miles an hour, for thousands of miles, with-

[1] Since 1830.

[2] If partial, and not general, it is to a class. If to steam, and not to sail, it is to a class. — AUTHOR.

[3] For a speech made in support of the Tonnage Bill, shortly after making this report, see Chapter XXVI.

out coaling; and will tend to the recovery of our share of the ocean carrying-trade of the world, in competition with the steamships of Great Britain, France, and Germany."

If an enemy had written this to excite ridicule, we could scarcely take offense, since the passage of the bill referred to has encouraged little more, so far, than a laugh at our expense, by the subsidized foreign-steamship corporations and their friends. The compensation proposed in the Senate Mail-Subsidy Bill was reduced one third in the House, that the measure might be almost worthless, and then substituted by the opposition for the tonnage bill, which would have been effective. In an oration, July 4, 1892, Senator Frye declared: "The reduced payments so discouraged capital that no contracts could be made for these two classes of vessels. Eight contracts were entered into by the Postmaster-General under the law, which, if executed, will require fifteen ships." To talk about this little fleet "recovering our share of the ocean carrying-trade" is the veriest nonsense. The Secretary adds: —

"Those nations, together with Spain and Italy, have subsidized their lines of steam vessels in one form or another, and they carry most of our exports, which are usually products of a bulky nature, and constitute a very large and profitable portion of the commerce of the world."

One would scarcely think the Secretary would content himself with such half truths as that five nations have subsidized their steam fleets. He continues: —

"Our annual customs receipts scarcely exceed the money paid annually to the owners of foreign vessels for the ocean transportation of our own people and merchandise, most of which large sum of about $200,000,000 would be paid to our own vessel-owners, under the fostering influence of friendly legislation.[1]

"Through treaties and regulations made since 1827 (?), mostly prior to the late war, the early discriminations of the government in favor of American shipping in the foreign trade have been removed, and the vessels of other nations are now admitted in the United States, in some cases, on more favorable terms than our own,[2] and in nearly all instances on conditions as favorable. The foreign competition, thus stimulated, together with the injurious effects of the war upon our ocean carrying-trade, have almost destroyed our foreign shipping inter-

[1] One might suppose he would recommend it.

[2] Notably, all foreign vessels from Dutch and German ports. — AUTHOR.

ests. This, fortunately, is not the case in respect to our coasting trade, which is now the largest of any civilized (*sic*) country, and gives us a fleet of vast benefit to the nation in time of peace, and capable of incalculable service in time of war."

The Secretary finds no fault with the "treaties and regulations" by which the protection, styled by him "discriminations of the government," was removed, and ruin to our marine introduced and effected. Nor does it excite his love of fair play, that the shipping of all nations, coming from Dutch and German ports, enter ours free of tonnage taxes, but our vessels pay them. That is a discrimination that may stand, as it hurts nobody but ourselves. Its abolition is not recommended. In fact, his cold account of our shipping loss and humiliation is unrelieved by any effort, intellectual or moral, to repair the loss or restore our prestige. His mind seems at ease about our foreign shipping interests, since "fortunately, our coasting trade is the largest of any civilized country," and "capable of incalculable service in time of war." But, reflecting that the enemy might appear in Congress, and there destroy the coasting trade, as once before he presented himself and applied an extinguisher to the marine in foreign trade, the Secretary added: —

"There should be no interference with the legal barriers that now preserve the coasting trade to citizens of the United States, whether upon the lakes, the rivers, or the ocean."

Even in this declaration there is nothing to show that the Secretary is not of ex-Secretary Sherman's faith, that what is wanted is American ownership, and cheap vessels built abroad. The Secretary is doubtless sincere in his solicitude for the domestic, but particularly the *lake* trade, as he offers several reasons therefor: —

"The late census shows that in addition to the large tonnage of documented vessels mentioned in the statistics above stated of vessels in this trade, there is a very considerable number of inferior undocumented craft employed upon the rivers and elsewhere, consisting of unrigged barges, flat-boats, etc. Upon the Ohio River and its tributaries, above Cincinnati alone, this additional tonnage is found to amount to 2,470,547 tons."

Considering the presence of so much "tonnage" in the upper

Ohio, not set down in shipping statistics, the loss of our ocean fleets seems, and perhaps is, unimportant. We never had in the foreign trade more than 2,496,894 tons, and still have 928,062 tons left. As we have in the upper Ohio River, according to the census and the Secretary's report, 901,713 tons more "tonnage" than has been lost by competition at sea, — "tonnage" that we did not know we had, — our lot is far from miserable. The Secretary adds: —

"The value of the coasting and river fleet to domestic commerce, and its relative importance, is shown by the reports of the Census Office, which state that on the great lakes alone (without considering wharves, elevators, shipyards, or other plants connected with shipping[1]), the aggregate valuation of the vessels in 1890 was $58,128,500, and that their total ton mileage for the season of 1889 was 15,518,360,000, equivalent to 22.6 per cent. of the total ton mileage of railways in the United States."

It is, therefore, to be hoped Congress will not open the domestic trade to foreigners, for then we might lose, through unprotection, the "undocumented craft" of the upper Ohio River. Verily, the protection of shipping with Secretary Foster seems altogether a local question.

Wishing Congress to have authentic information regarding our losses of carriage in the foreign trade, the Secretary republishes a table going back no farther than 1857. Comparing with 1826, our loss in 1857 was 21.8 per cent. of the whole business. The only object apparent in thus setting out a half truth is to obscure the true cause of the decline, and to take up the false ground that it was induced by the *war*, and the "war tariff" since. The Secretary's remark is: —

"The causes of the decline need not be discussed here. Since the war they have been such as might have been obviated by action similar to that recently taken by Congress, and by encouragement on the part of that body, such as has been given to its navigation interests in no stinted measure by the government of Great Britain."

Evidently he refers to the subsidizing of postal lines. He does not indorse bounty payments to be applied generally, because that would be following the example of France, and

[1] Had these been measured for tonnage, doubtless they would have been included. — AUTHOR.

acknowledging that the true cause of our shipping decline is want of protection. By putting the decline upon false ground, evidently it is sought to evade the logical remedy of protection. The "action recently taken by Congress" is but a step towards the work of "rehabilitation" promised in 1888.

The Secretary makes the following erroneous statement: —

"In 1861 our foreign-going tonnage, exclusive of that on the lakes, was 2,642,628, the highest point reached in the history of the nation, and in 1865, four years later, it had fallen to 1,602,583."

The figures here given are for the "registered," and not the "tonnage in foreign trade." The mistake was made by taking the figures from the wrong table in the Report of the Bureau of Navigation, namely, from table No. 10 instead of No. 17. The correct figures are, for 1861, 2,496,894 tons; for 1865, 1,518,350; loss in the period, 978,544 tons.

In relation to foreign-built yachts now irregularly documented as of "American ownership," the Secretary said: —

"The United States courts are considering various questions relating to the rights and duties of American owners of foreign-built yachts navigated in our waters. Some additional legislation in regard to vessels of this class may become necessary."

Contrary to the simplest principles of shipping and tariff law, it was sought by the Treasury Department to compel the owner of the yacht Conqueror to pay a tariff duty under the McKinley act, and failure resulted. The suit looked like a scheme to provide, by decision of court, for the general importation of foreign-built vessels; for, it is clear, if such tonnage is a mere dutiable commodity, that the free-ship question is merely one of catalogue, — "dutiable" or "free list." It is well that the government was defeated. Prohibitive protection to shipbuilding should stand.

Conclusion of the Matter. We have now completed a panoramic view of the Treasury Department in its relations to the shipping industry for a century past. There have been thirty-two secretaries who made one or more reports to Congress. In less than twenty of these is anything said about navigation *as an interest.* Only eight of the thirty-two secretaries had anything useful to propose. Only three of them advocated fos-

tering legislation, and but one perceived, with any degree of clearness, the true causes of our shipping decline. This officer was Secretary Windom.

On the other hand, since 1815, when the stripping of protection was begun, we have had seven secretaries, who never noticed the need of legislation for shipping; four others who proposed disabling and ruinous measures, and one who took it upon himself to act adversely.

It is evident from the record, made by the reports of the Secretaries of the Treasury, that the majority have not considered it their business to champion the interests either of commerce or navigation. When they come to make up their annual reports, then, for the first time, with few exceptions, they begin to think what they shall say on these topics. Former reports are examined, and Congress sometimes gets such a rehash as some handy clerk can prepare. This treatment of these great subjects goes on from year to year, with only now and then a variation. The result of this inattention and neglect we have before us. Our laws relating to vessels are complicated, inconsistent, and vexatious to a degree. The spirit of the statutes is conservative, repressive, and mercenary. Our policy of politeness and liberality towards foreigners contrast strongly with the severity and injustice dealt out to our own citizens. Too many of our laws are framed in foreign interest, too many of them are thus administered.

A department of commerce, with a cabinet minister in charge, selected for business ability, with authority to investigate all matters relating to trade and transportation, collect information, and block out measures for the consideration of Congress, could do more good in a decade, for the prosperity and power of the United States, than will ever be done in a century, with the Treasury Department as now organized. This department is a mere tax-gathering and distributing machine. A department of commerce, rightly managed, would be a business power for promoting the public weal.

CHAPTER XXIV.

THE BUREAU OF NAVIGATION OF THE TREASURY DEPARTMENT.

The Bureau of Navigation is now the medium of the Treasury Department in administering the greater part of the law relative to shipping. It is in charge of an officer entitled Commissioner of Navigation, and was established in 1884. A description of the relations of the department to the shipping interest would be incomplete without an account of this office. It was undoubtedly the outcome of a moderate agitation for a department of commerce, which should perform the same good offices for the trades of the sea as the department of agriculture now works out for the interests of the soil. Its recommendation to Congress was the kindly work of Secretary Charles J. Folger, of New York. In his report for 1883 he prefaced the presentation of the subject with the following words: —

"There appear but two methods by which our foreign shipping can be directly increased, namely, by subsidies, and by allowing the free purchase of foreign ships. Whether either or both of these means shall be adopted will depend on the judgment of Congress whether it is better to resort to them, than to suffer yearly the loss of 84 per cent. of the freightage on our exports and imports of merchandise."

Then, distrusting his own knowledge of the questions involved in an examination and choice of these propositions, he continued: —

"It would facilitate the solution of questions of the character above presented if there were established in the Treasury Department a Bureau of Navigation, whose function it should be to supervise that interest, make a study of its needs, observe its decline or increase, and recommend from time to time such measures as would keep it in a state of progress parallel with the general advance of the country.

"If such a bureau were to do nothing more than to look to the interests of seamen, and keep a record of the commercial marine, and guard against the physical obstructions to navigation within our own waters, its existence would be justified. Some of the duties which would naturally attach to such a bureau are now incongruously distributed among divisions of the Treasury Department, whose prime purpose and main work are of other nature. The establishment of that bureau might be effected with the addition of but two salaried officers to the present number in the civil service."

A bill for the establishment of the Bureau of Navigation, prepared by an official of the department, was duly introduced in Congress and promptly passed. The act is as follows: —

THE ACT ESTABLISHING THE BUREAU.

Be it enacted, etc., That there shall be in the Department of the Treasury of the United States a Bureau of Navigation under the immediate charge of a Commissioner of Navigation.

Sec. 2. That the Commissioner of Navigation, under the direction of the Secretary of the Treasury, shall have general superintendence of the commercial marine and merchant seamen of the United States, so far as vessels and seamen are not, under existing laws, subject to the supervision of any other officer of the government.[1] He shall be specially charged with the decision of all questions relating to the issue of registers, enrollments, and licenses of vessels, and to the filing and preservation of those documents; and whenever in title forty-eight or fifty of the Revised Statutes any of the above-named documents are required to be surrendered or returned to the Register of the Treasury, such requirement is hereby repealed, and such documents shall be surrendered and returned to the Commissioner of Navigation. Said Commissioner shall have charge of all similar documents now in the keeping of the Register of the Treasury, and shall perform all the duties hitherto devolved upon said Register relating to navigation.

Sec. 3. That the Commissioner of Navigation shall be charged with the supervision of the laws relating to the admeasurement of vessels, and the assigning of signal letters thereto, and of designating their official number; and on all questions of interpretation growing out of the execution of the laws relating to these subjects, and relating to the collection of tonnage tax, and to the refund of such tax when collected erroneously or illegally, his decision shall be final.

[1] This provision reserved the steamboat inspection service to the supervision of the Inspector-General. That was a mistake. Every district has a supervisor.

Sec. 4. That the Commissioner of Navigation shall annually prepare and publish a list of vessels of the United States belonging to the commercial marine, specifying the official number, signal letters, names, rig, tonnage, home port, and place and date of building of every vessel, distinguishing in such list sailing vessels from such as may be propelled by steam or other motive power. He shall also report annually to the Secretary of the Treasury the increase of vessels of the United States, by building or otherwise, specifying their number, rig, and motive power. He shall also investigate the operations of the law relative to navigation, and annually report to the Secretary of the Treasury such particulars as may, in his judgment, admit of improvement or may require amendment.

Sec. 5. That the Commissioner of Navigation shall, under the direction of the Secretary of the Treasury, be empowered to change the names of vessels of the United States, under such restrictions as may have been or shall be prescribed by act of Congress. The Commissioner of Navigation shall be appointed by the President with the advice and consent of the Senate, and shall receive a salary of four thousand dollars per annum.[1] And the Secretary of the Treasury shall have power to transfer from existing bureaus or divisions of the Treasury one clerk, to be designated as deputy Commissioner of Navigation, to act with the full powers of said Commissioner during his temporary absence from his official duty for any cause, and such additional clerks as he may consider necessary to the successful operation of the Bureau of Navigation, without impairing the efficiency of the bureaus or divisions whence such clerks may be transferred.

Sec. 7. That this act shall be in force and take effect on and after July first, eighteen hundred and eighty-four.

Approved July 5, 1884.

Commissioners and their Qualifications. A commissioner of navigation was immediately appointed, and the bureau began its work. In the eight years of its existence there have been four commissioners. Quoting the language of Secretary Folger, it is a question if all of them have been qualified to "supervise the interest of navigation, make a study of its needs, observe its decline or increase, and recommend, from time to time, such measures as would keep it in a state of progress parallel with the general advance of the country;" at all events, two of them have lacked knowledge or experience on the subject of ships and shipping economy.

[1] This was cut down in the first and subsequent appropriation bills to $3,600.

The first commissioner, selected by Secretary Folger, was Captain Jarvis Patten, of Bath, Maine, well known, not only as a navigator of sail and steam vessels, but as identified with the ownership and building of vessels; not only a student of shipping questions, but a writer and author of ability; a master of several languages, well versed in the science, laws, and literature of shipping. After serving twenty-nine months, President Cleveland, at the instance of Secretary Manning, called for his resignation, and appointed in his place, Charles B. Morton, a journalist.

The author of this book was the third commissioner, and the fourth served as disbursing clerk in the Fifty-first Congress.

These facts are introduced to show that the average Secretary of the Treasury cares nothing at all about the improvement of the shipping situation. He will not even tolerate in his department the talent and experience which he does not himself possess, "to study the needs of navigation," and which Congress has provided "to investigate the operations of the law relative to navigation, and annually report such particulars as may, *in his judgment*, admit of improvement or may require amendment." The present Secretary has gone so far as to suppress the report of the commissioner for 1891. Some of the best matter in that report, especially objected to, may be found in Chapters VII., VIII., and IX. Other chapters contain more or less of the suppressed information.

These incidents, as affecting individuals, are nothing in themselves. The public interest arises, however, when the public good is trampled down. The Bureau of Navigation represents the public interest in the shipping question. It was not established for the distribution of political spoil. Its prostitution to such a purpose is a public offense. That it has been so treated proves that it cannot perform the work intended by its establishment. This fact, too, is of public importance.

Opposition to the Bureau. From the time the bureau was established there has been opposition to its work, both inside and outside of the department. For the most part, it is prompted by the foreign steamship agencies, and the advocates of "free ships." It is needless to add, that this opposition is active and unscrupulous, and loses no opportunity to excite prejudice against any commissioner who is devoted to his duty.

Besides this, there are secretaries so constituted that they are unwilling to receive any opinions from the head of a bureau, no matter what the law may provide in that respect. The upshot of the matter is, that a bureau of a department is not the natural or logical instrumentality that should be employed to improve our interests in commerce and navigation. Anything short of a department will necessarily fail in attaining that object.

A Marine Board. The American members of the International Maritime Conference of 1890 recommended the formation of a marine board, to be composed of certain Treasury officers, performing duties connected with shipping, together with a number of unofficial experts, and a senator and representative in Congress. A bill for the creation of this board is pending. The Commissioner of Navigation is to be one of its members, and the others are to be taken from the heads of certain Treasury Department bureaus or divisions, the body to be presided over by an assistant secretary.

In theory, this bill looks as though it might prove useful, if enacted. In practice, however, it is highly probable that it will cheat its supporters, and simply because the Secretary of the Treasury may overturn all its work, or the best of its work, at any time. The board may learn all about a matter and settle upon the proper thing to be done, but it will be in the power of one man, who may know nothing about the subject, through influence of different kinds, to oppose their judgment and nullify their action.

On the other hand, the Secretary of the Treasury may influence such appointments that the board, through its members, would not possess the qualifications requisite for wise and expedient action. The disposition to get rid of expert officers and to fill their places with place-hunters is often very strong, and is not peculiar to any particular party. The fact is this: no bureau or board can be relied on by the people for any duty that the head of a department controls, unless that head is appointed to the supreme charge of that duty, and is held responsible for it. The matter all comes to one point, namely, a department of commerce, under a qualified secretary, to take the supervision of that interest and of navigation. The Secretary of the Treasury and the Postmaster-General should have

nothing to do with vessels. The vessel interests would be even better taken care of by the Navy Department than by the Treasury. Secretaries of the Treasury and Postmaster-Generals have been as scourges to our marine. It would be a novel sensation to our shipping interest to find itself under a department whose duty it was to be friendly towards it; and to manifest towards it the same disposition that the Department of Agriculture shows for the great and important interests engaged in tilling the soil.

CHAPTER XXV.

THE TONNAGE BILL AND ESTIMATES FOR BOUNTIES.

Since statesmanship first sought the furtherance of national interest in any special direction, bounties, rewards, or honors have been among the means employed. In English history we find the first application of such expedients in navigation, when it was decreed by King Athelstan, A. D. 925, that "if a merchant so thrived that he passed thrice over the wide seas of his owne craft, he was thenceforth a Thein's right worthie."

