Maritime Philadelphia 1609–1837

Not long ago in one of the popular question and answer programs conducted by the broadcasting companies, the omniscient interlocutor enquired "What is the largest inland city in the United States? By 'inland' I mean a city not on any navigable body of water."

With the utmost confidence came an immediate answer, "Philadelphia."

To us living on the banks of the Delaware and Schuylkill that anyone should be unacquainted with the fact that Philadelphia is a seaport seems preposterous. Had the answer come from some inhabitant of the Kentucky hill country, it could have been overlooked. But the person who gave it is a school teacher from one of the larger Midwestern cities probably fresh from a class to which she had just related the story of Washington's crossing the Delaware, quite unaware the same stream passes by Philadelphia's front door. One can be sure she would have made no such error about New York, Boston, or Baltimore, or even Nantucket, Salem or New Bedford. All of them

1 An address delivered before the Society at its meeting on April 10, 1939.
have publicised their maritime history to the utmost, while we here in Philadelphia for some unknown reason have entirely neglected it. Ours is equally as interesting, almost as ancient, and in some ways of even greater importance in national history. We can truthfully assure ourselves no port in the United States can produce anything which we cannot duplicate, sometimes as innovators, sometimes as improvers, seldom just as imitators.

The whalenmen of New Bedford and Nantucket may well have learned their trade from the men who were working in the Delaware as early as 1633, seven years before the first whalery was organized to the north. The clipper ship designers of Boston and New York certainly owed something to little Philadelphia trading sloops, such as the one Jonathan Dickenson had built in 1719, a sloop he described in exactly the same terminology William H. Webb or Donald McKay might have used in 1850, "sharp built." Our ships began the North American trade with our sister continent to the South. Our merchants opened the trade with China and India and at no time from 1784 to 1850 did Philadelphia control less than one third of the investment in East India voyages, but reading the maritime history of Boston and Salem one gathers the idea that they alone navigated the Indian Ocean and the China Seas. Those who think in terms of fighting ships will recall the original Continental fleet sailed from Philadelphia on the first expedition of the War for Independence. They will also remember that the first United States men of war, including the frigate Constitution, came from the brain of a Philadelphia Quaker, Joshua Humphreys. Robert Fulton is popularly credited with the first steamboat; we know better: John Fitch built and operated a steamer on the Delaware almost a quarter of a century before the North River Steamboat of Clairmont moved up the Hudson. To tell the whole story of maritime Philadelphia would be impossible. Much of its past has been irretrievably lost; a brilliant future we hope lies ahead. Tonight I propose only to sketch the broad story of Philadelphia's waterborne commerce, her ships and their builders, and her harbor during the first two centuries.

Before we begin, let us be sure we know exactly where Philadelphia is and what surrounds it. Not that any of us here need to be told it lies at the junction of the Schuylkill and Delaware Rivers, but unac-
customed as we are to using our waterways, we fail to appreciate their character. First, Philadelphia lies approximately 110 statute miles from the sea. The main stream, naturally winding and shallow, flows roughly from North West to South East with its mouth absolutely unsheltered from the prevailing southerly winds and storms. That mouth (38° 55' 59") is almost exactly in a line with Lisbon, Portugal. In other words, the progressive parts of Europe from which we branch, Britain, Norman France, the Netherlands, Germany, and Sweden, all lie far to the North of our latitude. Our outlook into the sea is away from, rather than towards them as is New York's and Boston's.

The city itself sits in a little pocket, you remember, a pocket with a very narrow hinterland. It is almost in a valley, surrounded to the North and West by a range of difficult mountains with no low easy passes leading to the larger back country of the West. Further limiting the tributary territory between the city and the mountains flows a great river, the Susquehanna, by which the produce of the hinterland is more easily transported to Baltimore than to Philadelphia. Again, Philadelphia is almost at the center of the North-South land route along the coastal plain. Neither at a terminus nor at a junction point, just in the middle with no natural reason to compel a traveller or goods even to pause in transit. As an example I commend to you the best trains of the Pennsylvania Railroad which you know hardly do more than hesitate at a sub-station here before dashing on towards their termini. Over its nearby rivals on the chief sea routes Philadelphia has no advantage or even equality. For instance from Philadelphia to Rio is 4800 miles, while from New York it is 4700 miles; from Philadelphia to Liverpool 3300 miles, from New York 3100.

Our climate does not give us any of the great commodities which of themselves would assure a monopoly commerce, such as the Southern ports have with tobacco, cotton, rice, and naval stores; the Northern ports with fish, and lumber; or the terminal ports, as New York or Montreal have with the products of their hinterlands. Our mountains have, to be sure, iron, coal, and oil, but each of these had very little bearing on Philadelphia's early history. Our soil was originally covered with magnificent timber. Once cleared wheat could be grown
bountifully, forty bushels reaped for each one planted. On these two products, timber and wheat our commercial history was founded. But when the Western grain lands and the Northern forests were opened, our production was supplanted quickly by cheaper ones and Philadelphia perforce had to find substitutes or die.

There was little about the Delaware in its original state that was suited for trade and navigation. It is long; the river is tortuous; it is literally full of shallows; and its fresh water freezes quickly.

All of our commercial history, then, from the very outset has been one of a fight against unfavourable conditions. When next you motor across the bridge look up and down stream and see how initiative, energy, and forethought have used such raw material.

The first white man to sail the waters of the Delaware was Henry Hudson. After one day spent in the river in August 1609 his mate entered in the Half Moon’s log: “. . . . the Bay we found Shoal; we were forced to stand backe [to sea] again. Steered away to the Eastward on many courses for it is full of shoals. He that would discover this Bay must have a small Pinnasse that draw but foure or five foot water to sound before him.” With that Hudson, eschewing the dangers of a difficult shallow river, turned North and shortly found a harbor more to his liking, one deep and unobstructed, New York.

