Hoboken Historical Museum   2004.026.0004

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Frontis: Photo portrait.
Caption: J. M. Davis, President of the Delaware, Lackawanna & Western Railroad Company and of the Hoboken Ferry Company, 1931
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[page i]

Romance of the Hoboken Ferry
by
Harry J. Smith, Jr.
under the personal supervision of
John M. Emery
Manager Marine Department Delaware, Lackawanna & Western Railroad Company

New York
PRENTICE-HALL, INC.
1931

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[page iii]

DEDICATED TO
WILLIAM HAYNES TRUESDALE
PRESIDENT, THE DELAWARE, LACKAWANNA & WESTERN RAILROAD COMPANY, 1899-1925;
CHAIRMAN, BOARD OF DIRECTORS, THE DELAWARE, LACKAWANNA & WESTERN RAILROAD COMPANY, 1925-

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Author's Note

The Romance of the Hoboken Ferry has been written to bring to the reader the history surrounding one of the oldest ferries in the country, and to picture the evolution of the ferryboat from the rowboat to the fast steamboats of today.

Every effort was put forth to make this history as accurate as possible by using as references the books entitled "Hopaghan Hackingh," by Charles H. Winfield, and "John Stevens," by Archibald Douglas Turnbull; also histories of Hoboken and Hudson County.

The author wishes to thank the officials of the Marine Department of The Delaware, Lackawanna & Western Railroad Company, and of The Hoboken Land and Improvement Company, and the Librarians of the Public Libraries of Hoboken, New York, Jersey City, Newark, and Morristown; also the Librarians of the Stevens Institute of Technology. It was only through their whole-hearted cooperation that this book was made possible.

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[page vii]

Contents

CHAPTER PAGE

Author's Note ...............v

I. Short History of the City of Hoboken 3

II. The Beginning of the Hoboken Ferry 11

III. The Introduction of Steam .... 21

IV. The Horse Boat—Opening of Spring Street Ferry.......31

V. The Swartwout Reign and the Murray Street Landing ...... 35

VI. The Hone Management.....39

VII. Reappearance of Steamboats ... 45
VIII. The Hulbert Street and Canal Street Ferries........51

IX. From 1823 to 1863 ............57

X. Ferry Tariffs, 1825 and 1853 ... 59

XI. The Christopher Street Ferry, and the Hoboken Ferry From 1863 to 1885 65

XII. On the Performance of a Double-Screw Ferryboat........69

XIII. On the Performance of a Double-Screw Ferryboat (Continued) .... 75

XIV. Opening of the Fourteenth Street Ferry...........81

XV. From 1888 to 1893 ...... 83

XVI. Early Ferry Management and the Eldridge Purchase.......85

XVII. The Acquisition of the Ferry by the Delaware, Lackawanna and Western Railroad Company......89

=====

CONTENTS

CHAPTER PAGE

XVIII. The Fires of 1905 ............95

XIX. From 1905 to 1908 ............105

XX. The New Delaware, Lackawanna & Western Railroad Terminal at Hoboken ....109

XXI. The Ferries During the Hudson Fulton Celebration.......115

XXII. Opening of the Hudson Tubes and the Retirement of Captain Hallock . . 119

XXIII. The Race Between the Ferryboats Lackawanna and Ithaca . . .123

XXIV. Pensions and Wages of the Ferry Men 127

XXV. The World War and Labor Strikes . . 131
Chapter I

Short History of the City of Hoboken

The glowing reports which Henry Hudson gave to the Dutch Government in Holland of the island at which his ship, the "Half Moon," had anchored on his epoch-making voyage up the Hudson River in 1609 undoubtedly whetted the cupidity of Michael Paauw, Burgomeister of Amsterdam.

The high cliff behind this fine land, rising from the shores of the river, was described as being white and green "as though it were either copper or silver myne."