In French history, two centuries and a third ago, "bounties" first performed a great part in building up a merchant marine. This was in the reign of Louis XIV., under his Minister Colbert, whose protective system included *premiums* on home-built ships, tonnage duties on foreign shipping, and the giving of French vessels the monopoly of trade to and from the colonies. In 1881 the French applied the bounty principle again, not only to the building, but the sailing of vessels, both of sail and steam. In a few years the Italians followed the example of the French. These marine-bounty laws remain in force, and represent fixed protective policies.

In our own country the giving of bounties, premiums, and medals to stimulate improvements and reward public benefactors has been so common that the principle is popular and well understood. Its application to the building up of an American marine was one of the steps considered by Thomas Jefferson, but tonnage dues and discriminating tariff duties were then deemed preferable. Bounties, however, as the only practical means to encourage the fisheries and the consequent rearing of seamen, were paid down to a recent date. Following the precedents of France and Germany, in paying bounties on sugar products, the tariff bill of 1890 applied this policy in the United States. For the first year, payments for all kinds,

including maple, have amounted to $7,330,046.[1] In 1890, also, the Senate passed a bill for the payment of navigation bounties, which, being modified, barely failed to pass the House.

"Subsidy," although a form of bounty, is not quite the same. Bounty is a reward for a public benefaction. Subsidy is paid to an ally, or to a citizen or corporation for a public service, and is in the nature of remuneration, but it may be so liberal as to be only another name for bounty. Such was the subsidy first paid by the British treasury to support steam lines on the ocean. On the other hand, a subsidy may be so mean and wanting as to afford, practically, no support at all. Such is the subsidy authorized by the substitute for the Farquhar tonnage bill. It only amounts to payment for carrying the mails, and *gives no reward for building up a naval power for national defense.*

"Subvention" is another term denoting a government aid or bounty, more especially paid to encourage enlargement and strengthening of the sea-power of a nation. As it is in England, steamers under subsidy carry the mails, but those under subvention may, or may not, take them, their pay being reduced one fourth, while they do. There, subvention steamers belong to the royal naval reserve, and are under admiralty control.

But bounty, subsidy, and subvention are near relations. In no sense are they *gratuities;* these are given without an equivalent or recompense, without claim or merit, as alms to relieve a beggar. A marine is a part of the territory of a maritime state; a part of the means, machinery, and resources by which a maritime people extend their commerce, gather riches, increase their strength, and establish their independence. Without a marine, a maritime state is a paralytic among the nations. It is therefore for the public good that individuals throng into the nautical pursuits, build up a strong, swift, and safe marine, and make the ocean a field of enterprise and a mine of wealth, — not for themselves alone, but for all their countrymen, *and their state.* If this public good cannot be attained by voluntary effort, then it becomes a public duty to encourage its accomplishment by state policy or assistance.

[1] Of which $7,065,284 was paid on cane sugar, $240,098 on beet sugar, $22,197 on sorghum sugar, and $2,466 on maple sugar.

It is a narrow-minded conception of the function of government that public improvements must be confined to the land, and no money expended for the national advantage at sea. Roads, bridges, canals, river and harbor improvements, every facility for transportation by land, has received the aid of the treasury. The men of navigation and commerce, all the tradesmen connected with the sea, have contributed their share since the foundation of the government. But the question is not, what in return has been laid out for their benefit, but, for American advancement and mastery in the foreign trade. The state includes the individual. It cannot promote its own good without benefiting individuals. Nor can it neglect or ruin the interests of private citizens without bringing evil to itself. Our flag is being driven from the sea. What have we expended to maintain it there? That is the question; and the answer is, nothing. Practically, nothing. Navigation and commerce have been treated as new milch cows — kept for "revenue only," while all the maritime nations but our own have acted in a wiser way.

The Desperate Struggle of our Marine. In closing the debate on the "tonnage bill," February 27, 1891, Hon. John M. Farquhar said: —

"I hold in my hand, Mr. Speaker, a list of seventeen nations and of four dependencies that expend annually a total of $35,000,000 on their shipping to drive the American flag from the seas. So it is not a battle of individuals against individuals, nor of corporations against corporations, but of nations against nations. The treasuries of all the great powers are generously used in the fierce struggle for supremacy or existence on the ocean. The nation which commands its own commerce must also own its own ships and successfully employ them.

"The question here presented, Mr. Speaker, is a struggle on the part of this country against every power on the face of the earth. That is why the Committee on Merchant Marine and Fisheries, desirous to have the best knowledge in their possession to place in the hands of the American Congress, have given this matter careful, thoughtful, and unremitting consideration, with a view of presenting a bill complete and supreme in all of its features, and which would have the effect

to bring back honor and profit to our nation. The difficulty that has stood in the way of perfect success possibly has been this: I question whether the American people know to-day the deep disgrace and loss that attach to their land and its marine, by the bad condition we are now in.

"But, Mr. Speaker, I hail the bill now before us, as it comes to this Congress in its present shape, as the courier that shall bear anew throughout both hemispheres the announcement that Americans are now bound to stand by their flag and the honor of their nation."

THE "TONNAGE BILL."

An act to place the American merchant marine, engaged in the foreign trade, upon an equality with that of other nations, to provide for ocean mail service between the United States and foreign ports, and to strengthen the naval establishment.[1]

That on and after the passage of this act there shall be paid, out of any moneys in the Treasury of the United States not otherwise appropriated, to any vessel, whether sail or steam, registered pursuant to the laws of the United States, and which shall be engaged in the foreign trade, plying between the ports of the United States, and foreign ports, as follows: If a steam vessel of not exceeding eleven knots speed when loaded, or if a sailing vessel, the sum of 10 cents per gross register ton for the first 500 miles or fraction thereof sailed outward, and the same sum for the first 500 miles or fraction thereof sailed inward, on any voyage or voyages; 10 cents per gross register ton for the second 500 miles or fraction thereof sailed outward, and the same sum for the second 500 miles or fraction thereof sailed inward, and 20 cents per gross register ton for each 1,000 miles thereafter, and pro rata for any distance sailed less than 1,000 miles after the first 1,000 miles sailed. The payments at the rate of 20 cents per ton for each 1,000 miles sailed, as herein provided, shall continue for the term of ten years at that rate, and thereafter for another term of nine years at a reduction of 2 cents per ton each year upon each 1,000 miles sailed, and pro rata for any less distance. But in case any steam vessel makes or can attain a higher speed at sea than 11 knots per hour when loaded, with winds and current slack, then, and in such case, the payments per ton for each 1,000 miles sailed as aforesaid shall be made

[1] Being the House substitute for House bill No. 4663 and Senate bill No. 3738. Defeated in the House, February 27, 1891, on ordering the third reading, by a vote of 147 to 144. A copy of the American Shipping League-bill will be found in the Appendix.

according to the fixed rating for speed; that is to say, for a speed of over 11 to 12 knots, 21 cents per ton; for a speed of over 12 to 13 knots, 22 cents per ton; for a speed of over 13 to 14 knots, 23 cents per ton; for a speed of over 14 to 15 knots, 24 cents per ton; for a speed of over 15 to 16 knots, 25 cents per ton; for a speed of over 16 to 17 knots, 26 cents per ton; for a speed of over 17 to 18 knots, 27 cents per ton; for a speed of over 18 to 19 knots, 28 cents per ton; for a speed of over 19 to 20 knots, 29 cents per ton, and for a speed of over 20 knots, 30 cents per ton; the speed of every steam vessel claiming a rate above 11 knots per hour to be ascertained from a trial of four hours' run with the freeboard of an unarmed cruiser, by the Secretary of the Navy, and by him to be certified to the Treasury and Post Office Departments, where records of speed shall be kept. The payments at the different rates for speed shall continue for the term of ten years at the full rate, and thereafter for another term of nine years at a reduction of one tenth the full rate per ton each year upon each 1,000 miles navigated, and pro rata for any distance less: Provided, That payment in all the foregoing cases shall not be made for more than 7,000 miles sailed on either an outward or an inward voyage, and that the foreign port to which the voyage is made shall be distant more than 70 miles seaward from the ocean or gulf boundary of the United States; and such payments to any vessel as aforesaid shall be made to the owner or owners thereof upon proof of the distance actually sailed, the distance to be ascertained and the payment to be made under such regulations as the Secretary of the Treasury shall prescribe and promulgate; distances between ports to be determined by measurements, which shall be furnished by the United States Hydrographic Office to the Bureau of Navigation of the Treasury Department.

Sec. 2. That no vessel shall be entitled to the benefits of this act unless its entire cargo shall be loaded at a port or ports of the United States and discharged or transferred at one or more foreign ports, or shall be loaded at one or more foreign ports and discharged or transferred at a port or ports in the United States; nor shall a vessel of less than 16 knots speed, not carrying the United States mails, be entitled to receive payment under this act unless it shall have freight on board at the time of sailing to the amount in tons, weight, or measurement, of at least 25 per cent. of the net cargo capacity, 2,240 pounds, or 40 cubic feet, to make a ton of cargo.

Sec. 3. That no vessel shall be entitled to the benefits of this act unless all the officers thereof shall be citizens of the United States, in conformity with the existing laws; nor unless upon each departure from the United States the following proportion of the crew shall be citizens

of the United States, or shall have declared their intentions to become citizens, to wit: During the first two years this act shall be in force, one sixth thereof; during the next three succeeding years, one third thereof; and during the remaining term of this act, at least one half thereof; nor unless there be carried on vessels of less than 1,000 tons gross register one native-born apprentice, and on vessels of 1,000 tons and upward one such apprentice for each 1,000 tons or three fourths fraction thereof.

Sec. 4. That, to owners of vessels already built, payments under this act shall be made for such time only as each shall stand inspection and hold character, if wood built, not lower than the second grade (A 1½) in a scale of six grades in the Record of American and Foreign Shipping, or the corresponding classification in any other incorporated American register of shipping approved by the Commissioner of Navigation of the Treasury Department. If iron or steel built, payments shall be made for such time only as each vessel shall stand inspection, and hold character not lower than the second class (A 1, thirteen years) in the Record of American and Foreign Shipping, or the corresponding classification in any other incorporated American register of shipping approved by the Commissioner of Navigation of the Treasury Department.

Sec. 5. That vessels keel-laid and built after the passage of this act, in order to be entitled to payments after losing or lapsing from class in the first grade if wood built, or from the first class or division if iron or steel built, must have been so well constructed as to have been classed originally in the highest grade of the first class, or first division, to wit: If wood built A 1, twelve years; and if iron or steel built, A 1 sixteen years, in the Record of American and Foreign Shipping, or the corresponding classification in any other incorporated American register of shipping approved by the Commissioner of Navigation of the Treasury Department. Vessels so built and classed for the highest character shall receive payments as in section 4 provided for vessels already built. Vessels unclassed in the register named in this act, or in an American register whose rules for building and inspection are fully equal in requirements, and all vessels whose class has expired or been suspended or withdrawn, shall be disentitled to payments while this disqualification exists.

Sec. 6. That all steam vessels hereafter built for the foreign trade and intended for a speed of twelve knots or more, in order to be entitled to the benefit of this act shall be structurally adapted to conversion into auxiliary cruisers or transports for the naval service, and in accordance with requirements specified by the Secretary of the Navy, to whom the plans of such vessels must be submitted for approval; but

if any such vessel shall be built without the approval of his plans, or shall be found on inspection when completed not to fulfill said requirements, then such vessels shall be classed for payments with those not exceeding eleven-knot speed: Provided, That the Secretary of the Navy may accept as auxiliary cruisers or transports steam vessels built before the passage of this act which shall meet the requirements of the Navy Department for the naval service. Steam vessels hereafter built shall receive payments based on speed, and be entitled to carry the mails of the United States only when they hold the certificate of the Secretary of the Navy, and all steam vessels found to fulfill the requirements of the Navy Department shall be enrolled as auxiliary vessels, and may be taken by the United States and used as transports or cruisers upon payment to the owners of the fair actual value at the time of the taking, and if there shall be a disagreement as to the fair actual value between the United States and the owners, then the same shall be determined by two impartial appraisers, one to be appointed by each of said parties, they at the same time selecting a third, who shall act in said appraisement in case the two shall fail to agree; and no enrolled auxiliary vessel shall be sold foreign without the consent of the Secretary of the Navy. (Amended: Provided, That no sailing vessel of less than 1,000 tons gross tonnage shall be entitled to receive the benefits of this act).[1]

Sec. 7. That all steam vessels receiving the benefits of this act and capable of maintaining a speed of twelve knots an hour at sea in ordinary weather shall carry the mails of the United States when required by the Postmaster-General to the port or ports for which they may be destined, and under such regulations as may be prescribed by the Postmaster-General, and for all mails so carried the Post Office Department shall turn into the Treasury the sea and inland postage thereon. Upon each of said vessels the United States shall be entitled to have transported free of charge such mail messengers as in the judgment of the Postmaster-General may be necessary, whose duty it shall be to receive, sort, take in charge, and deliver the mails to and from the United States, and who shall be provided with suitable room for the accommodation of messengers and the mails.

Sec. 8. That the Secretary of the Treasury shall fix the times and manner of payments, prescribe the vouchers, with forms of account and verifications, upon which payments shall be made, and shall adopt whatever regulations may be necessary to carry out the provisions of this act.

On the defeat of this bill, the "Cannon substitute" pending

[1] This Amendment in committee of the whole was a partial repudiation of the principle of the bill.

was passed. A copy of it will be found in the Appendix. They are both good bills — according to the point of view. The tonnage bill is a good American measure, the Cannon subsidy bill was a good anti-American manœuvre. The one offered bread, the other has given a stone. France, Germany, and Great Britain are said to have grumbled when the McKinley bill was passed, and foreign steamship companies to have smiled when Cannon's underhand and well-nigh worthless work went through.

An Explanation of the Tonnage Bill. On April 2, 1890, the House Committee on Marine and Fisheries, through its chairman, Hon. John M. Farquhar, of New York, reported a bill (H. R. No. 4663), with a book of hearings.[1] This bill proposed a navigation bounty of 30 cents per ton per mile. It was introduced in the Senate as S. No. 3738. Early in July it came before the Senate for enactment, together with another bill (S. No. 3739) for ocean mail service. Both bills passed. The House bounty bill, thus returned, went to the Committee on Marine and Fisheries, and the Senate subsidy bill to the Committee on Post Offices and Post Roads. The latter was reported to the House as passed by the Senate. The former was laid aside, and a "substitute bill" which should embody the good features of both the House and the Senate bills was prepared. It was this House committee substitute bill which was defeated, and the Senate subsidy bill, *cut down in its payments one third*, that became law.

The subsidy bill applied only to mail-steamship lines. It was a special, and not a general measure. Few, if any petitions supported it.[2] It offered only a partial protection, even for a steam marine. That it could fulfill the pledge of the Republican platform, to "rehabilitate" the American marine, was perfectly absurd. If it was a measure that would fully protect our steam marine, its enactment could not redeem that pledge. The Senate held this view of the matter, and therefore passed the bounty bill along with the subsidy measure, intending by both bills to protect the entire marine, sail as well as steam. And yet there were in the House great sticklers for protection, who could vote for every item in the McKinley

[1] 51st Cong. 1st Session, H. of R. Report No. 1210.

[2] The Bounty or Tonnage bill was strongly supported by petitions.

bill, even to the maple-sugar bounty clause, but could not refrain from speeches and votes to defeat a measure of protection to the nation itself, in supporting an American marine in the foreign trade. Not only so, but they could carry the House for an unprotective measure, one that is neither Democratic nor Republican, but anti-American in every feature, so far as it is effective in its action.

The tonnage or bounty bill, which the enemies of American shipping defeated, was a general measure framed on the lines of popular protection. It applied to sail as well as steam, to freighting as well as passenger or postal vessels. Being general and impartial, it was democratic. It gave all a chance. The rich and the poor, individuals, firms, or corporations, seaports small or great, north or south, east or west, all fared alike for encouragement, and no monopolies, rings, or trusts were favored. The operation of a subsidy measure is to build up a few corporations, instead of aiding all citizens who choose to enter and continue in any branch of the carrying-trade. Shipping protection, to be just and efficient, must be *full* and *equal*. To suit the American people it must be democratic, giving to every owner and all our ports impartial patronage, as impartial justice. The German steam-marine affords an example too imperial to be followed in the United States. In Germany the amount of seagoing metal steam tonnage is 927,804 tons, of which 37.14 per cent. is in three lines subsidized by the government.[1] One of these lines has over 18 per cent. of the total tonnage. Shipping protection, of such a character as to be thus monopolized by a few, will not probably long endure. Our subsidy laws have all been short-lived. The first act, in 1845, was repealed in 1858.

The shipping protection given by the republic of France, being general, as it should be, is the best foreign example, if we need one. The bounty paid, as *protection*, is free to all seagoing craft, sail as well as steam. In the progress of the tonnage bill the partial protectionists wished to strike out defense of sail vessels, though these constituted two thirds of the tonnage eligible for bounty. They succeeded in refusing protection to sailers of less than 1,000 tons. This pleased the anti-protection side of the House, as it put the protectionist

[1] Subsidy in Germany dates from 1856.

party in a false position, namely, that of enacting free trade for small seaports, sailing vessels, and poor young men; but protection for great seaports, steam corporations, and old firms able to own large ships. If one would search the field, a more indefensible position could not be found.

The tonnage bill had two faults induced by a desire of the Committee on Marine to be as saving as possible of bounty money. The first was starting the scale of bounties at 20 cents a ton, instead of 25 cents at least; and the second was limiting the payment of bounty on a single voyage to 7,000, instead of 10,000 miles. Otherwise, it was perfect.

The Cost of the Tonnage Bill. The Commissioner of Navigation made a careful estimate for the cost of the original bill (H. R. No. 4663 or S. 3738) which was submitted with the report (1210), and given also in Senator Frye's speech. The estimate that follows was prepared to accompany the "substitute bill," which was defeated, and shows an average abatement under the provisions of the original bill of 22.37 per cent., caused mainly by changing the rate of bounty from 30 to 20–30 cents.

AMOUNT OF BOUNTY UNDER THE SUBSTITUTE BILL.

TREASURY DEPARTMENT, BUREAU OF NAVIGATION,
WASHINGTON, D. C., *December* 10, 1890.

SIR: Your request for an estimate of the abatement of bounties that would result from certain changes proposed in your (substitute) bill, as it was reported to the House has had due consideration.

SAIL VESSELS.

If sailing vessels shall receive but 20 cents a ton, in place of 30 cents as formerly calculated, the abatement would be one third, or $380,784. Against this amount there is an increase from extending the former limit of 500 tons downward. This increase admits 181 vessels of an aggregate measurement of 63.350 tons. At 20 cents a ton, this increase would sum up to $164,710, leaving a net abatement of $216,074 for sail vessels.