In 1614 came the first explorers to really merit a place in the history of the harbor, five Dutch skippers from New Amsterdam. As a result of their voyage they made a diagram which fixed the position of the Bay and River. Later that year Cornelius Hendricksen, another New Amsterdam captain followed their course down the coast and explored the unknown river. Hendricksen made a surprisingly good map of what he found, but he did not attempt to chart the shoals, reefs, and bars. That maze of obstruction defied hydro-cartographers for over a hundred years until Joshua Fisher in 1756 gave his friends “the Merchants and Insurers of the City of Philadelphia This Chart of Delaware Bay and River, containing a full and exact description of the Shores, Creeks, Harbours, Soundings, Shoals, & Bearings.” Fisher’s Chart remained the basic representation of the River until the first United States Coast Survey was completed in 1846.
SHIP LOVELY MATILDA OF PHILADELPHIA, FROM PAINTING BY ANTOINE ROUX 1808.
Owned by Charles H. Taylor. By permission of the Marine Research Society
To the Dutch we are also indebted for the second contribution in making the Delaware safe and useful for commerce. In 1658 they placed crude wooden buoys on the more dangerous shoals. As long as they commanded the river they maintained these essential aids to navigation, but after the English took New Amstel and for many years to follow the buoyage was entirely without official supervision. When Penn arrived one of the earliest acts of the Provincial Assembly was to lay a tax on vessels entering the Bay, the proceeds to be used to carry on the work begun by the Dutch. Altho money was collected no buoys were set out, and in 1687 the Assembly “to prevent the Clamor of Masters of Vessels who are obliged to pay the money and reap no benefit thereby” passed another bill “to erect buoys for the safety and preservation of vessels coming in and going out.” Subsequently every one of the provincial governors extended their number and utility. Except for a few months during the War for Independence when the buoys were removed to hinder the movements of the British fleet and for a few days in 1784 when to quote John Dickinson “some evil disposed persons” stole them, the river had never been without these markers. The skill of the early navigators is attested by the fact that many of them are fixed today in spots almost identical to those located nearly three centuries ago.

William Penn was responsible for the next improvement. Evidently informed of the river’s character he instructed his commissioners to select the location for his “great towne” only after they had sounded the river on his side to find a spot where vessels of the largest size could ride and load “at ye Bank without litering.” That, of course, was impossible, but shortly after his arrival one of his colonists, Samuel Carpenter, remedied the fault by building the port’s first wharf between Walnut street and Dock creek. Its equipment sounds surprisingly modern, for it had both a crane and a granary to facilitate lading and storing cargoes. This first quay was a private affair, and although it could care for the traffic during the early years, it was quickly outgrown. Other property owners erected wharves, and the proprietary government built four public ones at the street heads. These were maintained by the city with an individual councilman told off to oversee each in his spare time. By 1716 these modest facilities had become so extensive reaching from Vine street south to the
Dock that it was necessary for the city to employ a wharfinger, Daniel Radley, to devote his entire time to the supervision of their use and repair. These wharves were pretty crude affairs, compared to what we know now. A French traveller described them: “The quays which line the river . . . are formed of trunks of trees, which are placed one on another in squares. The hollow centers are filled with earth and stones and the top is paved.” Quite different from the huge steel, concrete, and glass structures we know today. But they served their purpose and as another traveller said, “are well adapted for the accommodation of shipping, the largest merchant vessels being able to lie close alongside them.”

That is, they could lie close alongside when the wharves were new. Before long, however, the natural silt in the river, the ballast emptied from the vessels themselves, and the rubbish dumped by the townspeople filled in the deep water so that lying close alongside was impossible. Hence they had to be extended into deeper water with a repetition of the whole process endlessly unless some means of dredging could be found. That did not come until 1774 when Arthur Donaldson invented the forerunner of the modern clamshell dredge. How successful it might have been we do not know because the Revolution diverted all attention from such things. Almost a hundred years elapsed, despite the efforts of Oliver Evans and others, before any real results came in artificially deepening the river.

With the stream charted, its dangers marked, and safe places for loading assured, the next important step was the provision of a means by which vessels could find the river with ease as they came in towards the land—a marker which day or night would tell the ships’ masters when they had reached the Delaware.

In 1725 a crude lighthouse seems to have been erected on a high sand dune at Cape Henlopen. A feeble whale oil lamp in its top, devoid of any lens system, was visible at best five miles. If this tradition is correct, it was the second light to be erected on the entire Atlantic coast, and to the early mariner a mighty welcome sight, as he groped to find the entrance of the river after a six weeks or two months voyage from England aided by the rough navigating methods of the times. But its rays were so weak and uncertain Joshua Fisher did not even bother to notice it on his chart. Consequently that original light was
replaced forty years later at the huge cost of £7675, not including the value of a grant of 200 acres of land from the Proprietor. The funds like those for most all public improvements in colonial days, were raised by means of a lottery. The new structure, an octagonal stone tower seven stories high was set up on a sand dune well over a mile from the sea and on a clear night its rays were visible for a great distance. When the British evacuated the river in 1778 they tried to burn the lighthouse, and in 1813 they used it as a target, but for one hundred and sixty years the old tower withstood all attacks. Then in 1926 the sea having cut away the mile of sand that originally had separated the structure from the tide mark, it fell. Today there are six lighthouses, two light ships, and innumerable shore lights and buoys marking the passage from the sea to Philadelphia.

Few of us have ever seen the Delaware frozen solid from shore to shore, but it is a well established fact that prior to 1837-38, there was seldom a winter when navigation was completely open. The editors of Philadelphia newspapers as early as 1722 adopted a stock phrase when the river froze: “No vessel has entered, our River being locked up with Ice; and by Reason of this natural Embargo, no Shipping have either Entered or Cleared out this Week.” It is an almost incredible fact, that Montreal and Quebec are the only North American ports which have as much ice as our city.

That this had a profound effect on Philadelphia in general and shipping in particular is unappreciated by those not directly connected with the river’s traffic.