The wealthy merchants of Holland, on receipt of the news, were not slow to avail themselves of the possession of its shores. In 1614 the United Netherlands Company was formed under the authority of the United Netherlands. When their charter expired in 1618, another association was formed, The Dutch West India Company, and they purchased Manhattan Island from the Indians for sixty guilders, or about twenty-four dollars. In the year 1629, a grant was made by the Assembly of Nineteen to all persons who should plant colonies in New Netherlands, giving to them control of such lands as they might be able to improve. Also, any member of the Com-

pany who should plant a colony of fifty adults was to be entitled to sixteen miles of river front, and the title of "Patroon," or feudal chief, provided the Indians were satisfied for the land taken.

Michael Paauw, a director in the Dutch West India Company, had his eyes on the island across the river from Manhattan, where the high cliff was, and he staked a claim and received a grant on this land, now known as Hoboken. Paauw sought copper or silver, or perhaps gold.
Though present-day historians may differ as to the grants which were made of the land in New Jersey, the records are quite clear that Paauw's deed to Hoboken was signed in Fort Amsterdam on the Island of Manhattan, by agents of Paauw and three Indians who claimed ownership, on July 12, 1630. In November of that same year deeds were recorded of Paauw's purchase of Pavonia and other sections, including Staten Island.

As far as history relates, Paauw never even saw the lands upon which he had secured a claim, but other directors of the Dutch West India Company, jealous at the domain over which Paauw had gained control, tried to have it partitioned, and finally, in 1635, Paauw sold it to the Company for 26,000 florins, or $1,040.

With the Company in control of the bouwerie of Hoboken, it was leased to Cornelius Van Vorst in 1639, who in turn leased it to his son, Hendrick, for twenty years, on June 1, 1640. It was stipulated in the lease that rent would be "one-fourth part of the crops which God may vouchsafe to the soil, either as sheaves on the field or as may be considered best."

But Hendrick pined for Holland, and sailed away from the New Netherland and died in his native land. So it was that on January 1, 1642, William Kieft, the third Director General of the New Netherland, leased Hoboken to Aert Teunissen Van Putten, and the latter set about to clear the fields of rocks and trees and to fence in. He built a brew house—the first brewery built in America—on what is now Castle Point.

Van Putten was industrious, his crops grew, and he had a prosperous farm, but he did not live to enjoy it. The first Indian war, brought on by the Dutch settlers' harsh treatment of the natives and by the weakness and brutality of Governor Kieft, broke out in 1643. Aert Teunissen was killed while on a trading expedition near Sandy Hook, and the Indians laid waste by fire the crops and buildings in Hoboken, leaving only the brew house. The Indian was again in complete possession of his lands.

Susanna Jans, widow of Van Putten, had escaped to Fort Amsterdam, and there she married Sybout Claesen, a carpenter from Amsterdam, and he attempted to take title to the Hoboken bouwerie in the name of his wife, but Governor Kieft refused to allow his claim and leased Hoboken to Dirck Claesen, who came from Bremen. This lessee afterwards abandoned the place, so that at the end of the year 1649, it lay unoccupied.

In 1647 Petrus Stuyvesant arrived at New Am-

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page 6
sterdam to succeed Kieft as governor. Peace had been signed with the Indians, but another uprising occurred in 1654, following the shooting, in New York, of an Indian Chief’s daughter, who had been caught stealing from a peach orchard. Hoboken was again sacked by the Indians, but Nicholas Verlett, or Yar-lett, who had come into possession of the bouwerie, escaped to New York, although his home and farm buildings were burned to the ground.

In 1656, Yarlett evidently still occupied the bouwerie of Hoboken, for we find him applying to the Council in Fort Amsterdam for permission to remove the frame of a house standing at Hoboken, which he had sold to Michael Jansen for 230 florins, and requesting the aid of the government in getting it across the river. But owing to the unsettled state of affairs, and to the fact that the Indians claimed the frame, the request was refused. On October 14, 1656, being a widower, he married Anna Stuyvesant, the sister of Governor Stuyvesant and widow of Samuel Bayard. From that time Yarlett’s career was conspicuous.