STEAMERS.

If steamers below 11-knot speed receive but 20 cents a ton, instead of 30 cents, then, as it is unknown how many of them there are, and how much tonnage they would aggregate, I will assume this class con-

stitutes 20 per cent. of the whole steam fleet in foreign trade. The abatement would be one third on this proportion, or on $6\frac{2}{3}$ per cent. of the whole amount formerly estimated, which would be $110,488. The extension of limit from 500 tons downward only includes four vessels of 1,842 tons aggregate; these would increase the payment by $12,894, leaving an abatement so far of $97,594.

Then, taking the steamers above 11-knot speed, it may be assumed that their rate would be fairly averaged at 13 knots. Indeed, this may be too high, but at this rate, paying 21 cents for 12 knots, 22 cents for 13 knots, and so on up to 30 cents per knot, the average of present fleet at 13 knots and 22 cents therefor would abate the portion of the former estimate, which would remain subject to this reduction, 26.66 per cent.; in other words, this part of the abatement would amount to $392,050. Adding the net abatement above of $97,594, we find a total of $489,644 for steam vessels.

THE TOTAL ABATEMENT.

Adding together the abatements for sail and steam, we find a total of $608,124.

THE TOTAL OF BOUNTIES.

As the former estimate was $2,728,004, for both sail and steam, the first year, deducting the above abatement we have a total payment of $2,109,880. This shows an average abatement of 22.37 per cent.

THE PAYMENTS OF FOLLOWING YEARS.

From the foregoing calculations I think a general conclusion may be made, that the modifications proposed would abate the payments that I had estimated for the tonnage bill (as reported by your committee and passed by the Senate) during the lifetime of the measure over 20 per cent., and perhaps 25 per cent.; because it is doubtful if so great an abatement will leave encouragement enough to induce the measure of enlargement of the marine that was expected under a bounty of 30 cents a ton per 1,000 miles sailed.

RATIO OF BOUNTY TO WHOLE COST OF TRANSPORTATION.

As for the ratio of bounty to whole cost of transportation, my former estimate will have to be revised in the light of the modifications proposed. The whole cost of ship transportation includes the interest, insurance, and depreciation of the ship, besides the running expenses while loading, sailing, and discharging.

Taking an average of voyages to Europe and to ports around the capes, I found the average ratio of bounty under the reported bill to

whole cost of transportation was 12.38 per cent., for sailing ships. Under the modifications proposed this ratio will shrink to 8.25 per cent.

In the case of steamers running to ports in the West Indies and Mexico, I found the average ratio of bounty to whole cost of transportation was 10.93 per cent. Under the changes proposed, there being twice as much sail as steam, this ratio would fall to about 8.16 per cent. For the entire marine under bounty and during the term of the bill when steam will be gaining on sail, an average ratio of 8 per cent. may be estimated as a fair approximation.

In this connection it may be instructive to examine, in a practical way, how far the proposed bounty of 20 cents a ton (in place of 30) would go towards equalizing the footing of our sailing ships with those of foreign flags. There are now (or were on the 3d instant) in the harbor of San Francisco "under charter" and loading grain for Europe, 27 ships of large tonnage. Of these 24 were foreign (20 being British, 3 German, and 1 Norwegian). Only three are American, so that foreign flags prevail in the ratio of 9 to 1. The average foreign ship has been thirty-five days in port, the average American ship forty-eight days, or 37 per cent. longer time in waiting. The average rate of freight to the foreign ship is £2 0*s.* 5*d.*, but the average rate to the American ship is only £1 16*s.* 3*d.*, a difference in favor of the foreign ship of 11.51 per cent. The German and Norwegian vessels have full as much advantage as the British.

The American ships average a size of 1,878 tons and will carry 2,689.22 tons gross of grain. As their rate of freight is $8.82 per ton, the average earning of each for the carriage of a cargo will be $23,719. Foreign ships of same size getting 11.51 per cent. more freight money for the same load would receive $2,730 in excess of our ships. But there is one of our ships chartered by a British firm getting only £1 12*s.* 6*d.* in contrast with British ships chartered by the same firm getting £2, a difference in favor of the British flag amounting to 24.6 per cent. The discrimination against our ships has often been much greater. (See my report, 1890, pages 99 to 104.)

In view of this discrimination, existing to-day as for many years past, let us see how much bounty, as an offset, would be paid under the 20-cent provision of the bill now proposed on ships of 1,878 tons. The bounty would amount to $2,629, as against a discrimination of $2,730, so there would be a shortage of $101 on freight discrimination alone, and nothing for the longer time of waiting for charters and greater expense of running American vessels. This is exactly the situation with the fleet loading grain at San Francisco to-day: —

Nine ships foreign to one American chartered and loading, and

freights to American ships so discriminating as to drive them out of the trade, which is in the possession of foreign merchants, foreign underwriters, and foreign shipping. It must be evident, that our country is gaining nothing by having foreigners to transact our commerce and transport our products; but, rather, every interest of the country is being laid under contribution for the aliment of foreign nations. The condition of our foreign trade has not improved in years past, and never will improve until American ships shall be sustained by American spirit and American law.

Very respectfully yours,

WM. W. BATES, *Commissioner.*

HON. JOHN M. FARQUHAR,
Chairman of Committee on Merchant Marine and Fisheries.

Further and Final Estimate. After the opening of the debate upon the bill, the opposition set up that the cost of the measure would run up into the hundreds of millions, and again the Commissioner of Navigation was requested to state the possible extent of the cost under conditions named: —

TREASURY DEPARTMENT, BUREAU OF NAVIGATION,
WASHINGTON, D. C., *January* 1, 1891.

SIR, — Answering your request for an estimate of the "possible extent" of the "rehabilitation" of our marine in foreign trade, in ten years to come, under the stimulus of the bill now on its passage, "in case a policy of Pan-American reciprocity of trade and transportation shall be inaugurated and carried out, and the Nicaragua Canal shall be finished in five years' time," I have the honor to submit the following tabular statement showing figures for each year of the ten for sail and steam:

First. The eligible tonnage of first class — A 1 and A $1\frac{1}{2}$;

Second. The ineligible tonnage of second and third class;

Third. The eligible tonnage losses, by casualties of all kinds and by falling from first to lower classes;

Fourth. The total losses of eligible tonnage;

Fifth. The total losses of ineligible tonnage;

Sixth. The eligible tonnage gains by building and by repairing.

Seventh. The total eligible gains by building and repairing.

Eighth. The annual amounts of bounty payments; and

Ninth. The footings of the different columns.

TABLE SHOWING THE POSSIBLE EXTENT AND COST OF BOUNTY PAYMENTS TO AMERICAN SHIPPING UNDER THE SUBSTITUTE BILL.[1]

Year.	Eligible Tonnage of First Class, A 1 and A 1½.		Ineligible Tonnage of Second and Third Class.		Eligible Tonnage Losses.				Total Losses of Eligible Tonnage.		Total Losses of Ineligible Tonnage.		Eligible Tonnage Gains.				Total Eligible Tonnage Gains by Building and Repairing.		Annual Amounts of Bounty Payments.	
					By Casualties of all Kinds.		Falling from First to Lower Classes.						By Building.		By Repairing.					
	Sail.	Steam.	Sail.	Steam.	Sail.	Steam.	Sail.	Steam.	Sail.	Steam.	Sail.	Steam.	Sail.	Steam.	Sail.	Steam.	Sail.	Steam.	Sail.	Steam.
1891	356,000	153,000	364,431	44,630	12,460	4,590	24,920	9,750	37,380	14,340	14,577	1,664	20,000	32,000	10,380	4,340	30,380	36,340	$925,600	$1,178,100
1892	349,000	175,000	374,774	55,071	12,210	5,250	24,420	9,263	36,330	14,513	14,990	1,912	27,000	60,000	10,330	4,513	37,330	64,513	907,000	1,347,500
1893	350,000	225,000	384,204	63,821	12,250	6,750	24,000	8,800	36,250	15,550	15,368	2,713	24,000	90,000	8,250	5,550	32,250	95,550	910,000	1,755,000
1894	346,000	305,000	392,836	75,071	12,110	9,150	23,874	8,360	35,984	17,510	15,717	3,002	18,000	90,000	7,984	5,510	25,984	95,510	899,600	2,379,000
1895	336,000	383,000	400,993	90,321	11,760	11,790	22,848	7,942	34,608	19,732	16,039	3,612	20,000	120,000	8,608	6,732	28,608	126,732	873,600	3,025,900
1896	330,000	490,000	407,802	113,889	11,550	14,700	22,110	7,545	33,360	22,245	16,302	4,555	21,000	135,000	7,360	7,225	28,360	142,225	858,000	3,920,000
1897	325,000	610,000	413,600	143,634	11,375	18,300	21,450	7,168	32,825	25,468	16,544	5,745	17,000	137,000	6,825	6,468	23,825	143,468	845,000	4,941,000
1898	316,000	728,000	418,506	167,009	11,060	21,840	18,960	6,810	30,020	28,650	16,740	6,680	20,000	123,000	6,020	3,650	26,020	126,650	821,600	5,896,000
1899	312,000	826,000	420,726	189,449	10,920	24,780	18,408	6,470	29,328	31,250	16,829	7,577	22,000	115,000	5,328	3,250	27,328	118,250	811,200	6,690,600
1900	310,000	913,000	422,305	214,912	10,850	27,390	17,980	6,047	28,830	33,437	16,892	8,596	20,000	107,000	4,830	3,437	24,830	110,437	806,000	7,395,300
Footings for the period . . .					126,545	144,140	218,970	78,155	334,915	222,695	159,998	46,056	209,000	1,009,000	75,915	50,675	284,915	1,059,675	8,657,600	38,528,400

Total for sail and steam for ten years $47,186,000
Average for sail and steam for ten years 4,718,600

[1] The "Farquhar Tonnage Bill."

The total of all sizes of sailing vessels last year in the foreign trade was 720,431 tons; of this the portion eligible for payments amounted to 356,000 tons, and the remainder of ineligible vessels to 364,431 tons. The total of steam was 197,630 tons, the eligible being 153,000 tons, and the ineligible for bounty-earning 44,630 tons.

From the table it appears that the steam fleet might increase from 153,000 to 913,000 tons of first-class shipping, the greater part of it new, in ten years' time. Including the vessels of second and third classes, the aggregate steam tonnage would amount to 1,127,912, a gain of 572 per cent. in the period.

With such a rate of gain in steam it could not be expected that the sail fleet would hold its own. Beginning the period with 356,000 and closing with 310,000 tons, the decline is nearly 13 per cent., but the old ships would be nearly replaced with new. Including second and third class tonnage, the sail fleet might increase slightly.

There might be built 209,000 tons of sail and 1,009,000 tons of steam, or a total of 1,218,000 tons of shipping for the foreign trade in the course of the period. There might also be 75,915 tons of sail and 50,675 tons of steam, or a total of 126,590 tons repaired for maintenance of class in the same time. The total of building and repairing might amount to 1,344,590 tons in the period.

So great an increase of building and repairing, especially of iron or steel steam tonnage, some of it of great power and speed, could not be accomplished by the yards and shops now engaged in the business, but many new ones would have to be started, and thousands of mechanics set at work to turn out the tonnage thus estimated for. At the opening of the Nicaragua Canal we should be prepared with steamers for a large increase of trade east and west through that channel. I have estimated for the building and repairing in 1896 of 142,000 tons. That is 104,000 tons more metal steam tonnage than was turned out for ocean service in the past year, when a good business was done. For the average year of the period I have estimated for the building of 106,000 tons of metal steamers, or nearly three times the launch of last year, which was mostly for coastwise trade. The steam tonnage of wood and metal built last year for all seagoing trades was only 61,000 tons, when our machine shops were busy. In the palmy days of the fifties the utmost amount of Atlantic-coast steam tonnage turned out was 95,000 tons in 1853.

From these facts it may be judged that it would be impossible to turn out more steam tonnage than I have estimated in the table, even if we doubled the number of our yards and shops and trebled the number of our mechanics in three years' time. It will be fortunate if we can do so much for our country's good. If we shall succeed in build-

ing up our fleet of steam, and in rebuilding our sail marine to the tonnage estimated, our absolute, though not our relative, standing on the sea before the war would be practically restored. If we had these fleets now we would carry 35 per cent. of our foreign commerce, which has more than doubled in thirty years past.

In making up this estimate I have drawn largely upon the possibilities of reciprocal trade with the Pan-American nations. In short, I have assumed that transportation as well as trade will be considered in forming the new relations which it is to be hoped will sooner or later be inaugurated. With many of our American neighbors we can better afford to give trade for transportation, than transportation for trade, as we have long been doing to Europeans, to the loss of our flag at sea.

Respectfully yours,

WM. W. BATES, *Commissioner.*

Hon. JOHN M. FARQUHAR,
Chairman Committee on Marine and Fisheries,
House of Representatives.

CHAPTER XXVI.

TRANSPORTATION UNDER PROTECTION AND FREE TRADE.

This chapter is dedicated to the memory of Hon. William Windom, Secretary of the Treasury of the United States, whose last patriotic speech was made voluntarily, at the cost of his life, in support of protection to shipping.

The occasion was the annual banquet of the New York Board of Trade and Transportation, January 29, 1891. The Tonnage Bill was then pending in Congress. The honorable Secretary responded to the toast, "Our country's prosperity dependent upon its instruments of commerce." His remarks were confined to the two chief instrumentalities, transportation and money. In a few moments after their delivery, he fell from his chair, dead.

On the subject of transportation, the good and wise Secretary said: —

LAST WORDS OF WILLIAM WINDOM.

Mr. President and Gentlemen of the Board of Trade and Transportation: Early association with the charter members of your board, and full sympathy with the objects and purposes of its organization, make this an occasion of peculiar interest to me. The country owes you a debt of gratitude for what you have done in the interests of better and cheaper transportation. Fifteen years ago, when your board was organized and entered upon its work, our facilities for the interchange of commerce were quite inadequate, and freight charges were more than double what they are now. Improvements made by the transportation companies themselves have been very satisfactory, but, though much has been accomplished in the cheapening of rates, much more remains to be done. If I might be allowed to suggest, parenthetically, another very desirable improvement, it would be that more water be put into our harbors and canals, and less into our railroad stocks.

I am to speak briefly of the instruments of commerce in their relation to the wealth and prosperity of our country. The subject is very broad and my time very limited. I shall, therefore, confine my remarks to the two chief instrumentalities of commerce, transportation and money. By the former commodities change places, and by the latter they change owners. Even as to these I must content myself with the bare statement of a few facts and deductions. A nation's wealth and prosperity are usually in proportion to the extent and success of its commerce, and commerce itself is dependent upon the adequacy and adaptation of these two essential instruments. The history of all civilized countries attests the fact that the nation best equipped in these respects rapidly becomes the most powerful, the richest, and the most prosperous.

Domestic Commerce. Our own country is no exception to this rule. No nation has ever fostered more liberally or protected more carefully its internal and coastwise trade than we have done, and the resultant magnitude and prosperity of our domestic commerce is, I believe, without a parallel in the history of the world. For the accommodation and development of our home trade, we have built 45 per cent. of all the railroads of the world. We have more miles of railroad than all Europe, Asia, and Africa combined. The floating tonnage of the United States engaged in coastwise commerce and on our lakes and rivers is very far in excess of that of any other nation. One or two comparisons will convey some idea of this stupendous commerce. The tonnage which passed through the Detroit River alone during the 234 days of navigation in 1889 exceeded by 2,468,127 tons the entire British and foreign tonnage which entered and cleared at London and Liverpool that year in the foreign and coastwise trade.

The freight which passed through the St. Mary's Falls Canal in 1890 exceeded by 2,257,876 tons the entire tonnage of all nations which passed through the Suez Canal in 1889. The freight carried on railroads of the United States in 1890 exceeded by over 36,000,000 tons the aggregate carried on all the railroads of the United Kingdom, Germany, France, and Russia in 1889. Commodities are interchanged among our own people with greater facility and at cheaper rates (distance being considered) than in any other country on earth.

The increase of national wealth and prosperity, largely due to this system of protection to our home markets and domestic trade, and to the generous development of these instrumentalities of commerce, has become the marvel of the world. Take a few comparisons, based upon the United States census of 1880, and upon figures furnished by Mr. Mulhall, the English statistician. In manufactures we exceeded Great Britain in 1880 by $1,579,570,191, France by $2,115,000,000, and Germany by $2,305,000,000. In products of agriculture we excelled Great Britain by $1,425,000,000, France by $625,000,000, and Germany by $925,000,000. Our earnings or income for 1880 from commerce, agriculture, mining, manufactures, the carrying-trade, and banking, exceeded those of Great Britain from the same sources by $1,250,000,000, France by $2,395,000,000, and Germany by $2,775,000,000. Our increase of wealth from 1870 to 1880 as compared with that of other nations was: United States, $13,573,481,493; Great Britain, $3,250,000,000; France, $1,475,000,000; Germany, $3,625,000,000.

In 1880 our home markets consumed about $10,000,000,000 worth of our own products, an amount equal to the entire accumulated wealth of Spain, three times the increase of wealth in Great Britain for ten years, and seven times the increase of France for the same period. Our home markets that year absorbed five times as much of our manufactured products as Great Britain exported of hers to all the markets of the world. Of course I do not claim that all this marvelous development of wealth is due to railroads and ships, but without them it would certainly have been impossible. But for these instrumentalities of commerce, the rich farms of the west and south, and even of the Middle States, would have slumbered in primeval silence, and the myriads of shops and factories would never have existed. Were the ship and the railroad withdrawn, business would be paralyzed and desolation would reign supreme over more than half of our broad domain.

Foreign Commerce. Contrast these grand results of our liberally developed domestic commerce, operating upon our protected industries, with the present shameful condition of our foreign carrying-trade, which has not only been sadly neglected, but sometimes treated with actual hostility by the

government. There was a time when we stood first among the nations in shipbuilding, and Great Britain alone excelled us in ocean tonnage. Once, 95 per cent. of our imports and 89 per cent. of our exports were carried in American bottoms, and our merchant marine became the boast of every citizen, and the envy of the world.

Now, so far as foreign trade is concerned, our shipyards are comparatively silent, and our flag has almost disappeared from the high seas. The relative decline in our foreign shipping has been constant and alarming, until in 1889 only 12.25 per cent. of our imports and exports was carried in American bottoms, being the smallest percentage in any year since the formation of the government. Time will not permit me to trace the rise and fall of this industry, or to point out in detail the causes which have resulted in our present humiliating and unprofitable condition. Suffice it to say that the fault was not with the founders of our government. They fully appreciated the value and the necessity of a strong and healthy merchant marine, and left on record no doubt of their purpose to protect the interests of the republic, on the water as well as on the land. The second act passed by the First Congress — July 4, 1789 — provided for the protection of American shipping by the imposition of a discriminating duty in favor of teas brought in American vessels, thereby signalizing the first Fourth of July under the Constitution, by a declaration of commercial independence as a supplement to the declaration of political independence made thirteen years before.