First, of course, the ice prevented sailing vessels from entering or leaving the city. Second, either through its crushing effect, or by its cutting anchor cables, and carrying them bodily onto shoals, many vessels were wrecked. During the winter of 1809–10 seventeen vessels were lost in this way; as late as 1863 ice cut through the hull of the ship John Trux, sinking her, a total loss, at the foot of Race street. Even this winter, a mild one, the Philadelphia papers reported the loss of several vessels in the Delaware because of ice. Third, with water transport the only means of cargo carrying, the merchants of the city, almost suspended business while the river was closed. This created much unemployment. So much, in fact, one of the early merchants wrote that during December, January, and February the Alms
House had 1600 occupants and the jails and workhouses were full, all due to the suspension of business caused by the ice. In these months maritime insurance to Philadelphia was customarily one half to one and a half per cent higher than to other American ports and ship owners did not order one vessel in ten to come into Philadelphia, but rather to New York where, as one of them put it, “There is a certainty of entering.”

Charts, buoys, and lights could overcome the dangers of the shoals, but nothing known to man could prevent ice from forming in fresh water. Occasionally a gang of men with whip saws could cut a vessel out of a floe and then with a string of row boats tow her to safety behind a wharf. But this was seldom possible. In 1762 the first effort was made to give some general ice protection to vessels entering or leaving port. A series of piers, well armoured with iron, were erected at Reedy Island and later at Marcus Hook. These broke up floating ice and shunted it to mid-river while vessels rode in safety behind the piers. But until the steamboat was well perfected and had demonstrated its ability to break itself a channel there was no real solution to this problem of keeping the river open for navigation. Hence it is not surprising to find just after the War of 1812 Philadelphia merchants seriously considered a mass movement to New Castle, Delaware, where the water was sufficiently saline to prevent quick freezing.

Before this actually occurred, however, Captain William Jones, ex-secretary of the Navy, President of the United States Bank, Collector of Customs, and one of the leading merchant shippers of the day proposed with the backing of the Chamber of Commerce that the city build a steam ice breaker. He even drew up complete plans, specifications, and estimates. But as spring weather came on, the city fathers failed to act favorably on the project. Year after year a Common Council continued to put off the merchants with fair promises and no performances. At last in 1835 the Camden and Amboy Railroad, the only line to New York, tiring of the procrastination which was stopping its through traffic each winter, built a vessel named Ice Breaker for crossing the Delaware during the cold season. She was a huge affair with bows twenty feet thick and on her trial run she cut through three inch
ice with ease. But two days later the river froze so hard even she failed. Each winter thereafter brought more agitation, and finally in 1837, the City Council borrowed $70,000 and contracted for the building of a vessel so powerful no freeze could block her. She was constructed by Van Dusen and Bierly with engines by Matthias Baldwin, the world’s second craft specifically designed for such work. Today the city has over three quarters of a million invested in ice breakers.

All of these improvements to the Bay and River, notwithstanding the fact they benefited this State, New Jersey, and Delaware equally, had been made by Pennsylvania using her funds alone. In 1821 when some additional ice piers were needed at the Delaware Capes, Philadelphia drew the unfairness of this situation to the attention of Congress which authorized the Federal Treasury to build them. But before the work was commenced, the merchants realized that if properly designed the piers would serve a dual purpose, not only giving safety from ice but also acting as a breakwater to protect shipping in the Bay from the full force of storm driven seas.

A committee of the city’s foremost citizens was formed to present the case to Congress. Marshalling a huge mass of evidence, they pointed out that in the preceding twenty years 255 vessels bound for Philadelphia had been driven out to sea after actually reaching the mouth of the Bay, and in the last year fifty-one had been totally wrecked within ten miles of the Capes, all due to the complete absence of any shelter along the 200 miles of coast from the Virginia Capes to Sandy Hook. They showed that even the Delaware Bay pilot-boats, manned by the most skillful navigators on the entire coast, were being continually lost through lack of a harbor of refuge. The committee demonstrated to Congress that one quarter of the entire Federal income came from Philadelphia’s sea commerce. But in contrast with other ports where as high as 1/20 of the receipts were returned as harbor improvements, Philadelphia had received less than 1/100. Whether these presentments or the thought of the number of Philadelphia voters who were about to step to the polls at the ensuing Adams-Jackson election won the case is debatable. In either event Congress resolved to undertake the work and William Strickland Philadelphia’s most noted engineer was appointed to plan and execute
the project. Thousands and thousands of tons of stones were dumped into the Bay and slowly a massive wall was created to offer shelter to storm driven ships.

That gave Philadelphia a complete harbor with every conceivable man made aid. Since then all efforts have been nothing more than ones to enlarge the existing facilities to make navigation easier, safer, and faster. Over two hundred years of hard and continuous effort had been necessary to create for Philadelphia a harbor in any way comparable to that enjoyed naturally by New York, Boston, or Norfolk. Today it is only by keeping everlastingly at it physically and financially, that Philadelphia is able to maintain itself as a deep water port.

Compared to the beginnings of the ship building industry in the other American colonies, the period before William Penn's arrival held little to foreshadow what lay in the future. The Popham Colonists in Maine had built a sea-going vessel in 1608; the Virginia Company in 1620 sent over a number of professional ship carpenters as a speculative venture; by the time the Swedes had arrived in the Delaware, the province of Massachusetts Bay was building what were then huge vessels at Boston, Salem and Medford; and the Dutch had built on the bank of the Hudson one of the seventeenth century's largest merchantmen, the 600 ton New Netherlands.

Within a few months after the Swedish settlement had been founded, the initial steps were made to establish the industry. The company at home had stipulated among the privileges granted the colony that trade was to be conducted only in vessels built there. With this encouragement, "two large beautiful boats, one for use at Elfsborg, the other at Fort Christina" were built on Cooper’s Island. These were the first white man's watercraft of any sort built on the Delaware. Chandlery, stores, and sails, were sent over from Sweden to outfit them, and in the same cargo came equipment for a saw-mill.