On February 5, 1663, Nicholas Yarlett obtained from Governor Stuyvesant a patent for the bouwerie of Hoboken. This patent contained about 276 acres and was bounded on the north by the creek that parted Hoboken from Weehawken; the west line ran along the base of Weehawken, now known as West Hoboken Hill; and the southern boundary was the creek that separated Hoboken from the Harsimus meadows.

Yarlett’s patent was confirmed by Governor Phillip Carteret on May 12, 1668, after the English had taken possession of the colony following the bloodless war against the Dutch. Nicholas Varlett left two children by his first wife, Abraham and Susanna.

In the division of his property after his death, Hoboken was apportioned to his daughter. On June 8, 1673, she married Jan de Forest. They had one daughter, also named Susanna, who married Robert Hickman. Hickman and his wife sold the bouwerie of Hoboken to Samuel Bayard, a merchant of New York, for 500 pounds, or about $2,500. On his death it fell to his son, Stephen, who willed it to his son, William.

William Bayard was in possession of Hoboken when the Revolutionary War broke out. He was with the cause of the young colonists at first, and had entertained at his mansion in Hoboken, in 1775, the delegates from Massachusetts to the Continental Congress. After the City of New York had fallen into the hands of the English soldiers, and the patriot army had been driven back toward the Delaware, Bayard withdrew his assistance and on May 1, 1777, joined the army of the King, believing that the patriots could never hope to win against the strength of Britain.
For his act in joining the King’s Army and turning traitor to the cause, Bayard's estates were confiscated and advertised by Commissioner of Forfeited Estates Haring to be sold. They were purchased by Colonel John Stevens of New York on March 16, 1784, for £18,360, or about $90,000. This, however, included much land besides the Island of Hoboken. It was
ten years before this that the Hoboken Ferry was established.

Up to this time, Hoboken had not attracted settlers, but gradually the conviction was growing that the shore opposite New York City had a future and that there were fortunes to be made across the river. Colonel Stevens launched an enterprise to build a city, following in the wake of several other pioneers in Jersey real estate. He mapped out part of the land for sale under the name of the "New City of Hoboken." This sale was not successful. During the whole of the first half of the nineteenth century Hoboken was the pleasure resort for New York City. The greatest obstacle to Hoboken was the lack of ferry accommodations. However, owing to Colonel Stevens' inventive genius, he overcame this obstacle, and during the years 1820 to 1850 Hoboken flourished and thereafter began to give way to the transformation of the city into one of the most important industrial and transatlantic shipping sections of the metropolitan area.

Hoboken was incorporated as a city on March 28, 1855, and Cornelius Y. Clickener was elected Mayor on April 10 of the same year.

In 1881 the new City Hall was completed and in 1891 one million dollars' worth of new buildings were constructed. From 1890 to the outbreak of the World War in 1914, Hoboken's population increased at the rate of one thousand persons a year, so that when the city became an armed camp in 1917, the population was estimated at 70,000.

During the World War Hoboken became the port of embarkation for the United States Government, and orders to other ports along the Atlantic seaboard came through Hoboken. The first convoy carrying combatant troops left Hoboken on June 14, 1917; the total number embarking from there during the war was 1,646,404. The number disembarked at Hoboken from November, 1918, to December 31, 1921, was 1,437,371. In addition, 45,814 dead soldiers and marines were returned to their native soil from France through Hoboken.