The third act of Congress, passed sixteen days later, imposed tonnage duties as follows: —

American vessels per ton	6 cents.
American-built vessels belonging to foreigners per ton	30 cents.
All other vessels, per ton	50 cents.

On September 1, the same year, Congress prohibited any but American vessels from carrying the American flag. By the tariff act of 1794 an additional discriminating duty of 10 per cent. was levied on all goods imported in vessels not of the United States. And in all changes of the tariff prior to the war of 1812 this discriminating duty of 10 per cent. was re-enacted. So great was the development of our shipbuilding

and shipping interests under the fostering influence of these acts that we sold ships amounting to hundreds of thousands of tons to foreigners, and soon took front rank among maritime nations.

Voicing the national pride, in 1825 Daniel Webster said, "We have a commerce which leaves no sea unexplored; navies which take no law from superior force." How like bitter irony these words would sound in 1891. The brilliancy of our achievements on the ocean begat overconfidence, and listening to the siren voice of free trade, we gradually yielded to the seductive phrase, "reciprocal liberty of commerce," which at that time became very popular, until, in 1828, Congress swept away all protection to our foreign shipping interest, and opened our ports to the ships of all nations on the same terms as to our own. So strong had our position become under the protective policy of the first twenty-five years of national life that our merchant marine continued to be prosperous so long as wooden vessels were the only vehicles of ocean commerce, and other nations refrained from heavy subsidies to their ships.

But when wooden vessels began to be supplanted by iron steamers, and European governments poured their contributions into the treasuries of their steamship companies, the decadence of American shipping began, and has continued ever since. How could it be otherwise? The American people ask no odds against any in the world. Give them an even chance, and they will distance all competitors; but how can they be expected to compete unaided against foreign shipyards and shipowners, backed by the power and the treasuries of their governments? The amount which has been thus contributed to sweep our commerce from the seas cannot be accurately stated, but it is known to have reached hundreds of millions of dollars.

The mischief and its cause are both apparent. What is the remedy? It cannot be found in the reënactment of the legislation of 1789, because treaties stand in the way, and it would not now be expedient even if there were no treaties on the subject. In my judgment the remedy is plain and easily applied. If we would regain our lost prestige, reinstate our flag upon the ocean, and open the markets of the world to American producers, we must make the contest with the same weapons

which have proved so successful in the hands of our rivals. No nation can better afford this kind of contest than ourselves. Surely no object is of greater importance than the enlargement of our foreign markets, and nothing will contribute so much to that end as the command of direct and ample facilities for reaching them. The folly and the danger of depending upon our competitors for the means of reaching competitive markets cannot be expressed. Aid to our merchant marine is not aid to a class, but to the whole people, — to the farmer, the merchant, and the manufacturer, quite as much as to the shipbuilder and the shipowner.

Will Government Aid Pay? But it will cost money. Will it pay? Yes, a hundred-fold. The aggregate of our foreign carrying-trade for the last twenty-five years, while not more than one tenth our domestic trade, has, nevertheless, reached the enormous sum of $29,465,124,920. Estimating the cost of transportation at 10 per cent. of the value of the goods, we have an expenditure of about $3,000,000,000, at least 80 per cent. of which ($2,400,000,000) has been paid to foreign shipowners. If we add to this $20,000,000 a year paid for passage money, we have a grand total of $2,900,000,000 paid to foreign labor and capital during the last quarter of a century, a sum larger by nearly two hundred millions than the maximum of our bonded debt growing out of the late war.

Are not the benefits which would accrue from paying these sums to our own people worth saving? During that period we have exported of gold and silver, to pay balances of trade against us, an excess of $607,000,000 more than we have imported. Had we carried a fair share of our own foreign commerce in American ships, owned by American citizens and manned by American seamen, this vast sum, and much more, might have been retained at home to enrich our own people. Suppose that for twenty-five years we had given $5,000,000 a year in aid of our foreign shipping, and reduced by that amount the prepayments of our bonded debt, should we not have been far better off than we are now? Is it not high time these vast interests received attention? Have we not tried the do-nothing policy long enough?

Shall we give that protection and support to our foreign merchant marine that other nations give to theirs, and which

we freely give to all our other great interests, or shall we accept as inevitable our present shameful position? I regret to say that the uniform record of indifference, if not actual hostility, during the last fifty years, affords little reason for encouragement. In fact, the tendency of late has been to surrender to foreigners even our domestic commerce, rather than to assert ourselves upon the ocean. Discriminations of the most astonishing character have been made, both by Congress and by treasury regulations, in favor of Canadian railroad lines and steamships against our own. One instance of this kind may serve to illustrate the nature and extent of many other discriminations of like character.

Asiatic merchandise, destined for New York, if brought in American vessels to San Francisco, must undergo all the forms and delays of entry, under the strict scrutiny of customs officers, and then be placed in cars heavily bonded, for transportation through our own country to New York, while the same merchandise is brought in Canadian or British steamers to Vancouver, is transferred at once, and without any substantial surveillance to Canadian railways, which are not required to give bonds, but are permitted to pass our frontier and proceed to New York or other eastern ports unvexed by any of the disagreeable attentions of customs officers. The same discrimination has existed for years in favor of European goods landed at Montreal and transferred to Canadian railroads for western American ports, against goods landed at New York, Boston, and other eastern ports, to be transported wholly through our own country to their western destination. The result of these unfair and unjust discriminations against our own people and our own transportation lines has been not only seriously to jeopardize the revenues, but also to build up foreign transportation interests at the expense of our own.

"Reciprocal liberty of commerce" is a high-sounding, seductive phrase, but the kind of liberty our foreign shipping interest has enjoyed, for the last fifty years, is the liberty to die under unjust discriminations of the London Lloyd's Register Association, the crushing powers of European treasuries, and the utter neglect and indifference of our own government. Reciprocity itself is a most valuable thing, if kept within the lines of protection, but reciprocity by which we surrender our

merchant marine to our rivals, or give away a home market, worth ten times more to us than all the other markets of the world, in the vain attempt to grasp an uncertain market abroad, is a policy freighted with immeasurable disaster.

Presidents of the United States have repeatedly expressed the national humiliation and appealed to Congress for action in behalf of our rapidly vanishing merchant marine, but thus far their words have fallen upon deaf ears. Let us hope that the urgent appeals of President Harrison on this subject may bear fruit in some well-devised measure of protection and encouragement.

CHAPTER XXVII.

METHODS OF PROTECTING SHIPPING.

First Principles. In regard to our marine, three facts confront us. First, our proportionate carriage in the foreign trade has been gradually decreasing for sixty-six years, in which time it has fallen from 92.3 to 12.45 per cent., making a loss of 79.85 per cent., upon the total ocean freightage of exports and imports. The loss, during four years of the war, was 37.5 per cent. Second, on this industry there has been so little protection, during this period, that, as a factor, it may be disregarded, and the fact recognized that free trade has been the ruling and ruinous condition. Third, a remedy is called for, and it must be protective of the interest, or it will do no good. To make an intelligent choice of a remedial measure or system of expedients, we must know, first of all, *what it is* that protection must accomplish. According as this question is answered will we be right or wrong, and our legislation efficacious or ineffectual.

As vessels are built for *use*, it seems a simple matter to answer rightly, that protection must secure, first, preference for work; second, such advantages as will make service constant and remunerative. This is all that is necessary, and nothing more is wanted. It ought to be easy to fill these conditions. In the first place, we have the work to be done. All that is requisite is to give employment to our own, instead of foreign vessels. If it be said we have not the work to be done, that the exporting and importing is, seven eighths of it, in the hands of aliens, it is true, nevertheless, that we may influence largely the business done in our own ports, and we should recover our commerce for the hands of our own people.

We have a proof of the correctness of this view of protection in the circumstances of the British marine. That has been protected for fifty-eight years by discriminative ship-inspection

and classification; and for thirty-eight years by discriminative underwriting on hulls and cargoes. One of these policies looks to inducing the preference for employment of British tonnage, and the other to renewal of engagements and higher freights.

Protection by Discriminating Duties. We have had an illustration of the working of these principles in our own history. Discriminating duties on imports, while imposed, acted in foreign ports to induce the loading of our vessels in preference to foreign, unless the freights were made much less. During the forty-nine years of this protection and down to 1858, the proportionate carriage of imports exceeded that of exports in American vessels by an average difference of 6.86 per cent. That the protection given directly to our import carriage helped our export indirectly, is proved by these facts: —

	Per cent.
Average difference between import and export carriage for 41 years of protection, 1790 to 1830, included . .	4.85
Average difference between import and export carriage for 27 years of unprotection, 1831 to 1857, included . .	9.92

Thus, protection by discriminative duties, being correct in principle, could not help proving effective in practice. The British have supplied their place with what is really better for them, as they have but few duties, — their inspection and underwriting policies.

Protection by Export Bounties. The opposite of discriminating duties would be bounties paid on the shipment of exports. It would take but a small percentage upon the value of merchandise sent abroad to induce its shipment by American vessels. The bounty should be paid to the shippers, whence it would find its way to the producers. It need be no greater than the premium rate of insurance in any case, and for the greater part of our trade might average *only one* per cent. It should be equivalent to free insurance on cargoes in American vessels. Before it can be applied, however, we must repeal a few foolish acts, and abrogate certain disadvantageous treaties. Take, for instance, the act of March 3, 1815, passed for the purpose of stripping off, by treaty of July 3, 1815, our shipping protection against the British, between their European territories and the United States.

By this convention the following points were yielded: —

(1) No higher or other duties on productions of each country than on those of other foreign countries.

(2) No higher or other tonnage duties or port charges on British than American vessels.

(3) The same duties on productions of each country imported by American or British ships.

(4) The same duties and *bounties* on productions of each country exported, whether in American or British vessels.

(5) Where drawbacks are allowed upon the reëxportation of goods they shall be the same, whether by British or American vessels.

Article (2) has never been observed by the British. Our vessels have to pay "light dues" in some of their ports, while their vessels pay none in any of ours.

This treaty, while in force, inhibits us from paying export bounties on products to Great Britain, unless in British as well as American vessels. It was negotiated by John Quincy Adams, Henry Clay, and Albert Gallatin, all three of them politicians, pure and simple, without a particle of interest in the American marine. The ratification of this treaty was a virtual surrender of the independence of the United States. Great Britain needs no other document to secure her ascendency in North America. By the "favored nation" clause, which it contains, we have compromised our independence with other powers. As now we need again to protect our shipping, this treaty prevents so doing by discriminating duties, and it is equally out of the question by export bounties, while the acts upon which it was founded stand unrepealed. That we cannot, if we choose, pay planters a bounty on cotton, or farmers on wheat, raised and shipped to Europe in American vessels, may strike our people as an abridgment of liberty, if not a surrender of freedom. The British made the treaty of 1815 for the benefit of *British bottoms*, and our government also made it for the benefit of British bottoms, so for that purpose it is well made. For American vessels, there is no benefit in it, while, for British vessels, it is to-day a good defense against our competition. It prevents our adoption of two direct and advantageous methods of setting up a protected rivalry. While it may be possible to find some inferior powers to whose ports we

might pay export bounties in order to help our vessels to employment, the British shackles on our legislators should be broken and cast aside forthwith.

The Carriage of Free and Reciprocity Goods. Another remedy, correct in principle, would be the carriage of "free" and "reciprocity" goods in American vessels. On this line, Senator Aldrich, of Rhode Island, in 1886, made a most useful motion, which was to secure agreements with sugar-producing countries for importing free of duty sugar and molasses under the flags of those countries and our own. The following resolution was introduced by him: —

"Resolved, by the Senate of the United States (the House of Representatives concurring), that the President is requested to enter upon negotiations with the governments of the several principal sugar-producing countries of the world, with a view of securing mutual agreements by which the United States shall agree to admit at its ports, free of duty, sugar and molasses, the produce of such countries or their colonies, when transported in vessels under the flag of either of the contracting parties, and upon which no export tax or other export charges shall have been levied, upon the condition that such governments shall agree to admit into their respective countries or other sugar-producing colonies, free of duties, the agricultural, mineral, and manufactured products of the United States."

This was a statesmanlike scheme, because it provided for the freighting of our vessels, equally with the working of our mines, our factories, and farms. Three years later came Mr. Blaine's plan of "tariff reciprocity," looking up a market for the products of the *land*, but thinking and doing nothing for the freightage of the sea. There is no apparent reason why vessels had to be neglected in the reciprocity scheme. It may not be too late, yet, to give shipping a share in the benefits of reciprocity, if Senator Aldrich's resolution be passed. It would certainly be permissible to provide that, besides admitting sugar, coffee, and hides free, we will reciprocate in remitting tonnage dues for vessels of the treaty powers carrying reciprocity goods. However, as tonnage dues are a small thing and Congress may abolish them, the reciprocity law should be amended so that treaty goods shall derive benefit only when carried in vessels belonging to the reciprocating powers.

For many years past, the policy of the government has aimed

to reduce the "war" revenue by increasing the "free list." This list now embraces 55 per cent. of all our importations. When we consider that, in respect to many articles, freedom from duty might, as well as not, be conditioned on the carriage of American vessels, to the exclusion of foreign; and that this advantage has not been turned to profit, we must confess to a painful appreciation of the liberality of the Yankee mind, or be convinced that it has lost its skill and courage in legislative matters. Free trade undoubtedly increases importations, while we are able to pay for goods, but there can be no reason why striking the "fetters" from commerce should not be conditioned on giving our own people *two advantages* in place of one. We are not wise in supposing that an increase of import business now gives proportionately increased employment to American tonnage. In our history, it has not done so for sixty years past. In 1846 there was a striking instance of the advantage that a reduction of our tariff gives to foreign vessels. The tariff was much reduced and importations largely increased. Did the enlargement of business benefit American shipping? Scarcely at all, but it more than doubled the work of foreign vessels. We are having a like experience now. The increased import of sugar is nearly all of it for the benefit of foreign fleets, whereas the sugar, coffee, and tea trades should have been made truly and greatly to aid in the restoration of our flag to the sea.

How Subsidies, Subventions, and Bounties Act. Subsidies, subventions, and bounties do not secure, directly, the use or employment of vessels. Their action is *indirect* and through competition. Their receipt enables a vessel to bid lower for freights, and in this way, to secure engagements. But there is nothing certain in a competitive bid. Owners, agents, and brokers of vessels do not, if they can avoid it, bid against each other like a company at an auction, but a market price is agreed on, and then the engagements go by preference. Various considerations may rule the choice at the same figures for freight. It is the power of competition that is conferred by government aid. The preference must still be secured. While that may be done through a lower rate, there is not a certainty of it. Discriminating duties or export bounties would operate immediately on the *preference*, at market rates, while subsidy,

subvention, or bounty protection must look to cutting the market rates; and, even then, may not always succeed.

It is therefore evident that the action of Treasury aid tends strongly to the reduction of freights, the world over; although the percentage of aid received that can be applied to the reduction may not be large. As a general thing, constant employment and quick dispatch are more important than high rates of freight, on loads that must be awaited. At San Francisco, it is said to cost 25 cents per ton per month to wait for cargoes. It is about the same in other ports. Vessels under subsidies, subventions, and bounties generally avoid idleness, and manage to get freights.

The portion of the world's tonnage in active employment, now under protection of some kind, — subsidies, subventions, bounties, or underwriter's favor, — is very large — not less than *one half*. It may well be comprehended that this circumstance has very much to do with the cheapening of freights. It is also easily understood that the flags and fleets under this protection will keep the sea when all others have ceased to fly and to float.

Protection by Shipbuilding Premiums. Of the more indirect and less effective methods of ship protection, shipbuilding premiums may be classed first. In 1870 the so-called "Lynch Committee," after a course of hearings, reported a bill to the House containing the following features: —

(1) A drawback of duties on materials imported and used in the building, engineering, rigging, or equipping of vessels, not exceeding on wooden sail vessels $8 per ton; on iron, $12; on composite, $10; on wood steamers, $10; on composite, $12; and on iron, $15.

(2) Where American material was used in the construction of iron or composite vessels or steamers, sums equivalent to the duties, if imported, were to be paid. (This treated wooden sail and steam with disfavor.)

(3) Sail or steam vessels engaged more than six months in the year to receive, every sail vessel, $1.50 per ton; steamers running to British provinces, $1.50; to European ports, $4; and to other foreign ports, $3.

These provisions, framed on a wrong principle, for a wounder were not enacted. In the first place, shipbuilders

have all the protection that is required, and they have it in the right way, — their job is secured. No aid from the government is necessary, and none should be asked or given for the construction of steamers or other vessels. The French, Spanish, and Italians have made this mistake, and we must not follow it. First, because there is no real weight in the argument for cheap vessels; second, because all the difficulty encountered is in *running*, and not in building; third, because the problem is not the reduction of prices for building, but the getting of *employment* and remunerative freights while in the owner's hands. Protection is not given to the building, but to the products of factories; nor upon the purchase, but the produce of farms, and it should be the same with vessels. Freights and fares are the productions of ships. It is for these that our rivals contend. Help in this contention, strife, and warfare must therefore be the purpose of a wise protection.

The paying of premiums upon tonnage engaged in the foreign trade was really the only feature in the Lynch Committee plan that had any practical point. It would have worked fairly well, though the payments were scant and wide apart. But there was equity in the design. Vessels of all sizes and kinds were included in the protection to be given. Congress, however, resorted to the imperial plan of subsidizing a few steam lines, and in a few years withdrew even that little of ship protection. In 1876 Senator Boutwell renewed the Lynch plan, but it was not adopted.

Mr. Blaine's Partially Protective Plan. In 1879 Hon. James G. Blaine proposed to the Chamber of Commerce of New York the following plan: —

"I would abandon all idea of granting subsidy to special lines as they apply to Congress for aid. That policy, however just and meritorious, will always be rendered abortive by jealousy, and by scandal, either actual or imputed. I would prefer a general law that should ignore individuals and enforce a policy. For instance, enact that any man or company of men that will build, in an American yard, with American materials, by American mechanics, a steamship of 3,000 tons, and sail her from any port of the United States to any foreign port, he or they shall receive for a monthly line a mail allowance of $25 per mile per annum, for the sailing distance be-

tween the two ports; for a semi-monthly line, $45 per mile; for a weekly line, $75 per mile. Should the steamer exceed 3,000 tons, a small advance on these rates might be allowed; if less than 3,000 tons, a corresponding reduction; keeping 3,000 tons as the average and the standard. Provide that the steamships shall be thoroughly inspected by a competent commission under the direction of the Secretary of the Treasury, the Secretary of the Navy, and the Postmaster-General, and thus insure the very first class of construction for safety and for speed, both for passengers and cargo."