Timber was cut at once preparatory to building other vessels and it looked as though ship building here would quickly rival that of the other colonies. But all three of the colony's ship carpenters fell ill and Indians burned the seasoning timber so that the project was necessarily abandoned. Three years elapsed before any other ship building
THE ORIGINAL PLAN FOR THE DELAWARE BREAKWATER—1826
activities were inaugurated. In 1647 a barge was under construction. Immediately after this a sloop was built at Christiana and in 1651 Governor Printz began a ship of 200 tons burthen under the supervision of Claes Timmerman, a master shipwright. August 1652 saw her launched but before her stores arrived, Printz returned to Europe, evidently taking Timmerman with him for the hull lay in the river uncompleted. Hans Amundson who came over in 1654 was given instructions “to promote ship-building seeing that all materials may be felled and prepared so that all sorts of vessels may be built partly for use on the American coast and partly to be sent home.”

Nothing came of the effort though as the Dutch seized the colony the next year. If they built any vessels during the ten years of their control no record has been preserved. Governor Alricks constantly requested that small vessels be sent him from New Amsterdam but he seems to have made no attempt himself to have them built on the River. In fact, no trace of ship building can be found until 1676 when the ship Glob was built for some of the inhabitants of the tiny settlement that was to become Philadelphia. Later in the year, two more ships were built, one for Gregory Marlow, the other for Samuel Groome. The carpenter whose very identity has been lost was evidently successful for when Thomas Holme arrived in 1681 he found quite a group of complementary maritime tradesmen established along the river bank.

Due perhaps to Penn’s sound understanding that if his “Holy Experiment” was to be successful there must be a solid foundation of trade and industry, the Proprietor laid a definite plan among other things for ship building. In what might be called “ads” for emigrants, Penn let it be known he wanted ship carpenters and all other maritime tradesmen in his colony. He knew America was covered with a fine stand of timber suited to the industry. The best of this Penn required all settlers to preserve carefully when they were clearing land, and also he insisted that they keep one acre out of five in natural forest.

With the first lot of emigrants came a wide variety of mechanics and artisans, among them William West, an experienced shipwright. He with Penn as a silent partner, immediately commenced the construction of a vessel. She is said to have been named the Amity, a fitting name to associate with Philadelphia. Unfortunately little is
known of her save that all her rigging, iron work, and stores, were taken from a brig which had recently been condemned at Chester as unseaworthy after an extraordinarily long voyage from England. For building this vessel West was compensated in part with a plot of land on the river front at what is now Vine Street, to be used as a ship yard.

This successful venture immediately attracted imitators. One John Brown, for instance, sought a piece of ground at Lewes on which to build a sloop or shallop. Hermanus Wiltbank who had been in the colony since 1665 started work on a vessel. The Society of Free Traders built a number of whale boats for their fishery at Cape May. James West, evidently a relative of William, petitioned and received a ship yard grant. And William Penn himself set his sons Springett and William Junior at learning the art and mystery of ship building. Within a few years the industry had extended itself so much that Gabriel Thomas reported several fine ships and vessels had been launched as far up the river as Burlington, one of them a “great ship” for Governor Cox. By the turn of the century there were four ship yards in Philadelphia, and a decade later one observer related “by a moderate computation there had been launched from the stocks in this city in 40 years, near 300 sail of ships besides small craft, which may give us an Idea of the opulency of the Place.” On one day in May 1717, twenty five ship wrights were given the freedom of the city.

From even the first period Philadelphia ship building has always been an hereditary profession. The West family continued till well down to 1800, and one ship yard founded in 1707 handed on its traditions for almost a century and a half. This was the yard of Bartholomew Penrose. He, the son of a Bristol shipwright, with William Penn, William Penn Junior, and William Trent, as partners and James Logan as bookkeeper, on May 24, 1707 launched his first vessel, a 150 ton ship named the Diligence. On Bartholomew’s death in 1711 he was followed by Thomas Penrose who passed the torch on to his son James. By the father’s will James was given an unfinished hull and “all the apprentices & all the Tools of the Trade, hereby desiring James to take care of & be kind to the apprentices & compleat them in Knowledge of the Trade.” How well James followed the admonition is shown by the career of Joshua Humphreys, one of the apprentices. Humphreys, it will be recalled, designed a majority of the first ves-
sels of the United States Navy. Even the distaff side of the family plied the trade for when one of the men died he left a successor who is listed in the city directory as “Ann Penrose shipwright.” She was followed by Thomas Penrose who in 1793 was called into consultation with Humphreys on the design of the frigates. Next came Charles Penrose who became head of the Philadelphia Navy Yard, and in partnership with Samuel Humphreys, son of Joshua, in 1815 built one of the Navy’s first ships of the line. Charles died in 1845 bringing to an end the Penrose family’s century and a half of ship building activities. This family chain of ship builders is by no means an isolated case. The Grice-Bowers-Cramp ship building business continued in direct succession from about 1760 to 1927. The Lynn family built vessels as master shipwrights from 1717 until after 1860, and several other instances could be cited.

During the Swedish and Dutch regimes the favorite type of overseas trade was the ship, the largest class of sailing vessel: three masted, each square rigged, with a hull lofty of stern and gaudily decorated with both carvings and paint. In the coasting trade, much use was made of what were termed “yachts.” Because Governor Printz traveled about the river in one of these craft, the tradition has arisen that he was the first American yachtsman. This is quite erroneous since the word in those days was entirely different from the connotation given it today. Then it meant simply a mongrel type of watercraft somewhat smaller than the conventional ship, one used for trading, not one used solely for pleasure.

After the arrival of the English in the Delaware the three masted ship maintained its supremacy in voyages to and from the Mother Country, closely seconded by smaller two-masted brigantines and snows while one-masted sloops took care of the coasting voyages. About 1713 these four types were joined by what is generally considered to be an American innovation, the schooner. In size it filled a gap between the sloops and the brigantines: in rig it was especially well adapted for voyages along the American coast.