Hoboken has been slowly getting to its feet since the signing of the Armistice, and with the United States Government finally committed by legislation to selling the piers (which they occupied since the outbreak of hostilities) to private ownership, the city sees the beginning of a new era of progress and the return of Hoboken to its appointed place as the heart of the transatlantic shipping trade in the Port of New York.*
Chapter II

The Beginning of the Hoboken Ferry

In April, 1771, William Bayard, residing at Castle Point, was desirous of renting the place then called "Hoebuck," and in order to attract visitors he had to procure for them better accommodations for crossing the river. The only means of transportation at this time between Hoebuck and New York City were privately owned sailboats and rowboats, and until late in the year 1774 these boats were used for his guests. However, early in the year 1775 the demand for a ferry became so great that he petitioned the Common Council of the City of New York, and on February 21, 1775, the following appeared in the minutes of that body:

This Board taking into Consideration the Establishment of a ferry from the Dock belonging to this Corporation, at the Bear Market at the North River to Hoboock, and a debate arising thereon, and the question being put, whether a ferry shall be erected there, it was carried in the affirmative; and Harmanus Talman at the same time in Common Council, prayed a lease of said ferry to be made to him for the term of two years, and such rent and covenants as this Board should think reasonable: it was therefore ordered that a Lease be made to the said Harmanus Talman for the same, for the term of two years to commence the first of May next under the rent of fifty pounds per annum, and subject to the like covenants and conditions as the ferry to Powles Hook was leased to Abraham Mesier. Ordered that the Aldermen and Assistants of the West, South and North Wards, or the major part of them, be a Committee to cause a stair to be made, at the most convenient part of the Corporation Dock at the North River for the convenience of the new ferry to be erected there.

City of New York }*ss. At a Common Council held at the City Hall of the said city on Tuesday the 21st of February, 1775.
On May 8, 1775, the lease was signed and approved by the Mayor, and ordered to be delivered to Talman. Talman must have made some private arrangement with Cornelius Haring, for on May 1, 1775, the latter opened the ferry. The following notice appeared in the New York Journal, dated May 11, 1775:

"Cornelius Haring, Presents his most respectful compliments to the Public, and informs them that on

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inserted plate, illustration: Hoboock Ferry - 1775

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Monday, the first of May, he opened the New Established Ferry from the remarkable, pleasant and convenient situated place of William Bayard, Esq., at Hoebuck from which place all Gentlemen Travelers and others—who have occasion to cross that ferry will be accommodated with the best of boats of every kind suitable to the wind and weather to convey them from thence to New York Market near the new Corporation Pier at the North River opposite Vesey Street at which place a suitable house will be kept for the reception of travelers passing to and from his house and will have his boats in good order and his boats will always be ready to attend to travelers and ladies and gentlemen coming from the City of New York as well as those of the province he lives in at a minute notice and ladies who are going to any part of New Jersey, Philadelphia or the Northern country and choose to have their horse and carriage brought over that night and set out early the next morning or such as are coming from Philadelphia or elsewhere that choose to stay at the inn that night and the next morning go over to the city of New York. He has one of the best wharfs for landing horses and carriages at all time of the tide. The boats are to be distinguished by the name of Hoboock Ferry painted on their stern/"

During the War, which shortly followed, this ferry, like its neighbor at Paulus Hook, was subject to the control of the Continental Army, which occupied the City of New York on August 7, 1775. Orders were issued from headquarters in the city that a subaltern
and twenty men should be placed at the Hoboock Ferry to examine the passengers crossing there. This was done to prevent defecting persons passing into New York, also to prevent deserters from the Continental Troops, who at that time were numerous.

On September 15, 1776, the British Army occupied New York, Washington having fled with his army to King's Bridge. The British remained in control of New York until November 25, 1783; during this period the City was under military control, and the ferries, if any, were under their supervision.

Late in the year 1784, the ferries were reestablished and the following appears in the minutes of the Common Council of the City of New York on September 8 of that year:

"On this date John Van Alen exclusively is permitted by the Common Council to occupy the Ferry across the North River from the Corporation Wharf to Hoboock and in acknowledgment of their rights, he is to pay the City twenty shillings per annum." On October 8, 1784 the lease was granted.