Of course, only the outlines of this plan can be criticised. It looks only to *steam* navigation, and to the *postal* service, but the mileage feature in it was correct. What mainly is wrong is the theory of partial protection, and the idea of subordinating the business of shipowning to the carriage of mails. The rule should be the other way. In all our subsidy legislation the mistake has been made of requiring the Postmaster-General, where Congress has omitted it, to prescribe the size and speed of vessel, the number of trips per year, and other particulars of service that belong to the shipowner to determine. It is perfectly absurd thus to make the Postmaster-General the manager-in-chief of the steam marine of the United States. In all our history, we have never had a Postmaster-General qualified for such a responsibility.[1]

The mail and its carriage are things too small and inconsequential to control the designing and building of a nation's marine. It takes the knowledge and experience of years of business, and an understanding of the traffic needed between any two or more ports, to enable the brightest minds to adapt and plan successful vessels for the making of money. Mail subsidy protection might easily be so crude and stiff in its provisions as to wholly defeat its purpose. It should therefore play a subordinate part. The leading part is for the owners to fill and well perform.

Regulation of Triangular Trade. A simple and effective means of securing freights for American vessels in foreign ports would be found in the regulation of the "triangular trade." In other words, the present practice of admitting vessels of all

[1] Once, the Post Office Department planned for steamers to deliver mails at a city several miles inland, 3,000 feet above the sea.

flags, with cargoes from all countries of the world, should be modified by law, so as to admit vessels from other countries than their own *in ballast only*. This would do away with British, French, and German ships bringing cargoes from China, Brazil, or Mexico. It would prevent our vessels, if applied to them in return, from carrying cargoes from China, Brazil, or Mexico to British, French, or German ports, but we have now no trade of this kind, while the flags mentioned, with others, are taking away all our foreign trade. Our marine is sinking in a maelstrom of reciprocation that does not reciprocate. Our reciprocal rights have been rendered worthless, in large measure, by the protection now so generally given by foreign nations, who should have been content to confine it to *direct* traffic. For instance, if Spain subsidizes a line of steamers to run between the countries of South and Central America or Mexico and the United States, we should compel her ships to arrive in *ballast*. When France and Italy pay a bounty on the running of ships, they should arrive in *ballast*, from all ports not under their respective flags. And so for other nations.

In this proposition, in its broadest application, there is nothing unfair or unjust, and nothing that our own shipping would suffer from. When the "tonnage bill" was framed (as may be seen in Chapter XXV.), its application was confined to "vessels plying between the ports of the United States and foreign ports." It was not proposed to transgress the principle now laid down, that indirect trades are not rightfully the subject of third party protection, or even of enjoyment. It is not a matter of right, but of privilege only, that a British ship may bring a cargo from Brazil to the United States. The *right* lies with vessels of the Brazilian and American flags. That Norwegian vessels shall monopolize our West India fruit trade is only a privilege that we are foolish to grant, — for the mere delight of pleasing Norway.

It is believed we have no treaties that, rightly interpreted, stand in the way of enacting a measure for the regulation of triangular trade. They are all based, at least theoretically, on the principle of reciprocal advantage, each nation to receive an equivalent from the other. It is therefore just and expedient, when this principle no longer rules, because new and changed

conditions have supervened, that such treaties, if any exist, be abrogated by Congress, and such other measures substituted therefor as will properly protect the interests of the United States.

Free Pilotage. There is a small benefit that might be conferred, so long as tonnage taxes are collected from vessels in foreign trade. The government might pay their pilotage bills, in and out of American ports. Taking the fleet in the foreign trade, as a whole, the receipts from tonnage dues and the expenditure for pilotage would, it is believed, pretty nearly balance.

A System Needed. Finally, it is not a single measure of protection, but a well-considered system, that is needed to nourish the growth and insure the prosperity of an American marine. While the friends of this interest have faith in the wisdom of Congress, they feel that the speediest tonic and restorative would be the tonnage bill (Chapter XXV.). Other measures, in substitution or modification of it, might follow, until a permanent system, without cost to the treasury, shall have been worked out and finally established.

It is as true of the shipping interest as of other industries needing defense from foreign competition, — "when there is a will there is a way." It lies with the American people to have an American marine, or to depend on rivals and enemies for shipping which shall do their foreign trade. There are ways enough, and the best method will reveal itself, if we but put our heads to work with resolution, and keep our hearts true to our patriotic purpose, — *the American ship for American trade*, — in the interest, the safety, and the honor of the people of the United States.

APPENDIX.

THE LOAD-LINE PROBLEM.

It is a fundamental of the building art that the structure should be planned for the load. Not only must a work have strength for the uses intended, but its service must be limited to its competency, if we would preserve its strength and extend its life.

(1) To every member of a structure a margin or reserve of power must be given, that it may endure the stresses and survive the strains of use. The builder or engineer, knowing the strength of his materials and the stoutness of their combination, is guided by experience and judgment in fixing the factor of safety.

Ships are not exceptions to the general laws of mechanism. They must possess all the qualities of structures necessary on the land, and, in addition, those peculiar to the sea. Their foundation must be contained within themselves. The fluid in which they float is in constant motion. Their stresses are ever varying, even in the smoothest sea. Built for carrying loads upon this fluctuating support, a ship may be rolled, pitched, and twisted with every wave, sometimes with regularity, at other times with frightful caprice and furious energy. The greater the load, the more needful the strength and the more imminent the danger in mounting the sea and then plunging into its depth; in dashing from side to side, or sweeping the decks with water. If any work of man requires proportioning to its load and its exigencies, it is the freighting ship. Her factor of safety must indeed be high. Her builder must study her structural needs, and provide in her fabric for all emergencies.

(2) But there is another principle than strength on which the safety of vessels depends at sea. A ship is not only a structure, but a float; not only a machine, but a carrier. Under sail or steam at sea she must possess a power that the waves cannot overcome while her strength shall last. This quality is buoyancy, — specific lightness of body. By its power, when nearly buried in the seething sea, ships rise to the surface again; but once under the waves without its presence would disappear forever. It is upon this buoyant power that carriage depends, but safety at sea requires that cargo shall not consume it all.

In a harbor or smooth water the least possible lightness will float a vessel in a state of rest. She may there be loaded to the very verge of her sides, only that the water be refused entrance; or, if decked, she may be laden "deck to," and still float. If the deck has the usual sheer, she may be loaded until the water flows over it, except at bow and stern, and she will still swim and keep her bottom. But let the wind arise and the sea make, and the necessity will soon appear for a limit to the deep-load draft, and the presence of freeboard in the sides, even in a sheltered roadstead. With the creation of motion in the sea and in the vessel a demand for wave buoyancy will spring up, and it must be supplied, or the overloaded craft will be deck-swept, foundered, or sunk.

To be navigable, it is not enough that vessels shall be able to float; but they must have freeboard and consequent wave buoyancy, or be unseaworthy hulks. Navigable vessels must carry their decks above the water proportionably to their immersion below it. Experience has determined this necessity. When the sea grows high and sharp by the violence of the wind, it rises upon the sides and ends of a vessel and mounts the decks if possible. The vessel, having acquired wave-like motions, rises and falls into the sea with more or less momentum, first one end and then the other, or one side and then the other. Even the centre of gravity itself is often obliged to rise and fall, thus increasing the submersion and reducing the freeboard while the water is disturbed and waves prevail. The load-line that the owner sees in port is one line, but the load-line that the crew sees at sea in a gale of wind is another, and a deeper line, often in dangerous proximity to the decks of freighting vessels.

Illustrations of the effect of overloading are numerous. One that has got into the books runs thus: The owner of a coal ship in the trade between Cardiff and Rouen paid the master by the quantity of coals he delivered. At first, this ship was driven to perform three voyages to two of other vessels. Then the master began experimenting in deep loading; each succeeding voyage he immersed the sides three inches deeper than before. Finally the ship sailed, and has never been heard from since. On the other hand, cases of saving vessels from the consequences of overloading by jettison, or throwing a portion of cargo overboard, have been common enough to teach experienced mariners the necessity of freeboard, and the limits to loading deeply.

(3) Ever since cargo vessels have been built, shipbuilders have known they must have strength for the greatest load, and freeboard for the heaviest sea. Mariners have known that "weak" and leaking, "unsound" and sinking, "overloaded" and foundering, are causes and effects. Underwriters and owners also know that the "dangers of the seas" await all vessels out of condition, or loaded

beyond their powers of strength and buoyancy, yet thousands of lives and millions of property are annually swallowed up for the want of safe rules and their observance for loading vessels. It should be the business of statesmen to learn these things, and of government to provide the means of safety.

THE PRINCIPLE OF FREEBOARD RULES.

(1) Waves are excited by the force of the wind in passing over the sea. By pressure and friction on the surface, the motion of the wind is in part communicated to the water. The latter oscillates and forms in waves, their amplitude depending on different causes.

Matter of any kind put into motion acquires momentum and develops power. The power of waves is manifested in their velocity and amplitude. The towering height and enormous breadth of ocean waves prove their power is immeasurable.

A vessel floating in waves must be subject to their impulse and recoil. She must receive their motion and yield to their movements, which she may hinder, but not obstruct, unless at her peril. No materials, nor any combination of them, can withstand sea-labor; the only safety is in evading it. The motion in a wave approaching a ship cannot pass through her, wholly, without effecting her destruction. If she shall survive, it must pass under, around, or over her, and will be sure to take the shortest and easiest course. For the wave motion to pass under the vessel she must be lifted, and that in the same time. If too deep in the water or too narrow at the surface to be lifted in the time of the wave, and the topside is too low to keep off the unbalanced crest, then it will break upon the deck, and make a trial of the vessel's strength and buoyancy.

The principal danger from waves inheres in their rate of motion and the interception of their movements by the immersed body of a vessel. The overloaded ship has been likened to a half-tide rock, over which the sea must break because the rock cannot rise. When a ship cannot rise in time, it is because her reserve buoyancy is not sufficient to give her ample lightness when the sea mounts up around her. Her want of life is caused by deficient freeboard, and, in proportion to her deadness, the seas will beat upon her sides and deck. Wave-beating destroys mechanism, and an overloaded vessel may fail at any moment to endure the violence imposed upon her. It is thus that overloading completely disqualifies a vessel to face the ocean in a storm.

(2) Vessels, then, require freeboard on account of their load-depth in the water. The farther down the bottom goes the higher up the side should rise. This is necessary for two reasons: first,

to obtain the strength to carry the load over an undulating sea: second, to provide the buoyancy to prevent that sea from breaking upon the deck, perhaps forcing the hatches or breaking the beams, and loading the vessel with tons of water; but in any event taxing her strength, using up her buoyancy, and sapping her life. If she shall spring aleak, as she may do, at such a moment of danger, where will her safety be found, with deck flooded or swept, men at the pumps or washed overboard, and water gaining in the hold? Verily, vessels do need freeboard, and this should be provided in loading by proper rules.

As a general proposition, derivable from experience in navigation, it may be laid down that the freeboard first assumes a sensible proportion to depth of immersion at about 6 feet draft, provided the length is moderate. Decked craft of less than 6 feet draft of water, unless of faulty dimensions and form, oppose so little hindrance to the free motion of unbroken waves that their degree of freeboard is as much a question of convenience as safety. Under 6 feet draft the different sizes of craft may load to nearly the same freeboard line. Above 6 feet draft, vessels begin to have depth and weight capable of exciting labor of more or less severity at sea, first, as the model may be adapted to intercept the waves or permit them to pass freely; second, in proportion as the draft of water increases; and third, as the burden assumes the character of a load.

(3) But vessels in wave-water are found to require freeboard for lightness on account of their length as well as depth. All experience proves this to be the case. Surf-boats have to be built shallow, wide, and short, so as to engage but one sea at a time. Long ships loaded as deeply as short ones cannot rise so quickly at the ends, and must, therefore, be wetter and more dangerous. As they will not rise so quickly, they will not mount so high, and will consequently offer a longer resistance to the motion of the sea. The need of greater buoyancy stored in the topsides and beneath the upper-decks of long vessels accords with the requirement of more strength than is necessary in short ones. There is, therefore, a twofold reason for giving the long ship more side out of water than a short one.

The necessity for increased freeboard, on account of overlength, first becomes apparent in well-formed vessels at the limit of ten depths for the length. This proportion bears a likeness to that established by the force of wave-propagation to the height and length of waves of the second order. There are no exact observations by which it can be established that the standard seaworthy proportion of length to depth should be greater than eight depths for the length; but experience in navigation will bear out the limiting ratio of ten to one with ample proof.

(4) Again, the freeboard requisite on account of depth and length may be modified by the vessel's breadth. The advantage of a broad bottom over a narrow one of same depth is that the former will not be carried by momentum so deeply into the water, and, therefore, will have more time to rise. She will also lift more weight with the same freeboard immersion, ship less water in consequence, and be safer at all times. The wide vessel may therefore have less side out of water, though perhaps no less of buoyancy in reserve, than a sharp bottomed or narrow one.

As near as can be judged by experience in navigating vessels of different proportions of breadth to depth, the influence of breadth begins to be favorably felt when it has reached the proportion of two to one.[1] In the average vessel, it is at about this point that breadth commences sensibly to increase the stability, and stableness is of itself a quality which largely enables a vessel to keep her deck above the waves.

Of late vessels have been built with topsides and deck formed into one curved surface, no bulwarks being erected, the design being not to obstruct the waves, but to allow them to run over the hull. Alexander McDougall, of Duluth, has built many such vessels for the business of the Great Lakes, and some for ocean trade, and general success attends the new model. It is found that by its adoption the minimum of freeboard or buoyancy reserve may be given to freighting vessels. But these vessels in gales of wind must be handled from decks or towers built above the reach of the sea, which may be done with safety, since the sea, being unobstructed by topsides and bulwarks, rises but little above the hull and soon returns to place.

OF FREEBOARD RULES.

Rules for load limitation, to be useful, must be of easy and general application. Regard must be had to the nature of the navigation, the length of voyages, the proportions and propulsion of vessels, and the seasons of the year. The principles of water pressure and wave motion must be applied. Not only after vessels are built, but when they are designed is it necessary to fix the loading limit. Without the knowledge of the load-line height there can be no perfect design of a cargo ship, nor a scheme of proportions for building her worthy the guidance of a mechanic. The rules in any system of vessel classification should be framed to govern construction with reference to their carrying, in safety, the burdens which they may bear at the designated line of flotation. The principles are simple.

First. The load is in proportion to the draft of water, and so must be the strength to carry it.

[1] That is, when the draft without keel included is equal to the half-breadth.

Second. The hindrance of wave oscillation is in proportion to the load and its depth.

Third. The load diminishes the vessel's time of oscillation and makes her sluggish in the ratio of the square root of load. The square root is, therefore, a freeboard factor.

Fourth. The dangers of waves, depending upon their velocity and height, are increased in the ratios of the squares. The squares of numbers are also factors in the rules to be applied.

Fifth. The waves of the sea often prevail in cross directions, so that on every course the vessel is likely to retard the free transmission of motion with more or less constancy. At longer or shorter intervals this retardation will be violently resented. The height to which the obstruction, now at its maximum, will force the crest of the sea, and tend to precipitate it on board, will depend upon the velocity of projection derived from the load depth, the sluggishness of the vessel, and the velocity of wave oscillation. The latter may be doubled from a fresh breeze to a strong wind; trebled from a strong wind to a gale, and so on; and is in proportion to the square root of wave amplitude at all times.

(1) As a vessel's side most intercepts the motion of a wave and generally first meets the danger in its effort to overturn or swamp the vessel, the underwater body receiving the impulse and the topside keeping off the crest, the depth of the side from the deck must form the first element of a freeboard calculation. For average purposes this depth may be taken from the gunwale or deck to the middle of the turn of the bilge at midship. (Taken in the reverse way this factor is called a height.)

(2) Beyond the limiting proportion of ten depths of hull for the length, taken from the bottom of the deck to the level of garboard strake (outside), any excess must be treated as overlength of vessel, for which freeboard must be allowed in direct ratio and added to the measure for depth. For very long vessels, in certain states of the sea, this allowance would be too small, on account of the increased liability to ship seas over the head and stern; but up to fourteen depths on the Lakes, and twelve depths for length on the Atlantic, the rule will accord with experience. Ocean vessels under ten and over eight depths in length should have allowance for underlength. Such vessels are few in number.

(3) When the breadth exceeds the proportion of two depths or heights of side the difference becomes overbreadth, which should be allowed to decrease the freeboard in a ratio corresponding to its square root.

(4) For the purpose of calculating freeboards for different seasons of the year, it will be convenient to frame the rules to take a certain percentage of an ascertained number for winter, summer, or other conditions of navigation.

(5) As great sheer to the deck unduly deepens the hold forward and aft for cargo, at the same time loading the vessel with herself at the ends, making her sluggish to rise, while decreasing the proportionate depth and strength amidship, thus doubly unfitting for a maximum load, the advantage of sheer is not considered to extend farther than the premise that the extremities will have sufficient freeboard with the sheer at the stem of seven tenths, and at the stern of three eighths, of the cube root of register length.

FREE-BOARD RULES.

A BILL TO INCREASE THE SAFETY OF LIFE AND PROPERTY ON SHIPS AT SEA BY ESTABLISHING RULES FOR FREE-BOARD OR LOAD MARKS.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all vessels above one hundred tons measurement duly registered, enrolled, or licensed, engaged in ocean or coasting trade and transportation, shall be inspected, measured, and marked for free board by a surveyor of tonnage in the port where documented, anchored, or moored; the said free board to be set off below the line of the deck, as hereinafter provided, in order that there shall be reserved for each vessel a sufficient margin of strength and a safe seagoing proportion of buoyancy, at the maximum load draft, in salt water.

SEC. 2. That the words "free board" shall denote the height of the side of a loaded vessel above the water line at the lowest point of sheer near the middle of her length, measured to the top of the beam at the side; or, in cases where a water-way is fitted, to the curved line of the top of the beam continued through to the side. In vessels with more than one deck, the one that strengthens the top of the hull, and is able to bear the shipment of seas, and has facilities for the speedy discharge of water, shall be considered the true free-board deck, whether it be the uppermost or the one next below. So-called "upper," "spar," or "hurricane" decks filling these conditions shall be taken for free-board decks from which to measure and fix the free-board or load marks. So-called "promenade" or "awning decks" are not to be taken for free-board decks, but in their cases the second or "main" deck is to be so regarded and measured from. The free board may be found by either of the methods, first or second, as an owner may prefer, but in case of using the second method the vessel must be on the stocks or in dry dock, where the level of the bilge point may be correctly determined.