The early ships averaged in size about eighty tons burden; the brigantines about fifty and the sloops about twenty five tons. Or in dimensions more familiar the ships were about seventy-five feet long while the sloops were but little larger than the life saving boats we
see at the Coast Guard Stations along the Jersey beaches. Just think of a 4000 mile voyage to Europe in such craft. As time passed each class grew larger until by 1740 ships averaged about 100 tons and by the Revolution there were a few owned in Philadelphia, as large as 250 tons. At the close of the century Conrad Pister built the ship Oriental of 1000 tons. She was so large that on the day of her launch Pister made the rounds of every ship yard from Kensington to Southwark borrowing the services of all the ship carpenters in the city to aid in getting her into the water. But she and one or two more of similar size built the same year were exceptions, and because no port at that time could begin to load them full, they were not copied until well along in the middle of the nineteenth century.

No precise record of the total number of vessels built in Philadelphia has been preserved prior to 1722. We have Richard Castleman’s statement that over 300 had been launched up to 1710. What happened between that year and 1722 we have no knowledge. After that some idea can be gained for then a formal register of all vessels owned in the Province was started by the authorities in an effort to control the gentle art of evading the payment of His Majesty’s custom imposts. There were between 1722 and March 1776, when the record ends, a total of 3241 vessels, wholly or partially owned in Philadelphia. Of these the majority were built along the banks of the Delaware. How many others were constructed here and owned abroad we have no means of determining. But the average output per annum exceeded all the colonies except Massachusetts, the producer of the greatest volume of shipping in America.

The keynote of Philadelphia’s ship building, however, was quality rather than quantity.

Within a decade after the Province was founded, Philadelphia was building vessels of such high grade that orders from England were being taken constantly by her shipwrights. “We are Rarely without ten or twelve Vessels on ye Stocks—Ships Brigantines and Sloops, having orders from Bristol and London to Build for Merchants there” wrote Jonathan Dickenson.

These statements, though, were much like those which emanated from Wall Street in 1929. Soon there began a downward trend. 1721 brought an over production of Pennsylvania staples with a consequent
drop in commodity prices. Since Pennsylvania bought all her manufactured goods abroad, the metallic currency was quickly drained from the colony to pay the bills. That caused a general depression in all fields “but above all in our ship-building,” the Provincial Assembly reported to the Council of Trade, “by which the most advantageous returns have been made. It so generally declines that our yards appeared almost empty and all trade discouraged.” Complaints and petitions poured in on the heads of the Governor and the Assembly. Someone conceived the idea of issuing paper currency. It was tried and it worked. Almost immediately trade picked up, but an insufficient quantity of this money was issued and the corner around which prosperity waited could not be reached. More paper money was issued and with the injection of a real inflation “ship-building was vigorously carried on and both shipwrights yards and our port were fill’d with shipping. So much that this present year, 1726, double the number of vessels have been built at Philadelphia that had been in any year before a paper currency.” From that time to the close of the American Revolution there seems to have been a period of great prosperity for the shipbuilders. John Smith’s diary recorded in 1746 “I walked to Wicoco. Called to see several vessels on the stocks—The carpenters seem now to have full business.” In 1769 there were twenty two vessels built; and in the year before the war began twenty five vessels valued at £7,500 pounds sterling were exported from the Province, in addition to those built for home use.

Although during the War for Independence there is a lack of records, we know a very considerable number of vessels were built as privateers and letters of marque. Indeed at this period, Philadelphia taking the lead from Massachusetts was the chief shipbuilding center in the colonies. That is established incontrovertibly by the construction orders of the Continental Marine Committee which gave Philadelphia four frigates to build while no other colony had more than two.

In addition to these, we built two others for the Continental Navy, fifty-four craft of all types for our own State Navy and an unknown but very large number of private armed vessels.

When the British evacuated the city in June, 1778, Philadelphia was entirely without shipping. A local ship carpenter, returning to his
home almost before the last British vessel had retreated around League Island has left a description of what he found:

By the time we got to the wharf there was not a vessel of any kind at them, for the British during their stay had destroyed all the sea vessels and nearly all the River craft they could put their Toarch to Wherever they could get at them. But one Square Rigged vessel escaped to my knowledge—a large ship belonging to the Cliffords which lay on the Jersey Shore.

Of course this condition of affairs led to an immediate boom in ship building. There were privateers to build, letters of marque, and simple trading vessels. All of these called for a more or less specialized type, regardless of size or rig: sharp, heavily canvassed craft designed primarily for speed rather than for carrying capacity so that they might run the gauntlet of British men of war.

With the Peace of 1783 the character of vessels changed at once. Shippers wanted vessels which could stow a large cargo and be handled by a few men rather than the sharp speedy-war-time pickpockets whose huge crew and small cargo capacity ate ruinously into freights and profits. The new construction gave rise to the Philadelphia China Trader, the nearest approach to the famous ships of the Honourable the East India Company the United States ever produced. These vessels, such as Thomas Truxton’s Canton, John Barry’s Asia or Jesse Waln’s William Penn could really be described as magnificent pieces of the shipbuilders’ art. Their decorations, figureheads and stern carvings, attracted attention in all the world’s ports. Indeed, when the ship Ganges entered Calcutta, it is said Hindus actually fell down and worshipped the River God figurehead which William Rush had carved and fixed to her bows.

An aphorism of the time said the best vessel in the world would be one with a Boston underbody and Philadelphia topsides, implying that the New Englanders had speed and Philadelphia beauty. But it must not be thought those built here entirely sacrificed speed to capacity and comeliness. The Rebecca Sims, Captain Brinton, built by Samuel Bowers in 1809 leaving the Delaware Capes for Liverpool made a passage of fourteen days, a record which was never equalled until steamers had driven the sailing ship from the sea. The brig Huntress in 1837 set an all time record in her nine day passage from the Capes of Delaware to Mobile Point and the bark Gazelle made Henlopen from New Orleans in eight days. The ship Roanoke ran
from Rio de Janeiro to Philadelphia in twenty eight days, a speed the newspapers reported as "unexampled in the history of navigation."