Mr. Alen soon grumbled about the terms, and on Wednesday, August 10, 1785, a petition of John Van Alen, praying to be released from his purchase of the Lease of the Ferry from the Corporation Dock to Hoboock was read and granted by the Common Council of the City of New York:

"Ordered that the said ferry be again exposed to sale for the term of three years at Public Auction to the highest bidder on Wednesday the 17th inst. at 3 o'clock in the afternoon at the house of John Van

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page 15

Alen by the Treasurer under the directions of the Aldermen and Assistants of the West Ward and that the Clerk advertise the same. M.C.C. 1785."

On Wednesday, August 31, 1785, Alderman Gilbert reported to the Common Council that he had attended the sale of the ferry to Hoboock and that same was struck off to Sylvanus Lawrence for three years at thirty-seven pounds per annum, and order was issued that the clerk prepare a lease to him accordingly.

On May 9, 1787, a petition of Charles F. Wiessenfels and a petition of C. Hurler and James Bogert, concerning the ferries to Hoboock, were respectfully read and referred to Aldermen Gilbert and Van Geldert of the Common Council of the City of New York; and on Wednesday, June 20, 1787, Aldermen Gilbert and Van Geldert reported that they had taken the subject under consideration and were of the opinion that Mr. Lawrence have an abatement on the rent in arrears for the said ferry at the rate of seven pounds a year and that Mr. Wiessenfels (he had purchased the privilege of getting the said ferry of Mr. Lawrence) have a lease of said ferry on
the same terms and conditions which were originally granted to Mr. Lawrence, which report was read and granted by the Common Council. On July 9, 1788, the ferry was leased to Charles F. Wiessenfels for three years to commence the 31st of August next at five pounds per annum. This arrangement soon fell through, and on March 19, 1789, the Common Council of the City of New York ordered the clerk to publish advertisements for receiving proposals in writing, sealed until the seventh of April next, from any persons desirous of the privilege of keeping the ferries from New York to Hoboock for the term of three years from the first of May next. On Wednesday, April 15, 1789, the bids were opened, and John Stevens was the highest bidder. This is the first time the name of Mr. Stevens appears in connection with the ferry, although there can be no doubt that he was the owner of the ferry all the time he held the lease until the 12th of December, 1791.

On July 15, 1791, Stevens asked for renewal of his lease. On October 25, 1791, the Common Council received a petition from Isaac Nicoll relative to the ferry, and they ordered the Treasurer to sell the said ferry at public vendue on the first of December next for the term of three years from the first of May next, the purchaser to keep the stairs in repair at his own expense. On December 12, 1791, the Treasurer notified the Common Council that pursuant to the Order of the Board on the 25th of October last he had rented the ferry for the term of three years at the annual rental of ninety-one pounds to Joseph Smith, and orders were given that a lease be prepared accordingly. The ferry was leased to Joseph Smith for two years on May 1, 1795, at ninety-five pounds per annum.

On February 22, 1796, the following appeared in the minutes of the Common Council:

Ordered that the Aldermen and Assistants of the Fourth and Aldermen and Assistants of the Fifth Wards be a Com-

mittee to report the best mode of disposing of the ferries across the North River.

On Monday, April 11, 1796, the Committee reported that they had been leased at public auction to Joseph Smith for three years from the first of May next at the annual rental of one hundred and twenty pounds, to be paid quarterly under the following conditions:

The Purchaser to enter into Bond with sufficient securities for the faithful performances of their Contract and the Conditions.
Each ferry to be provided with two large boats for the conveyance of horses, cattle, carriages and other heavy articles and two rowboats for the conveyance of passengers.

To ferry from sunrise 'till 9 o'clock at night from the first of May to the first of October and not to be excluded from double ferriage after sunset.

The stairs at the landing places to be upheld and kept in repairs at the expense of the respective lessees.