SEC. 3. That in taking dimensions for free-board computations or tables, in all cases the length shall be measured on the load line (approximate) from the fore side of the stem to the aft side of the sternpost in sailing vessels, and to the aft side of the after post in

steamers; the breadth shall be taken from outside planking or plating, as for the register dimension; the depth used in expressing the proportionate length of all vessels and in computing the free board by the first method shall be the perpendicular depth, taken from the top of the upper-deck beam outside, at the lowest point of sheer near the middle of the length of the vessel to the level of the top of the keel, or the seat of frame, except in awning-deck vessels, in which the depth shall be measured from the top of the main-deck beam to the same points. The depth used in computing the free board by the second method shall be taken from the beam as above, but instead of extending to the keel it shall reach only to the level of a point in the outside of bilge from which a diagonal line may be thence drawn to bisect the right angle formed by a perpendicular to the side with a horizontal line touching the outside of bottom at the garboard strake, thus permitting the dead rise and curve of bilge to vary the free board to some extent. But this method shall not be used in cases where the angle of rise from the keel to the point in the bilge exceeds twelve degrees. In all cases the free board is to be set down from the point from which the depth was taken.

SEC. 4. That the rules are framed for flush-deck vessels of standard proportions; first, of ten times the depth for length in sail vessels and twelve times the depth for length in steam vessels; second, of twice the draft (without keel) for breadth; and third, with a sheer at the stem of seven tenths, and at the stern of three eighths of the cube root of length. It has been assumed that with these proportions the strength, stability, and buoyancy will be sufficient to insure safety, with the free board fixed by the rules and tables, when the vessel is laden with homogeneous cargo. For vessels of less relative breadth than twice the draft (without keel) the free board should be increased to provide a sufficient range of stability. For vessels whose length, breadth, or sheer is greater or less than the standard above described, the free board shall be increased or diminished proportionably, as hereinafter specified. In cases of vessels built with sides crowned inward to meet and form a deck, dispensing with bulwarks, with intent that the sea may wash freely over the vessel, the free-board volume reserved shall be a portion of the whole displacement ample for safety and suitable to the draft of water for vessels and barges towed by steamers, respectively, to be ascertained by admeasurement and calculation as hereinafter prescribed.

SEC. 5. That the free boards for different classes of vessels shall be computed by the following rules:

Rule I.

A. For the winter season (October to March, inclusive), for first-class seagoing steam or sail vessels built of metal, wood, or composite materials, not having spar or awning decks, multiply the square root of the depth by the depth in feet, taken from beam to keel, and of the product take fifty per centum for the free board in inches.

B. For the winter season, for vessels as described in Clause A, crossing the Atlantic Ocean between ports north of Capes Hatteras and Finisterre, take fifty-three per centum of the product of the depth into its square root for the free board in inches.

C. For the summer season (April to September, inclusive), for vessels as described in Clause A, take forty-nine per centum of the product of the depth into its square root for the free board in inches.

D. For the summer season, for steam vessels, as described in Clause A, on voyages between Atlantic or Gulf ports and ports or places in Mexico, the West Indies, Central and South America to the River Plate, and between all ports and places on the Pacific Ocean from fifty degrees of north latitude to forty degrees of south latitude, take forty-seven per centum of the product of the depth into its square root for the free board in inches.

Rule II.

A. For the winter season (October to March, inclusive), for first-class seagoing steam or sail vessels built of metal, wood, or composite materials, not having spar or awning decks, and as described in Clause A, but whose owners shall prefer taking the depth to the bilge, as provided and set forth in section three, multiply the square root of the depth by the depth in feet, taken from beam to bilge, and of the product take fifty-six per centum for the free board in inches.

B. For the winter season, for vessels as described in Clause A, crossing the Atlantic Ocean between ports north of Capes Hatteras and Finisterre, take fifty-nine per centum of the product of the depth into its square root for the free board in inches.

C. For the summer season (April to September, inclusive), for vessels as described in Clause A, take fifty-five per centum of the product of the depth into its square root for the free board in inches.

D. For the summer season, for steam vessels as described in Clause A, on voyages between Atlantic or Gulf ports and ports and places in Mexico, the West Indies, Central and South America to the River Plate, and between all ports and places on the Pacific Ocean from fifty degrees of north latitude to forty degrees of south latitude, take fifty-three per centum of the product of the depth into its square root for the free board in inches.

Rule III.

A. If there be overlength of vessel the free board found by the foregoing rules shall be corrected by adding thereto, as inches, one third of the square root of the overlength in feet. If there be underlength deduct, instead of adding as above, one third of its square root.

B. If there be overbreadth of vessel correct the free board otherwise found by deducting from it, as inches, the square root in feet of the overbreadth. If there be underbreadth add to it, as inches, half of its square in feet.

C. If there be less sheer of deck than the standard given in section four, the free board otherwise found shall be increased by adding half the average deficiency in inches. If there be greater sheer, decrease the free board otherwise found by deducting, as inches, the square root of the excess of sheer expressed in feet or decimals of a foot.

D. If the vessel be built with inward crowning sides, as described in section four, then the free board shall be marked to reserve a portion of buoyancy, which shall be found from a scale of entire displacement, properly computed from measurements of the vessel or from the verified model or draft, which reservation shall be ten per centum for vessels drawing thirteen feet or less, keel excluded, and one per centum additional for each foot in excess thereof.

Rule IV.

A. For the winter season (October to March, inclusive), for first-class seagoing steam or sail vessels built of metal, wood, or composite materials, having an "upper," "spar," or "hurricane" deck, as described in section two, multiply the square root of the depth by the depth in feet, taken from the top of beam of said deck to the keel, and of the product take sixty per centum for the free board in inches.

B. For the winter season, for vessels as described in Clause A, crossing the Atlantic Ocean between ports north of Capes Hatteras and Finisterre, take sixty-three per centum of the product of the depth into its square root for the free board in inches.

C. For the summer season (April to September, inclusive), for vessels as described in Clause A, take fifty-nine per centum of the product of the depth into its square root for the free board in inches.

D. For the summer season, for steam vessels as described in Clause A, on voyages between Atlantic or Gulf ports and ports and places in Mexico, the West Indies, Central and South America to the River Plate, and between all ports and places on the Pacific Ocean from fifty degrees of north latitude to forty degrees of south

latitude, take fifty-seven per centum of the product of the depth into its square root for the free board in inches.

Rule V.

A. For the winter season (October to March, inclusive), for first-class seagoing steam or sail vessels built of metal, wood, or composite materials, having an "upper," "spar," or "hurricane" deck, as described in section two (and in Rule IV., A), but whose owners shall prefer taking the depth to the bilge, as provided and set forth in section three (and in Rule II., A), multiply the square root of the depth by the depth in feet, taken from beam to bilge, and of the product take sixty-seven per centum for the free board in inches.

B. For the winter season, for vessels as described in Clause A, crossing the Atlantic Ocean between ports north of Capes Hatteras and Finisterre, take seventy per centum of the product of the depth into its square root for the free board in inches.

C. For the summer season (April to September, inclusive), for vessels as described in Clause A, take sixty-six per centum of the product of the depth into its square root for the free board in inches.

D. For the summer season, for steam vessels as described in Clause A, on voyages between Atlantic or Gulf ports and ports and places in Mexico, the West Indies, Central and South America to the River Plate, and between all ports and places on the Pacific Ocean from fifty degrees of north latitude to forty degrees south latitude, take sixty-four per centum of the product of the depth into its square root for the free board in inches.

E. If there be overlength or underlength of vessel, then the free board found by Rules IV. or V. must be corrected as prescribed in Rule III., A. If there be overbreadth or underbreadth of vessel, then the free board otherwise found must be corrected as prescribed in Rule III., B. If there be less sheer of deck than the standard given in section four, then the free board otherwise found must be corrected as prescribed in Rule III., C. If the height of ("upper," "spar," or "hurricane") deck at the side exceeds seven feet between the tops of beams, then the depth of side and the free board must be measured from a point seven feet above the main-deck beam. For a less height of deck, no correction shall be made.

Rule VI.

A. For the winter season (October to March, inclusive), for first-class seagoing steam or sail vessels built of metal, wood, or composite materials, having an awning deck, divide the square of the depth by one hundred, and of the quotient take fifty-four per centum for the free board in feet and decimals of a foot.

B. For the winter season, for vessels as described in Clause A, crossing the Atlantic Ocean between ports north of Capes Hatteras and Finisterre, take sixty per centum of the quotient (of the division of the square of the depth by one hundred) for the free board in feet and decimals of a foot.

C. For the summer season (April to September, inclusive), for vessels as described in Clause A, take fifty-one per centum of the quotient (of the division of the square of the depth by one hundred) for the free board in feet and decimals of a foot.

D. For the summer season, for steam vessels as described in Clause A, on voyages between Atlantic or Gulf ports and ports and places in Mexico, the West Indies, Central and South America to the River Plate, and between all ports and places on the Pacific Ocean from fifty degrees of north latitude to forty degrees of south latitude, take forty-eight per centum of the quotient (of the division of the square of the depth by one hundred) for the free board in feet and decimals of a foot.

Rule VII.

A. For the winter season (October to March, inclusive), for first-class seagoing steam or sail vessels built of metal, wood, or composite materials, having an awning deck, as described in section two (and in Rule VI., A), but whose owners shall prefer taking the depth to the bilge, as provided and set forth in section three (and in Rules II., A, and V., A), divide the square of the depth by one hundred, and of the quotient take sixty-one per centum for the free board in feet and decimals of a foot.

B. For the winter season, for vessels as described in Clause A, crossing the Atlantic Ocean between ports north of Capes Hatteras and Finisterre, take sixty-seven per centum of the quotient (of the division of the square of the depth by one hundred) for the free board in feet and decimals of a foot.

C. For the summer season (April to September, inclusive), for vessels as described in Clause A, take fifty-eight per centum of the quotient (of the division of the square of the depth by one hundred) for the free board in feet and decimals of a foot.

D. For the summer season, for steam vessels as described in Clause A, on voyages between Atlantic or Gulf ports and ports and places in Mexico, the West Indies, Central and South America to the River Plate, and between all ports and places on the Pacific Ocean from fifty degrees of north latitude to forty degrees of south latitude, take fifty-five per centum of the quotient (of the division of the square of the depth by one hundred), for the free board in feet and decimals of a foot.

E. If there be overlength or underlength of vessel, then the free

board found by Rules VI. or VII. must be corrected, as provided in Rule III., A. If there be overbreadth or underbreadth of vessel, then the free board must be corrected as provided in Rule III., B. If there be less sheer of main deck than the standard given in section four, then the free board otherwise found must be corrected as provided in Rule III., C.

Rule VIII.

A deduction in free board shall be made in cases where the hulls have been framed and built at least four feet above the "main" or "upper" deck (but not above a "spar" deck), in the form of "poops," or "half poops," "forecastles," or "bridge houses," with bulkheads made to resist the admission of water from the sea, the erections being entered from the top, according to the following rules: —

(1) In case the combined length of the erections exceeds two tenths of the length of the vessel, for each tenth additional deduct ten per centum of the difference between the free board due to the vessel under Rules I. or II., and the free board due the vessel if she had a full-length awning deck under Rules VI. or VII. For erections of less height than four feet, for each foot of said height allow one fourth of the deduction which would be made if the erection exceeded four feet. But no deduction shall be made for poops, half poops, or raised quarter-decks and forecastles, except for height that may exist above the requirements of sheer prescribed in section four.

(2) No deduction shall be made for excessive round of beam, nor inclosures upon deck, nor for erections of any kind that are not properly built into the sides of the vessel.

Rule IX.

A. Vessels of the first class carrying cargoes of lumber, timber, or other products that will float in water, if built with sufficient beam to have stability with a part of the load on deck, will be allowed a reduction of free board to the extent of twenty per centum when so loaded. Vessels of the second class will be allowed a reduction of ten per centum. Vessels of the third class and those without class will not have any reduction allowed. The allowances under this rule must be marked and painted on the sides before their use is made.

B. An addition to the free board must be made for all vessels inspecting below the first class. In the cases of vessels holding the second class this addition shall be five per centum; in the cases of vessels holding third class it shall be ten per centum; and for vessels holding no class, twenty-five per centum. When a vessel falls from

one class into another, or rises from one class to another, application must be made for new free-board marks, and the same must be given or the vessel will be held to have no marks.

C. The class to which a vessel may belong shall be determined by the inspection of the "Record of American and Foreign Shipping."

SEC. 6. That all vessels measured for free board shall be marked on the sides for the same, in a permanent manner, by cutting or stamping the lines of draft, and by painting a stripe one foot in length and one inch in width close above said lines, the stripes to be white, or in a hue or tint contrasting with the color of the side, and to be distinctly visible at a distance of fifty feet. This marking and painting to be done at the expense of the vessel for salt water and also for fresh, after such design as may be approved by the Commissioner of Navigation, who shall issue instructions and prescribe regulations for the proper administration of this act.

SEC. 7. That the work of measuring for free board shall be done by surveyors or inspectors, who shall be indorsed by the officers of the American Shipmasters' Association, of New York, under the supervision of the collectors of customs, to whom application must be made by owners, masters, or agents of vessels. Said surveyors or inspectors shall make no computations nor declare any result, but forward the notes and diagrams of survey to the Bureau of Navigation for verification and calculation. Upon advice from the Bureau they will proceed to mark the lines for cutting or stamping and painting, as the same may have been determined from the notes and diagrams first made. For vessels afloat, survey for free board shall be made on the order of the collector. For vessels building on the stocks, application for measurement for tonnage and survey for free board shall be made ten days before launching.

SEC. 8. That on the entrance and clearance of vessels subject to this act it shall be the duty of collectors of ports or districts to require from the master of each vessel a sworn statement that his vessel is marked for free board, and that she is, or has been, loaded for the voyage about to be made, or that has been made, within the lines of the draft assigned by law. Any false swearing or violation of this act by any owner, master, or agent shall be punishable by a fine not exceeding ten cents per gross ton register, to be assessed by the collector against the vessel and paid into the Treasury of the United States. Complaint that a vessel is or was overloaded shall not be received by the collector unless made under oath by an officer of the customs or revenue service, or by at least two other responsible persons: *Provided, however*, That no vessel shall be fined for overloading before being measured and marked.

SEC. 9. That the collectors of customs be, and they are hereby, authorized to employ surveyors or inspectors to carry out the re-

quirements of this act, at a compensation not to exceed six dollars a day for the time engaged in the discharge of duty.

SEC. 10. That all acts or parts of acts which conflict with this act be, and the same are hereby, repealed, and this act shall take effect ninety days from its approval by the President.

COMPARISON OF FREEBOARDS, BY THE RULES PROPOSED FOR THE UNITED STATES WITH THOSE ADOPTED BY GREAT BRITAIN.

TABLE I. STEAM VESSELS, OF STANDARD PROPORTIONS, NOT HAVING SPAR OR AWNING DECKS. FREEBOARDS EXPRESSED IN INCHES AND DECIMALS OF AN INCH, AND MEASURED FROM THE TOP OF DECK AT THE SIDE.

Which Rule Used.	Outside Depth. Feet.	Winter Freeboard.	Winter, North Atlantic.	Summer Freeboard.	Summer, South Atlantic and Pacific.
American, I. . . .	10	18.31	19.26	18	17.30
" II. . . .	8.75	17.01	17.78	16.75	16.23
British, full . . .	10	17.50	18.50	16.50	15.50
" sharp . .	10	16	17	15	14
American, I. . . .	14	28.93	30.51	28.42	27.47
" II. . . .	12.50	27.50	28.84	27.07	26.18
British, full . . .	14	28	31	26.5	25
" sharp . .	14	25.5	28.5	24	22.5
American, I. . . .	18	41.19	43.47	40.42	38.90
" II. . . .	16.25	39.69	41.66	39.03	37.72
British, full . . .	18	41	44	39	37
" sharp . .	18	37	40	35	33
American, I. . . .	22	54.84	57.94	53.81	51.75
" II. . . .	20	53.34	56.02	52.45	50.65
British, full . . .	22	55.50	59.50	53	50.50
" sharp . .	22	50.50	54.50	48	45.50
American, I. . . .	26	69.79	73.78	68.46	65.81
" II. . . .	24	69.34	72.87	68.17	65.83
British, full . . .	26	73.50	78	70	66.50
" sharp . .	26	68	72.50	64.50	61
American, I. . . .	30	85.95	90.88	84.27	80.98
" II. . . .	27.75	85.60	90.01	84.15	81.22
British, full . . .	30	95.50	100.50	91	86 50
" sharp . .	30	87.50	92.50	83	78.50
American, I. . . .	34	103.13	109.06	101.14	97.18
" II. . . .	31.25	101.83	107.08	100.08	96.63
British, full . . .	34	118	124	112	106
" sharp . .	34	109	115	109	97

COMPARISON OF FREEBOARDS, BY THE RULES PROPOSED FOR THE UNITED STATES WITH THOSE ADOPTED BY GREAT BRITAIN.

TABLE II. SAIL VESSELS, OF STANDARD PROPORTIONS, NOT HAVING SPAR OR AWNING DECKS. FREEBOARDS EXPRESSED IN INCHES AND DECIMALS OF AN INCH, AND MEASURED FROM THE TOP OF DECK AT THE SIDE.