The fame of our ship builders spread first along the Atlantic Coast so that by 1785 newspapers in New York, Baltimore, and Boston carried offerings of vessels described as "built of the best white oak and finished off in the neatest manner on the Philadelphia plan." Even the British admitted we on this side of the Atlantic had outstripped them at their own art. Colonel Champion commenting in the House of Commons on the commercial relations existing between England and the United States in 1784, paid tribute to the great part American ship building had played in building up the British merchant marine, and continued by saying:

An American ship will pay for herself in six years, whilst the British ship will not accomplish it in less than ten. New England has supplied about two fifths of the whole number of American ships employed in Great Britain. But the most beautiful are those built in Philadelphia where this art has attained to the greatest perfection, equal, perhaps superior to any other part of the world.

Brissot de Warville, the French traveller, after having seen the products of the ship yards along the entire coast, and after having examined the work of the great Boston naval architect John Peck, agreed most emphatically with Colonel Champion that Philadelphia was the leader in the United States.

This was by no means a matter of chance. In other states, naval architecture was largely a rule of thumb affair, but in Philadelphia it was a matter of science. The ship builders here had early organized themselves into a craft guild, the Ship Wrights Company, which had as its aim the study and improvement of naval architecture. In 1795 it established a school for the instruction of ship carpenters with a library of the best technical books published in the old world. This was the first institution of its kind in America.

It was about this time Stephen Girard began to acquire his fleet of vessels. Next to his business and his apprentice boys Girard loved his ships best and with the entire United States open to his search, it is significant that Philadelphia was the spot where they were designed. Probably Girard's ships, such as the *Montesquieu* built by Isaac White or the *North America* built by Joseph Grice, were the finest merchant sailing vessels ever constructed in the United States at any time. The materials that went into them were the very best the forests,
mines, and looms could produce; the thought and skill lavished on their design and building would shame even the work in our great air liners of today. At a later period when Girard thought he could do better elsewhere than in Philadelphia, he did not hesitate to go outside. But during these years at the turn of the eighteenth century he had no need to seek beyond the sight of his counting room to find the best sailing ships the world could provide.

In fact, the world was coming to Philadelphia. When the Dey of Algiers sought speedy corsairs, he got them here. For him, a nineteen year old boy, designed the brig Hassan Bashaw; Nathaniel Hutton built the Skjoldebrand; and the Hamdullah and the Leila Eisha were built by other Philadelphia shipwrights. The King of Spain sent his ambassador to seek the services of Samuel Bowers as chief naval constructor of the Spanish Navy to build vessels to throw at England's Lord Nelson. Bowers refused because he thought "treachery and assassination were two prominent features of Spanish character" that he did not wish to risk knowing. To obtain the skill of Samuel Humphreys, the Czar of Russia offered $60,000 per annum and perquisites consisting of a town residence with coach and servants, a country place with similar appendages; all to be paid for and maintained out of the imperial treasury and if this was not satisfactory, Humphreys had carte blanche to extend his emoluments indefinitely. That Humphreys turned down this princely offer is a high tribute to his patriotism: the salary alone was ten times greater than ever Humphreys received from his own land.

As a commentary on the quality of Philadelphia's vessels, one can cite the ship Truelove built by John, Manuel, and Benjamin Eyre, of Kensington, which in 1764 sailed down the Delaware River on her maiden voyage. One hundred and ten years later, 1873, she sailed back into the River on her return voyage, then a whaler out of Hull, England. Stephen Girard's ship Rousseau built in 1801, retired from active duty after 93 years of work.

Mr. Jefferson's embargo, of course, had a profound effect on ship building. Only with the greatest difficulty could vessels secure permits to quit the harbor. As a consequence the sounds of saw, adze, and caulking mallet were missing in the ship yards. Describing conditions in Philadelphia, Robert Wharton wrote his brother, "Our city as to
traffic is almost a desert, wharves crowded with empty Vessels, the
noise and buz of commerce not heard, whilst hundreds of labourers
are ranging the streets without employ or the means of getting bread
for their distressed Families.” The lifting of the embargo brought a
short lived boom, the tonnage climbing in 1810 to almost 110,000
tons; 91,45 tons of which were launched that year with a value of an
even million dollars. It is noteworthy that not until well after 1890
did Philadelphia’s registered tonnage reach the same figure again.

The War of 1812 brought a very close blockade of the Delaware
River cutting the tonnage in 1814 to a level only slightly above that
of the year 1793 when the yellow fever had turned Philadelphia into
a deserted village. During the War Philadelphia borrowing the Balti-
more Clipper designs from Maryland shipwrights built her share
of privateers—vessels fast enough to slip by His Britannic Majesty’s
frigates lying between Henlopen and May. These conditions dupli-
cated exactly those of our War for Independence and again with Peace
came a period of intense activity along the waterfront and in the ship
yards, making vessels ready to resume trading on the basis the mer-
chants had known before the War.

In this they were to be sadly disappointed. Almost at the same
time we made peace with Great Britain the Napoleonic Wars were
brought to a close. Immediately the huge merchant fleets of the
European countries which had been engaged in transporting troops
and munitions were released to reenter trading. The result showed
itself at once in our ship building. In January 1816 there was only one
ship on the stocks in Philadelphia. The next year not a single ship
was launched. 1818 was a little better, but very little. In fact, one ob-
server wrote “The merchants whose exclusive occupation is that of
shipbuilding have been languishing for several years past and but
for the public service in the Navy Yard, the best workmen in that art
would have been destitute.” Then the writer went on to prophesy all
manner of dreadful things. As if to confound him, the tide turned and
our ship building began a new era, one which produced the packet
ships of the Cope’s Liverpool Line, and the twenty three other lines
which ran from Philadelphia to all the Atlantic and Gulf ports. These
vessels built by George Burton, the Vaughans, the Lynns, and the
Van Dusens originated a new model which was eventually adopted
as the standard for the famous New York Black Ballers. William Cramp, Neafie and Levy, and others founded the little ship yards at Kensington that over the course of the next hundred years would produce the navies of almost every country that had a sea coast and merchant shipping in such volume that the Delaware would become known as the *Clyde of America*.