Which Rule Used.	Outside Depth. Feet.	Winter Freeboard.	Winter, North Atlantic.	Summer Freeboard.	Summer, South Atlantic and Pacific.
American, I. . .	10	18.31	19.26	18	17.30
" II. . .	8.75	17.01	17.78	16.75	16.23
British, full . . . (Iron.)	10	18.50	—	—	—
" sharp . .	10	17.50	—	—	—
" full . . . (Wood.)	10	19	—	—	—
" sharp . .	10	18	—	—	—
American, I. . .	14	28.93	30.51	28.42	27.47
" II. . .	12.50	27.50	28.84	27.07	26.18
British, full . . . (Iron.)	14	30	—	—	—
" sharp . .	14	27.50	—	—	—
" full . . . (Wood.)	14	31	—	—	—
" sharp . .	14	29	—	—	—
American, I. . .	18	41.19	43.47	40.42	38.90
" II. . .	16.25	39.69	41.66	39.03	37.72
British, full . . . (Iron.)	18	42	45.50	—	—
" sharp . .	18	39.50	43	—	—
" full . . . (Wood.)	18	43	46.50	—	—
" sharp . .	18	41	44.50	—	—
American, I. . .	22	54.84	57.94	53.81	51.75
" II. . .	20	53.34	56.02	52.45	50.65
British, full . . . (Iron.)	22	55.50	60	—	—
" sharp . .	22	52	56.50	—	—
" full . . . (Wood.)	22	57	61.50	—	—
" sharp . .	22	54	58.50	—	—
American, I. . .	26	69.79	73.78	68.46	65.81
" II. . .	24	69.34	72.87	68.17	65.83
British, full . . . (Iron.)	26	71	76	—	—
" sharp . .	26	67.50	72.50	—	—
" full . . . (Wood.)	26	73	78	—	—
" sharp . .	26	69.50	74.50	—	—
American, I. . .	30	85.95	90.88	84.27	80.98
" II. . .	27.75	85.60	90.01	84.15	81.22
British, full . . . (Iron.)	30	89	95	—	—
" sharp . .	30	84.50	90.50	—	—

COMPARISON OF FREEBOARDS, BY THE RULES PROPOSED FOR THE UNITED STATES WITH THOSE ADOPTED BY GREAT BRITAIN.

TABLE III. STEAM VESSELS, OF STANDARD PROPORTIONS, HAVING AN "UPPER," "SPAR," OR "HURRICANE" DECK. FREEBOARDS EXPRESSED IN INCHES AND DECIMALS OF AN INCH, AND MEASURED FROM THE TOP OF DECK AT THE SIDE.

Which Rule Used.	Outside Depth.[1] Feet.	Winter Freeboard.	Winter, North Atlantic.	Summer Freeboard.	Summer, South Atlantic and Pacific.
American, IV. . .	23	69.68	73	68.58	66.37
" V. . .	21.25	69.12	71.66	67.76	65.82
British, full . . .	23	74.50	78	72	69.50
" sharp . .	23	71	74.50	68.50	66
American, IV. . .	27	87.68	91.30	86.28	83.47
" V. . .	25	87.25	91	86	83.50
British, full . . .	27	87	91.50	83.50	80
" sharp . .	27	83	87.50	79.50	76
American, IV. . .	31	107.06	112.24	105.34	101.88
" V. . .	28.50	105.40	109.99	103.90	100.86
British, full . . .	31	105.50	111	100.50	95.50
" sharp . .	31	100.50	106	95.50	90.50
American, IV. . .	35	127.74	133.95	125.67	121.53
" V. . .	32.25	125.97	131.46	124.15	120.52
British, full . . .	35	128.50	134.50	122.50	116.50
" sharp . .	35	122	128	116	110
American, IV. . .	37	138.54	145.29	136.29	131.78
" V. . .	34.25	137.69	143.72	135.71	131.73
British, full . . .	37	142	148.50	135.50	129.50
" sharp . .	37	135	141.50	128.50	122

[1] Measured not from main, but freeboard deck.

COMPARISON OF FREEBOARDS, BY THE RULES PROPOSED FOR THE UNITED STATES WITH THOSE ADOPTED BY GREAT BRITAIN.

TABLE IV. STEAM VESSELS, OF STANDARD PROPORTIONS, HAVING AN AWNING-DECK. FREEBOARDS EXPRESSED IN FEET AND DECIMALS OF A FOOT, AND MEASURED FROM THE TOP OF MAIN DECK AT THE SIDE.

Which Rule Used.	Outside Depth. Feet.	Winter Freeboard.	Winter, North Atlantic.	Summer Freeboard.	Summer, South Atlantic and Pacific.
American, VI. . .	14	1.30	1.42	1.24	1.19
" VII. . .	12.75	1.12	1.22	1.07	1.03
British, full . . .	14	1.12	1.37	.96	.80
" sharp . .	14	1	1.25	.84	.68
American, VI. . .	18	1.99	2.19	1.90	1.80
" VII. . .	16.25	1.85	2.01	1.77	1.69
British, full . . .	18	1.58	1.87	1.37	1.16
" sharp . .	18	1.42	1.71	1.21	1
American, VI. . .	22	2.86	3.15	2.71	2.57
" VII. . .	20	2.69	2.93	2.57	2.45
British, full . . .	22	2.42	2.79	2.09	1.76
" sharp . .	22	2.17	2.54	1.84	1.51
American, VI. . .	26	3.94	4.34	3.73	3.53
" VII. . .	23.75	3.73	4.06	3.56	3.39
British, full . . .	26	3.66	4.12	3.24	2.82
" sharp . .	26	3.33	3.79	2.91	2.59
American, VI. . .	30	5.19	5.73	4.92	4.65
" VII. . .	27.50	4.94	5.39	4.71	4.48
British, full . . .	30	5.42	5.92	4.92	4.42
" sharp . .	30	5	5.50	4.50	4
American, VI. . .	34	6.57	7.26	6.22	5.87
" VII. . .	31.25	6.29	6.87	5.99	5.69
British, full . . .	34	7.37	7.91	6.83	6.29
" sharp . .	34	6.83	7.37	6.29	5.75

THE MAIL SUBSIDY BILL.[1]

AN ACT TO PROVIDE FOR OCEAN MAIL SERVICE BETWEEN THE UNITED STATES AND FOREIGN PORTS, AND TO PROMOTE COMMERCE.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Postmaster-General is hereby authorized and empowered to enter into contracts for a term not less than five nor more than ten years in duration, with American citizens, for the carrying of mails on American steamships, between ports of the United States and such ports in foreign countries, the Dominion of Canada excepted, as in

[1] Passed the House by a vote of 139 to 120, and is now a law.

his judgment will best subserve and promote the postal and commercial interests of the United States, the mail service on such lines to be equally distributed among the Atlantic, Mexican Gulf and Pacific ports. Said contracts shall be made with the lowest responsible bidder for the performance of said service on each route, and the Postmaster-General shall have the right to reject all bids not in his opinion reasonable for the attaining of the purposes named.

SEC. 2. That before making any contract for carrying ocean mails in accordance with this act the Postmaster-General shall give public notice by advertising once a week, for three months, in such daily papers as he shall select in each of the cities of Boston, New York, Philadelphia, Baltimore, New Orleans, Saint Louis, Charleston, Norfolk, Savannah, Galveston, and Mobile, and when the proposed service is to be on the Pacific Ocean, then in San Francisco, Tacoma, and Portland. Such notices shall describe the route, the time when such contract will be made, the duration of the same, the size of the steamers to be used, the number of trips a year, the times of sailing, and the time when the service shall commence, which shall not be more than three years after the contract shall be let. The details of the mode of advertising and letting such contracts shall be conducted in the manner prescribed in chapter eight of title forty-six of the Revised Statutes for the letting of inland mail contracts so far as the same shall be applicable to the ocean mail service.

SEC. 3. That the vessels employed in the mail service under the provisions of this act shall be American-built steamships, owned and officered by American citizens, in conformity with the existing laws, or so owned and officered and registered according to law, and upon each departure from the United States the following proportion of the crew shall be citizens of the United States, to wit: During the first two years of such contract for carrying the mails, one fourth thereof; during the next three succeeding years, one third thereof; and during the remaining time of the continuance of such contract at least one half thereof; and shall be constructed after the latest and most approved types, with all the modern improvements and appliances for ocean steamers. They shall be divided into four classes. The first class shall be iron or steel screw steamships, capable of maintaining a speed of twenty knots an hour at sea in ordinary weather, and of a gross registered tonnage of not less than eight thousand tons. No vessel except of said first class shall be accepted for said mail service under the provisions of this act between the United States and Great Britain. The second class shall be iron or steel steamships, capable of maintaining a speed of sixteen knots an hour at sea in ordinary weather, and of a gross registered tonnage of not less than five thousand tons. The third class shall be iron or steel steamships, capable of maintaining a speed of fourteen

knots an hour at sea in ordinary weather, and of a gross registered tonnage of not less than two thousand five hundred tons. The fourth class shall be iron or steel or wooden steamships, capable of maintaining a speed of twelve knots an hour at sea in ordinary weather, and of a gross registered tonnage of not less than fifteen hundred tons. It shall be stipulated in the contract or contracts to be entered into for the said mail service that the said vessels may carry passengers with their baggage in addition to said mails and may do all ordinary business done by steamships.

SEC. 4. That all steamships of the first, second, and third classes employed as above and hereafter built shall be constructed with particular reference to prompt and economical conversion into auxiliary naval cruisers, and according to plans and specifications to be agreed upon by and between the owners and the Secretary of the Navy, and they shall be of sufficient strength and stability to carry and sustain the working and operation of at least four effective rifled cannon of a calibre of not less than six inches, and shall be of the highest rating known to maritime commerce. And all vessels of said three classes heretofore built and so employed shall, before they are accepted for the mail service herein provided for, be thoroughly inspected by a competent naval officer or constructor detailed for that service by the Secretary of the Navy; and such officer shall report, in writing, to the Secretary of the Navy, who shall transmit said report to the Postmaster-General; and no such vessel not approved by the Secretary of the Navy as suitable for the service required shall be employed by the Postmaster-General as provided for in this act.

SEC. 5. That the rate of compensation to be paid for such ocean mail service of the said first-class ships shall not exceed the sum of four dollars a mile, and for the second-class ships two dollars a mile, by the shortest practicable route, for each outward voyage; for the third-class ships shall not exceed one dollar a mile, and for the fourth-class ships two thirds of one dollar a mile for the actual number of miles required by the Post Office Department to be traveled on each outward bound voyage: *Provided*, That in the case of failure from any cause to perform the regular voyages stipulated for in said contracts or any of them, a pro rata deduction shall be made from the compensation on account of such omitted voyage or voyages; and that suitable fines and penalties may be imposed for delays or irregularities in the due performance of service according to the contract, to be determined by the Postmaster-General: *Provided further*, That no steamship so employed and so paid for carrying the United States mails shall receive any other bounty or subsidy from the Treasury of the United States.

SEC. 6. That upon each of said vessels the United States shall be entitled to have transported, free of charge, a mail-messenger,

whose duty it shall be to receive, sort, take in charge and deliver the mails to and from the United States, and who shall be provided with suitable room for the accommodation of himself and the mails.

SEC. 7. That officers of the United States Navy may volunteer for service on said mail vessels, and when accepted by the contractor or contractors may be assigned to such duty by the Secretary of the Navy whenever in his opinion such assignment can be made without detriment to the service, and while in said employment they shall receive furlough pay from the government, and such other compensation from the contractor or contractors as may be agreed upon by the parties: *Provided*, That they shall only be required to perform such duties as appertain to the merchant service.

SEC. 8. That said vessels shall take, as cadets or apprentices, one American-born boy under twenty-one years of age for each one thousand tons gross register, and one for each majority fraction thereof, who shall be educated in the duties of seamanship, rank as petty officers, and receive such pay for their services as may be reasonable.

SEC. 9. That such steamers may be taken and used by the United States as transports or cruisers, upon payment to the owners of the fair actual value of the same at the time of the taking, and if there shall be a disagreement as to the fair actual value between the United States and the owners, then the same shall be determined by two impartial appraisers, one to be appointed by each of said parties, they at the same time selecting a third, who shall act in said appraisement in case the two shall fail to agree.

Approved, March 3, 1891.

We will here put on record the so-called "American-Shipping League Bill," which constituted the crude measure out of which, partly, the defeated "Farquhar Tonnage Bill" was evolved.

AMERICAN SHIPPING LEAGUE BILL.[1]

A BILL FOR THE RESTORATION OF THE MERCHANT MARINE OF THE UNITED STATES ENGAGED IN THE FOREIGN TRADE.

Be it enacted, etc., That on and after the passage of this act there shall be paid, out of moneys in the Treasury of the United States not otherwise appropriated, to any vessel, whether sail or steam, constructed and wholly owned in the United States and registered pursuant to the laws thereof, and which shall be engaged in the foreign trade, plying between the ports of the United States and foreign ports, or between foreign ports and other foreign ports, the sum of 30 cents per gross registered ton for each 1,000 miles sailed, outward and inward, and pro rata for any distance traveled less than

[1] Fifty-first Congress, first session, H. R. 601, introduced December, 18, 1889.

1,000 miles on any voyage or voyages: *Provided*, That the foreign port to which the voyage is made shall be more than 70 miles from the boundary of the United States; and such payments to any vessel as aforesaid shall be paid to the owner or owners thereof upon proof of the distance actually traveled, to be made pursuant to such rules and regulations as the Secretary of the Treasury shall prepare and promulgate. Distances between ports to be determined by measurements which shall be furnished by the United States Hydrographic Office to the Bureau of Navigation. The payments, at the rate of 30 cents per ton for each 1,000 miles traveled, as herein provided, shall continue for the term of ten years at that rate, and thereafter for another term of nine years at a reduction of 3 cents per ton each year upon each 1,000 miles traveled, and pro rata for any less distance. No vessel shall be entitled to the benefits of this act except such vessel whose entire cargo shall be discharged at one or more foreign ports, or whose entire cargo shall be loaded at one or more foreign ports and discharged at a port or ports of the United States.

IMPROVEMENTS BY THE COMMITTEE ON MARINE.

Without the improvements made by the Committee on Marine and Fisheries, and embodied in the "substitute" or tonnage bill, the foregoing measure would have stood no chance for passage in the House. The principal additions were as follows: —

1. In section 1, providing that the first 1,000 miles sailed should be divided into two parts, and the encouragement thus made equal for the Gulf or Southern trade. Second, providing a scale of speed performance, with payments according thereto, so that steam navigation should be stimulated and emboldened, and postal lines formed with ships adapted to cruising in time of war.

2. In section 2, limiting the bounty to cargo carriers of a definite speed.

3. In section 3, providing for the nautical employment and education of American boys.

4. In section 4, accepting only first and second class tonnage as eligible for the bounty.

5. In section 5, providing for the inspection and classification of eligible tonnage.

6. In section 6, providing for the construction of naval cruisers to be used in the postal service.

7. In section 7, regulating the carriage of mails by sea-going steamers to every foreign port, as may be desired by the government.

8. The unit of bounty was reduced one third for sailing ships and low speed steamers, and the limit of distance navigated fixed at 7,000 miles.

FOREIGN TRADE AND TRANSPORTATION.

VALUES OF IMPORTS AND EXPORTS OF UNITED STATES CARRIED, RESPECTIVELY, IN CARS AND OTHER LAND VEHICLES, IN AMERICAN VESSELS AND IN FOREIGN VESSELS, DURING FISCAL YEARS FROM 1859 TO 1892 INCLUSIVE, WITH PERCENTAGE CARRIED IN AMERICAN VESSELS (COIN AND BULLION INCLUDED FROM 1859 TO 1879 INCLUSIVE, AS METHOD OF TRANSPORTATION CANNOT BE STATED.[1]

Year ending June 30.	Total Imports and Exports.				Per cent. carried in American Vessels.
	In Cars and other Land Vehicles.	In Vessels.			
		In American Vessels.	In Foreign Vessels.	Total in Vessels.	
1859 . . .	—	$465,741,381	$229,816,211	$695,557,592	66.9
1860 . . .	—	507,247,757	255,040,793	762,288,550	66.5
1861 . . .	—	381,516,788	203,478,278	584,995,066	65.2
1862 . . .	—	217,695,418	218,015,296	435,710,714	50.0
1863 . . .	—	241,872,471	343,056,031	584,928,502	41.4
1864 . . .	—	184,061,486	485,793,548	669,855,034	27.5
1865 . . .	—	167,402,872	437,010,124	604,412,996	27.7
1866 . . .	—	325,711,861	685,226,691	1,010,938,552	32.2
1867 . . .	—	297,834,904	581,330,403	879,165,307	33.9
1868 . . .	—	297,981,573	550,546,074	848,527,647	35.1
1869 . . .	—	289,956,772	586,492,012	876,448,784	33.1
1870 . . .	—	352,969,401	638,927,488	991,896,889	35.6
1871 . . .	$22,985,510	353,664,172	755,822,576	1,109,486,748	31.9
1872 . . .	27,650,770	345,331,101	839,346,362	1,184,677,463	29.2
1873 . . .	27,869,978	346,306,592	966,722,651	1,313,029,243	26.4
1874 . . .	23,022,540	350,451,994	939,206,106	1,289,658,100	27.2
1875 . . .	20,388,235	314,257,792	884,788,517	1,199,046,309	26.1
1876 . . .	18,473,154	311,076,171	813,354,987	1,124,431,158	27.7
1877 . . .	17,464,810	316,660,281	859,920,536	1,176,580,817	26.9
1878 . . .	20,477,364	313,050,906	876,991,129	1,190,042,035	26.3
1879 . . .	19,423,685	272,015,692	911,269,232	1,133,284,924	23.0
1880 . . .	20,981,393	258,346,577	1,224,265,434	1,482,612,011	17.4
1881 . . .	25,452,521	250,586,470	1,269,002,983	1,519,589,453	16.5
1882 . . .	34,973,317	227,229,745	1,212,978,769	1,440,208,514	15.8
1883 . . .	48,092,892	240,420,500	1,258,506,924	1,498,927,424	16.0
1884 . . .	46,714,063	233,699,035	1,127,798,199	1,361,497,234	17.2
1885 . . .	45,332,775	194,865,743	1,079,518,566	1,274,384,309	15.3
1886 . . .	43,700,350	197,349,503	1,073,911,113	1,271,260,616	15.5
1887 . . .	48,951,725	194,356,746	1,165,194,508	1,359,551,254	14.3
1888 . . .	54,356,827	190,857,473	1,174,697,321	1,365,554,794	14.0
1889 . . .	66,664,378	203,805,108	1,217,063,541	1,420,868,649	14.3
1890 . . .	73,571,263	202,451,086	1,371,116,744	1,573,567,830	12.9
1891 . . .	72,856,194	206,459,725	1,450,081,087	1,656,540,812	12.5
1892 . . .	72,948,067	220,173,735	1,564,558,808	1,784,732,543	12.3

REMARKS. — 1. The traffic in cars and other vehicles were not separately stated prior to July 1, 1870. 2. Exports are stated in mixed gold and currency values from 1859 to 1879 inclusive.

[1] Part of table 39, *Report of Bureau of Statistics*, 1892. Hitherto the percentage carried in American vessels has been computed upon the total of imports and exports. While that method would show the ratio of American to total carriage, it would not compare the work of ours with foreign *vessels*, that being the object of sixth column. — AUTHOR.

GROWTH, THRIFT, AND DECLINE OF SHIPPING IN FOREIGN TRADE.