There was little in the foreign trade of the Delaware River valley before the American Revolution which would have induced Masefield to sing of “a cargo of ivory and apes and peacocks, Sandalwood, Cedar-wood, and sweet white wine.” While the Swedes and Dutch controlled the River, almost the only exports were hides and furs, chiefly beaver skins, and after agriculture produced a surplus came the shipment of some tobacco. In return for these, cargoes of all sorts of household goods, utensils, and tools, were imported. These transactions, though, were like those of parent with child—a paper profit resulted, but all in all the family’s pocketbook remained unchanged.

It was not until Penn’s colony was well established that a real commerce was instituted, and trade routes were definitely formed. The first of these lanes ran up and down the American coasts with extensions to the West Indies. Almost every colony produced one major product; cod fish in Massachusetts; tobacco in Maryland and Virginia; naval stores in North Carolina; rice and indigo in South Carolina; and sugar and its by-product rum in the West Indies. All these Philadelphia wanted, and to get them she exported the few things she produced more economically, lumber, staves for barrel and hogsheads, domestic animals, and above all wheat and flour. Today we hardly think of Philadelphia as a producer of flour, but one of the first municipal offices, and one of the most important, was that which rejoiced in the resounding title of “Searcher and Packer of Flour and Bread and Regulator of Weights and Measures.” His duties were to grade and mark flour so that the Philadelphia product would maintain the high quality for which it has quickly gained an enviable reputation. The best instance of the cheapness and quality of the Philadelphia product is the story of Benjamin Franklin’s first purchase here, three penny worth of bread. You recall his astonishment at the huge quantity and the goodness of the loaves his trifling piece of money brought him.
SHIP GLOBE OF PHILADELPHIA LYING AT WHAMPOA, 1831
Reproduced through the courtesy of John Frederick Lewis, Jr.
The second great trade route lay between England and Philadelphia. Unfortunately the Mother Country wanted little that we produced. She was still self sufficient in food-stuffs; she needed but little lumber, chiefly walnut from which her cabinet makers produced a great deal of the furniture which is now coming back to us as early American antiques, easily proved because the materials are undeniably American. The other things England wanted were flaxseed and furs. But Philadelphia wanted a myriad: manufactured goods of all kinds; metals, textiles, teas, shoes, and tools. Consequently the direct balance of trade always flowed against Philadelphia and had not some other means of making payments been found, all the currency—precious metals—would have quickly drained from the Province. But the ingenuity of the early traders was boundless. They knew England wanted West India goods, the sugar, rum; and the Philadelphia traders also knew the West Indies wanted provisions, animals, and barrels. Consequently a lively trade grew up, a triangular trade: Philadelphia to Jamaica with staves, flour, and meat; swap them for sugar, rum, and molasses, load up for England and trade these for iron, about thirty different kinds of wool, cotton, and silk stuffs, teas and oriental goods, load up and return to Philadelphia, clipping a handsome profit on each trade. See how the barrel staves and flour grew in value when translated through sugar and rum into textiles and other manufactured goods: in 1698 £2720 sent out brought home £10,700. In 1748 £11,900 gave us a return of £61,500, and in 1768 £50,400 of exports brought back £43,2100 of British imports. These credits paid for all the adverse balances and provided the surplus capital for other ventures.

The third trade route lay between Philadelphia and the Wine Islands, or the South of Europe, Spain and Portugal. Exactly the same cargoes travelled out as those bound to the Indies. But the second lading consisted of wines; madeira, sherry, port, all of which was not dropped off at London or Bristol, but to a very large amount brought home. Just how large the wine trade was can easily be seen from the statistics for the three years between 1715 and 1718 when Philadelphia with a total population of about 10,000 imported 94,941 gallons of Madeira and Fayal wines.

During the Revolution trade was forced to abandon its usual routes and concentrate on a few ports the British Navy and diplomats failed
to close to us. Again it was wheat, flour, and staves, that went out of Philadelphia; however, the returns were not the ordinary trade goods; but largely munitions. The usual imports came not so much through trade as through the capture of British merchant vessels by our privateers.

At the close of the War, Philadelphia began immediately to re-enter foreign trading. To her dismay, she quickly learned that Independence was not all she had expected. Each of the States set up tariff barriers to favor its own products and to exclude as far as possible those of its twelve neighbors. Pennsylvania established a custom service under Sharp Delaney and issued a list of dutiable goods. Sensing an opportunity to build up a Delaware River port of her own, New Jersey made each of these dutiable imports a free entry. The result was wholesale smuggling across the river and Philadelphia's merchants saw failure close ahead. As a counter-step they formed an association whose members pledged themselves not to handle any illegally entered goods. That was partially effective, but it did not cure the evil; something further was needed; something the merchants themselves could not do, but something they could suggest and push to a conclusion. A meeting was called and a resolution passed stating that the Congress alone should have the regulation of trade. In that and similar resolves adopted in other cities was born the cure for the evil: Article I, section VIII of the Federal Constitution, the Interstate and Foreign Commerce clause.

It was not until after the War for Independence that America began her direct trade with the exotic ports of the Orient. In the first years after the Peace, Robert Morris together with Boston and New York merchants sent out a trial vessel to China to learn if we could break our dependence on the British East India Company. So hearty was the welcome she received from the Hong merchants and so cheering was the 25% profit the venture yielded that on her return John Donaldson, Tench Coxe, Nalbro Frazer, John Pringle, and Thomas Truxton loaded the ship Canton and dispatched her for the Orient. Following her in rapid succession went other vessels owned by the Brinkers and Hazelhursts, Walns, Dales, and Fishers. At the same time a Philadelphia vessel, the United States entered the port of Pondicherry and opened the trade with India. Their outbound cargoes consisted largely of ginseng, raw cotton, and specie; the inbound cargoes:
teas, china silk, muslins, and other textiles with such intriguing names as Beerboon Gurrahs, Callipatti Baftas, Allabad Emerties, Chintzes, and Nankins.