[*Favorable events in Roman letters, highly favorable events in small Roman capitals, adverse events in italics, strongly adverse events in boldface.*]

Year.	Foreign Trade. Shipping.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.		Events, Changes, Transactions, and Influences Favorable and Adverse, accounting for the Growth, Thrift, and Decline of American Shipping in the Foreign Trade.
				Imports.	Exports.	
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.	
1789	123,893	3.64	14.00	17.5	30	DISCRIMINATIVE TARIFF AND TONNAGE DUTIES; NAVIGATION ACT PASSED.
1790	346,254	9.75	12.17	41	40	British and French at war. Duties increased 2½ per cent.
1791	363,110	9.81	13.03	58	52	British and French at war. Duties increased 2½ per cent.
1792	411,438	10.55	13.39	67	61	*Algerine piracy begun.*
1793	367,734	8.96	13.95	82	77	*Algerine war. Our first naval fights.*
1794	438,863	10.32	15.91	91	86	Duties on goods increased, AND 10 PER CENT. EXTRA ON THOSE IN FOREIGN SHIPS.
1795	529,471	12.03	26.76	92	88	British and French wars continue.
1796	576,733	12.53	32.28	94	90	*The French begin spoliation of our commerce; war follows.*
1797	597,777	12.45	27.54	92	88	*All the British banks fail. We have war with France.*
1798	603,376	12.06	26.01	91	87	*War with France continued until 1799½.*
1799	657,142	12.63	30.33	90	87	
1800	657,107	12.33	30.04	91	87	Peace with France.
1801	630,558	11.26	36.06	91	87	*Trouble with the Barbary States, followed by a two years' war.*
1802	557,760	9.74	26.04	88	85	**War with Barbary States.** A navy called for and built.
1803	585,910	9.84	20.33	86	83	**War with Barbary States.** A navy called for and built.
1804	660,514	10.82	26.67	91	86	Light-money of 50 cents a ton added to tonnage dues. Tariff raised 2½ per cent. *British impressment of our seamen begun.*
1805	744,224	11.81	34.31	93	89	
1806	798,507	12.28	35.53	93	89	*Both British and French capture and confiscate our vessels.*
1807	810,163	12.54	36.84	94	90	*British and French confiscations continued. Embargo act passed.*

1808	765,252	11.09	11.51	93	88	**Embargo act in force. Hurt ourselves most.**
1809	906,855	12.77	15.71	88	84	**Non-intercourse act.** *This, too, was damaging to ourselves.*
1810	981,019	13.43	20.84	93	90	French warfare ceased. *England determined to bring on a war.*
1811	763,607	10.18	15.29	90	86	*Great decline in our tonnage; much of it laid up.*
1812	758,636	9.78	14.91	85	80	**War with England.**
1813	672,700	8.40	6.23	71	65	**Commerce much restricted.**
1814	674,633	8.17	2.41	58	51	**Our harbors all blockaded. Very little commerce.** *Suspension of specie payments.*
1815	854,295	10.05	19.47	77	71	Peace with England. *First act for free-shipping passed.*
1816	800,760	9.12	26.10	73	68	First packet line to Liverpool. *A flood of British importations.*
1817	804,851	8.94	20.76	79	74	**Second act for free-shipping,** *causing a*
1818	589,954	6.39	23.31	85	80	*Great falling off in tonnage. Discriminating duties taken off goods from German ports.*
1819	581,230	6.08	16.55	87	82	British banks resumed specie payments.
1820	583,657	5.95	14.70	90	89	Our banks resumed specie payments.
1821	593,825	5.88	12.63	92.7	84.9	Second packet line to Liverpool.
1822	582,701	5.63	14.05	92.4	84.1	London and Havre packet lines started.
1823	600,003	5.63	14.03	92.1	87.4	*From* 1819 *to* 1827 *we made several free-shipping treaties.* West Indies opened.
1824	636,807	5.79	14.23	93.4	88.7	**Third act for free-shipping,** *suspending protective duties.* Tariff increased.
1825	665,409	5.88	17.33	95.2	89.2	*British North American and West India ports closed again.*
1826	696,221	6	14.01	95	89.6	Culmination of proportionate American carriage.
1827	701,515	5.87	13.54	94.3	87.5	*Beginning to experience effect of free-shipping policy.*
1828	757,998	6.18	13.12	91.4	84.5	**Final act for free-shipping reciprocity. Protection stripped off.**
1829	592,859	4.70	11.65	93	86	*Low freights and hard times for shipping.*
1830	537,563	4.15	11.14	93.6	86.3	*British shipping gaining our trade. Tariff reduced.* West Indies opened again.
1831	538,136	4.94	13.80	91	80.6	Railroad building. Money plentiful.
1832	614,121	4.48	13.74	89.4	75.8	Havre packets increased. *Tariff reduction.*
1833	648,869	4.63	14.11	90.7	75.5	*Tariff reduced.* France, Spain, Portugal, and Algiers at war.
1834	749,376	5.18	15.97	89	74.4	*British Lloyd's Register Society organized.*
1835	788,173	5.32	18.25	90.2	77.3	*Tariff reduction.*
1836	753,094	4.95	20.94	90.3	75.4	All packet lines increased.
1837	683,205	4.38	16.56	86.5	77.6	**Panic and suspension of banks.** *Tariff reduction.*

GROWTH, THRIFT, AND DECLINE OF SHIPPING IN FOREIGN TRADE — (*continued*).

[*Favorable events in Roman letters, highly favorable events in small Roman capitals, adverse events in italics, strongly adverse events in boldface.*]

Year.	Foreign Trade. Shipping.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.		Events, Changes, Transactions, and Influences Favorable and Adverse, accounting for the Growth, Thrift, and Decline of American Shipping in the Foreign Trade.
				Imports.	Exports.	
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.	
1838	702,962	4.39	13.84	90.6	82.8	Banks resume, *but close again in* 1839. *First British steamers arrive.*
1839	702,400	4.25	17.13	88.7	78.3	*Cunard line subsidized*, $425,000. *Canadian rebellion. British war imminent.*
1840	763,838	4.48	14.05	86.6	79.9	New England and New York banks pay specie. (They served a shipping people.)
1841	788,398	4.48	14.15	88.4	77.8	*General specie suspension. Tariff reduction.*
1842	823,746	4.53	11.23	88.5	76.3	Specie resumption. TARIFF RAISED. Duties to be cash down.
1843	856,930	4.36	11.50	77.1	77	First British war with China since 1840. American China clippers built. (Only nine months in this year.)
1844	900,471	4.66	11.38	86.7	70.5	Times improving. Shipbuilding increasing.
1845	904,476	4.54	11.65	87.3	75.8	Annexation of Texas. War impending with Mexico.
1846	943,307	4.60	11.48	87.1	76.2	Bremen packets put on. **Tariff reduction and bonded-warehouse acts.** Irish famine.
1847	1,047,454	4.96	14.46	77.2	65.3	FIRST AMERICAN TRANSATLANTIC-STEAMERS SUBSIDIZED AND BUILT.
1848	1,168,707	5.38	14.24	82.9	71.1	California gold-mining and emigration. Revolutions in Europe.
1849	1,258,756	5.62	13.10	81.4	68.9	British "free-ship" act. California clippers. Collins's steamers beginning to run.
1850	1,439,694	6.23	14.28	77.8	65.5	The English chartering our ships. (The Lloyds prevented buying them.)
1851	1,544,663	6.47	18.22	75.6	69.8	Sailing packet-lines and ships increased in number.
1852	1,705,650	6.93	17.18	74.5	66.5	*British steamers increased; their subsidy advanced.*
1853	1,916,471	7.50	19.60	71.5	67.1	Crimean war to 1856. Australian gold-mining and "clipper" trade.

1854	2,151,918	8.18	22.16	71.4	69.3	Reciprocity with Canada. *British Lloyds advance rating of iron ships to twelve years A 1.*
1855	2,348,358	8.63	19.72	77.3	73.8	Great increase of shipbuilding. *Bonded warehouse time increased.*
1856	2,302,190	8.19	22.83	78.1	70.9	*Bank contraction.* Second British war with China for three years.
1857	2,268,196	7.83	24.33	71.8	60.2	*Tariff reduction and bank panic following.*
1858	2,301,148	7.72	20.27	72	75	Rebellion in India. **Steamship subsidies withdrawn.** *Collins's Line fails.*
1859	2,321,674	7.58	22.73	63.7	69.9	*All our lines of transatlantic steamers dissolve and sell off.*
1860	2,379,396	7.58	24.27	63	69.7	France and Austria, Great Britain and China, at war.
1861	2,494,894	7.76	18.19	60	72.1	**The great civil war for four years. Southern ports closed.**
1862	2,173,537	6.62	13.28	44.8	54.5	*Specie payments suspended. Many vessels sold abroad. Insurance rates advanced.*
1863	1,926,886	5.75	17.46	43.3	40	*Rating of British iron ships raised to twenty years at Liverpool.*
1864	1,486,749	4.35	19.61	24.6	30	**Confederate cruisers destroying our ships at sea.**
1865	1,518,350	4.36	17.36	29.9	26.1	End of the civil war. Insurance rates reduced. Efforts to regain our losses.
1866	1,387,756	3.91	28.47	25.1	37.7	Prussia and Austria, France and Mexico, at war.
1867	1,515,648	4.18	24.28	28	39.1	Culmination of effort to revive our navigation.
1868	1,494,389	4.06	23.02	33	36.6	*Continued specie suspension. British steamers increasing.*
1869	1,496,220	3.97	23.25	31.3	34.9	*British Lloyds discriminated severely against wooden ships since the war.*
1870	1,448,846	3.76	25.76	33.1	37.7	**British Lloyds degrade "foreign ships" in their Register.** *Opening of Suez Canal.*
1871	1,363,652	3.45	28.70	31	32.6	Bank expansion. France and Germany at war.
1872	1,359,040	3.37	30.80	26.8	29.8	*Tea and coffee put on free list. British steamers bring the tea.*
1873	1,378,533	3.33	32.42	27	25.7	*Bank contraction, followed by panic.* American steamers in foreign trade increased.
1874	1,389,815	3.27	30.88	30.2	24.6	New steamers on the Pacific Ocean to China and Japan.
1875	1,515,598	3.48	28.00	29.2	23.7	Development of Pacific Ocean trade.
1876	1,553,705	3.46	25.51	30.8	25.4	Reciprocity treaty with Sandwich Islands Russo-Turkish war.
1877	1,570,600	3.41	25.95	31.5	23.7	Development of West Indian and Mexican trade by steam.
1878	1,589,348	3.36	25.59	32.2	22.6	Bank and government contraction in view of specie payments.
1879	1,451,505	3.00	24.60	31.6	17.6	*Increase of foreign steam lines.*
1880	1,314,402	2.62	32.27	22	13.7	Specie payments resumed.
1881	1,297,035	2.52	32.58	19.9	13.3	Large employment of our ships in California grain trade.

GROWTH, THRIFT, AND DECLINE OF SHIPPING IN FOREIGN TRADE — (*continued*).

[*Favorable events in Roman letters, highly favorable events in small Roman capitals, adverse events in italics, strongly adverse events in boldface.*]

Year.	Foreign Trade. Shipping.	Shipping per Capita.	Commerce per Capita.	Proportion of American Carriage in Foreign Trade.		Events, Changes, Transactions, and Influences Favorable and Adverse, accounting for the Growth, Thrift, and Decline of American Shipping in the Foreign Trade.
				Imports.	Exports.	
	Tons.	Cubic ft.	Dollars.	Per cent.	Per cent.	
1882	1,259,492	2.39	29.71	19.2	12.8	*Bounty and subsidy protection to French marine.*
1883	1,269,681	2.35	29.76	20.7	13.4	Large employment of our ships in California grain trade.
1884	1,276,972	2.31	27.37	22.4	14.4	*"Free-ship" plank in St. Louis platform discouraging our shipping business.*
1885	1,262,814	2.23	24.84	21.3	13.7	*German subsidy protection to marine.*
1886	988,041	1.71	24.67	20	13.6	*British admiralty subvention. Italian bounty and subsidy established.*
1887	989,412	1.67	25.46	18.6	12.2	*Increase of foreign subsidized steam lines and ships.*
1888	919,302	1.52	25.25	18.5	11.79	*Congress refusing to protect our shipping.*
1889	999,619	1.56	26.12	17.08	11.62	Protection plank for American shipping in Chicago platform.
1890	928,062	1.47	27.52	16.68	9.03	*Passage of bounty bill delayed. French bounties renewed. Italian subsidies renewed. Canadian subsidies begun.*
1891	988,719	1.54	29.20	15.85	9.26	**Bounty bill failed of passage.** Postal subsidy bill passed.
1892	977,624	1.49	28.94	17.66	8.11	*British underwriters reject our ships in Pacific coast grain trade.* (See pages 222–225.)

Note. — For the fiscal year of 1892, the percentage of American carriage for imports and exports by vessels, taken together, is 12.3, — or less than one eighth of the whole traffic.

SUBSIDIES AND PAYMENTS FOR OCEAN MAIL SERVICE BY GREAT BRITAIN AND THE UNITED STATES.

Year.	Great Britain.	United States.				
	Subsidy.	Subsidy and Mail Payments.			Percentage Paid.	
	To British Steamers.	To American Steamers.	To Foreign Steamers.	Total Amount Paid.	To American Steamers.	To Foreign Steamers.
1848	$3,250,000	$100,500	—	$100,500	100	—
1849	3,180,000	235,086	—	235,086	100	—
1850	5,313,985	619,924	—	619,924	100	—
1851	5,330,000	1,465,818	—	1,465,818	100	—
1852	5,510,635	1,655,241	—	1,655,241	100	—
1853	5,805,400	1,880,273	—	1,880,273	100	—
1854	5,950,559	1,903,286	—	1,903,286	100	—
1855	5,741,633	1,936,715	—	1,936,715	100	—
1856	5,713,560	1,886,766	—	1,886,766	100	—
1857	5,133,485	1,589,153	—	1,589,153	100	—
1858	4,679,415	1,177,303	$33,758	1,211,061	97.2	2.8
1859	4,740,190	1,079,220	125,350	1,204,570	89.5	10.5
1860	4,349,760	707,245	147,085	854,330	82.7	17.3
1861	4,703,285	570,953	235,932	806,885	70.7	29.3
1862	4,105,353	80,686	293,932	374,618	21.6	78.4
1863	4,188,275	79,397	336,677	416,074	19.1	80.9
1864	4,503,050	64,356	376,085	440,441	14.6	85.4
1865	3,981,995	66,572	408,856	475,428	14	86
1866	4,227,018	245,605	468,324	713,929	34.4	65.6
1867	4,079,966	411,065	456,138	867,203	47.4	52.6
1868	4,047,586	625,239	390,907	1,016,146	61.5	38.5
1869	5,481,690	757,964	343,726	1,101,690	68.8	31.2
1870	6,107,761	791,389	315,944	1,115,333	70.9	29.1
1871	6,070,741	699,661	275,364	975,025	71.7	28.3
1872	5,693,500	805,788	221,103	1,026,891	78.4	21.6
1873	5,665,296	815,400	228,757	1,044,157	78.1	21.9
1874	5,697,346	750,296	238,098	988,394	75.9	24.1
1875	4,860,000	740,361	236,283	976,644	75.8	24.2
1876	4,420,261	580,063	173,547	753,610	76.9	23.1
1877	3,976,580	286,835	162,061	448,896	63.8	36.2
1878	3,914,990	40,152	159,828	199,980	20.1	79.9
1879	3,768,230	41,251	158,775	200,026	20.6	79.4
1880	3,873,130	38,780	161,029	199,809	19.4	80.6
1881	3,601,350	42,552	197,515	240,067	17.5	82.5
1882	3,538,835	40,645	239,856	280,501	14.4	85.6
1883	3,608,800	48,077	268,281	316.358	15.2	84.8
1884	3,608,355	53,170	279,051	332,221	16	84
1885	3,642,065	49,048	282,855	331,903	14.8	85.2
1886	3,662,505	43,319	286,072	329,391	13.1	86.9
1887	3,625,915	76,727	335,946	412,673	18.5	81.5
1888	3,490,864	86,890	376,528	463.418	18.7	81.3
1889	3,184,425	109,828	405,573	515,401	21.3	78.7
1890	[1] —	120.170	420,507	540,677	22.2	77.8
1891	[1] —	147,561	443,204	590,765	24.9	75.1
Totals.	190,027,789	25,546,330	9,482,947	35,037,277	Av. 43.2	56.8

[1] Returns incomplete ; amount increased, apparently.

Several facts appear from this Table. First, that Great Britain increased to almost double her subsidies on the establishment of American subsidized lines. Upon the formation of a party in Congress, in opposition to subsidies to American steamers, the British ceased to enlarge their appropriations, and even ventured to decrease them.

Second, that after the repeal, in 1858, of our subsidy act of 1845, which was given effect in 1847, 1848, and 1850, Great Britain lightened up considerably on her subsidy payments to British lines, being able to do this without damage to them, since much of the support withdrawn by Congress from our own lines, to their ruin, was turned to the British after the legislation of 1858. By the breaking out of the war we were paying 30 per cent of the cost of foreign mail service to foreign shipping. Until 1858, we had paid nothing to foreign vessels for such a service.

Third, that after the war, when Congress had again undertaken to support an American Ocean Mail Service, Great Britain for the second time enlarged her subsidies until a party in Congress was formed to oppose a subsidy policy, when she ventured a second time to reduce her appropriations, and on the second repeal of our acts for supporting steam lines, she greatly reduced them (from 1874 to 1878). As after 1858, so after 1878, a large part of the support withdrawn from our own lines, causing their ruin, was straightway turned over to the aid of the British. From 1868 to 1887, inclusive, — ten years, — we paid only 27.8 per cent. of cost of mail service to foreign steamers; but for the later period of 1878 to 1891, — fourteen years, — the contributions of the treasury have been an average of 80.9 per cent. This ratio was exceeded only, during the four years of the war, when foreign lines were paid a proportion of 82.7 per cent. Taking the period of 1858–1891, — thirty-four years, — in which we have permitted our treasury to support foreign steam lines to more or less extent, the proportion of mail money so paid has been an average of 56.8 per cent.

In the forty-four years of the table, we see Great Britain expending eight dollars where we have paid out one upon the maintenance of a steam marine in the foreign trade. And where we have expended $2.70 on our own steam lines, we have contributed one dollar to aid foreign. For fourteen years past the United States has contributed to increase the sum paid British steamers as postal subsidy an amount, on the average, equal to about 7 per cent. Is it any wonder we are weak and well-nigh helpless on the sea? Or that Great Britain, having paid her money, has got the worth of it in naval and commercial power?

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