The year 1800 saw forty Philadelphia ships in the China trade exclusively, all of them owned and using this as their home port.

Shortly after Philadelphia capital and ships pioneered in Eastern seas, they ventured into new fields. In 1799 the ship John led the way into the Rio de la Plata, opening for all North America a trade with its sister continent. Thereafter our trade with South America, grew so quickly that of the forty-four vessels which entered the Plata 1801–02 fifteen hailed from Philadelphia. So it went, trade with Russia, for hemp; with the East Indies for spices and pepper; with Spain for cork, olives, and wines; the West Indies for sugar; and the names and credits of Philadelphia’s merchants—Stephen Girard, the Walns, Mordecai Lewis, the Willings, and Emlens, were as well known to Hoqui, Rajendra Dutte, Lagoanere, or Guardoqui as to the President of the Bank of North America.

Almost every writer on American maritime history has called attention to the undeniable fact that Philadelphia’s relative position in foreign commerce declined from first place in the 1790’s to sometimes a bad third or fourth position by the 1820’s. Most commentators ascribe this to a lack of energy on the part of Philadelphia in seeking a way toward a broader hinterland. At first glance these writers appear to be correct, but on closer analysis I claim the relative decline is due not to a lack of energy or to bad judgment, but rather to extraordinary foresight.

The years following the turn of the eighteenth century were by no means easy ones for traders and shippers. First the French spoliations. Then the embargo which kept vessels at their wharves when they should have been out in search of profits. Just after it was raised came two or three years of good business, and then when the British blockaded the port in 1812 another period of inactivity and loss. Succeeding the war came a brief period of expansion and then its companion depression. The early 1820’s saw another boom and so it went until the panic of 1837 sent nearly half of Philadelphia’s foreign traders and exchange brokers into receivership. Such a feast or famine is of course a far from healthy condition for business.

Therefore to the clear vision there were more attractive spheres
than shipping—ones in which politics at home or abroad, or unfavorable markets, or gales at sea would not at one swoop wipe out the accumulated savings of years. With such conditions to combat even the occasional enormous returns of foreign trading were not commensurate with the risks. Consequently many of the merchants in the early years of the nineteenth century began to turn their attention towards different fields, leaving the other coastal cities the more hazardous export-import business.

One of these new ventures was destined not only to take the place of the foreign trade Philadelphia relinquished to the other ports, but in a very short time to vastly exceed the palmiest years in both tonnage and value.

If any men deserve prominent spots in the City’s Valhalla it is he who brought the first ark load of anthracite down the River and he who taught Philadelphia citizens its uses. The first man’s name was William Turnbull. In 1806 he built a crude box-like flat boat near Mauch Chunk. Into it he piled some ten tons of coal and drifted down the Delaware, landed at Philadelphia and sold his lading to the Center Square Waterworks for fuel. You all recall it failed because there were no proper grates; that his black stones were heaved into the gutters; and that he himself was sent packing with the odor of swindle closely associated with his name. Soon after, however, Joshua Malin discovered the method of making anthracite commercially useful, and to fill a demand which that created in 1814 the regular transport of coal by water was begun. Six years later 365 tons were brought down and were found sufficient to stock the entire city for a year. New York, Boston, Portland, and all the little cities along Long Island Sound quickly heard of this new fuel. In 1822 four vessels left the Delaware bound for northern cities, and thereafter the trade expanded rapidly. 1827 saw 39,000 tons in 397 vessels pass the Capes outward bound. And fifteen years after the first exportation 350,000 tons in 3225 vessels cleared the port, the greatest number of vessels Philadelphia had ever dispatched in all its history.

Equally important the coal trade served as a means of transition for some of the more hidebound merchants from foreign trading into the field which eventually was to change Philadelphia from the nations first port into the “work shop of the world.”

While William Jones and Robert Wharton were bemoaning the
lack of traffic on the river, Governor Snyder had another story to tell.

"It is a cause of much satisfaction," he said, "that in proportion to the difficulty of access to foreign nations is the zeal and exertion to supply our own wants by home manufactures. Our mills and furnaces are greatly multiplied; new beds of ore have been discovered and the industry and enterprise of our citizens are turning them to the most useful purposes. Many new and highly valuable manufactories have been established, and we now make in Pennsylvania various articles for which two years since we were wholly dependent upon foreign nations. . . . These . . . permanent and extensive manufacturing establishments . . . will insure the real and practical independence of our country."

Into these newly organized mills went the capital which formerly had built and dispatched ships to the corners of the globe. In the early and middle nineteenth century 400 miles of canals; 500 miles of railroads; fifty millions in highways; and thirty five millions in coal and iron testified to an initiative and foresight few other cities could boast of by the same time. "There is no part of the world where in proportion to its population, a greater number of ingenious mechanics may be found than in the city of Philadelphia or where in proportion to the capital employed, manufacturers thrive better; and certainly, more manufacturing capital is put into motion than in any other city of the world," wrote John Bristed in his great study of the Resources of the United States.

Not that Philadelphia has turned its back entirely on the sea. The latest figures of the port show a waterborne trade in 1937 worth one billion two hundred million. But Philadelphia’s merchants saw, or rather foresaw, that the destiny of the city lay elsewhere than exclusively on the sea.

There was to be sure none of the romance of China trading in the coastal voyage of a collier; Matthias Baldwin’s locomotives had little to compare with the beauty of a Cope Line packet under full sail; but man’s two greatest material needs, employment and profits, followed much more closely in the path of the mill, the mine, and the railroad than ever they did the wake of the East Indiaman or the China Clipper.