Meanwhile the ferries were being improved, and the rent was increased. This time Elis Haynes was in charge of the ferry on the New York side and John Town on the Jersey Side. Mr. Town announced that he spared no expense to render the Hoboken House and Ferry accommodations to the Public and that he had the best boats on the river. The boats at this time consisted of two periaugers and two rowboats. The periauger was a sort of two-masted canal boat with leeboards. This was brought into requisition when there was wind enough to make the voyage to Manhattan; when there was a calm the periauger was used.

Then the rowboat was brought out and propelled by a stiff "white-ash" breeze. For a long time the crew of one of these periaugers was comprised of a negro and his dog. The ferry house on the Jersey side consisted of three frame shanties, one a waiting room, one a barroom, and one a warehouse, where the farmers deposited their produce to await a favorable opportunity to take it to the market.

On Thursday, February 14, 1799, Alderman Bogert and Messrs. Findsay and Carmer were appointed a Committee to inquire into and report the rates which ought to be established for Paulus Hook and Hoboock Ferries previous to the letting of them for a further term. On Monday, March 11, 1799, the Board proceeded to the consideration of the rates of ferriage to be taken as reported at the last meeting, Monday, March 4, 1799, which were approved and established as follows:

A passenger................................£0.0.9

A coach, chariot, or covered wagon........... 0.8.6

A phaeton ..................................... 0.5.6

A chaise or top chair........................... 0.3.6

A chair.......................................... 0.2.6

A sleigh ....................................... 0.3.6
Horse and cattle............................. 0.1.9
A sheep, calf, or hog......................... 0.0.6
A large trunk or chest....................... 0.1.3
A small do do ........................ 0.0.9
A bushel of salt............................ 0.0.2 1/2
A hogshead of wine or molasses............. 0.8.0
A barrel of do do ...................... 0.1.0
A barrel of beef, flour, or fish............. 0.1.3
Planks of every kind....................... 0.0.2

Boards of every kind. ........................ 0.0.1
Aside of sole leather........................ 0.0.2
A side of upper leather..................... 0.0.1
A raw hide.................................... 0.0.3
Iron, steel per cwt................................ 0.0.6
A desk........................................ 0.3.0
A large table.................................. 0.1.0
A small table .................................. 0.0.6
A basket of fruit or bag of two bushels..... 0.0.4
A mahogany chair............................. 0.0.2
A common chair.............................. 0.0.1
A bag of grain of two bushels...............................0.0.3
A bag of flour or meal do.................................0.0.3
Aerate of earthenware....................................0.2.0
A tierce of earthenware..................................0.2.3
A feather bed.................................................0.0.6
A clock case....................................................0.1.0
A chest of tea..................................................0.2.0
Dry wood per ct. wt........................................0.0.6
Indigo & copperas per ct. wt.............................0.0.6
Gunpowder per bag ct. wt................................0.1.0
Large bale of cotton........................................0.2.0
An empty hogshead or pipe..............................0.1.0
An empty hogshead or barrel............................0.0.3
Cabbage per hundred......................................0.1.6
Empty barrels.................................................0.0.3
Shad per hundred............................................0.2.0

And all other articles and things in like proportion.

On Friday, March 26, 1799, the Clerk was ordered by the Common Council that an advertisement be published for receiving written proposals, sealed until the sixth of April next inclusive, for leasing the Paulus Hook and Hoboock Ferries for three years from the first of May next. On Wednesday, the 10th

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page 20

of April, the clerk presented to the Board the written proposals sealed for the Hoboock Ferry, and the Board determined to accept the bid of Zadock Hedden.
Chapter III

The Introduction of Steam

Hedden held the lease a few months. Experience had taught the Common Council that a promise to pay and the actual payment of rent for the ferry lease were two different things; so, to make sure of the rent, they demanded security from Mr. Hedden. Mr. Hedden resented this insinuation about his honesty; he gave up the lease of the ferry and refused to have anything more to do with it. From this time until it was leased to Garret Covenhoven on August 2, 1802, the ferry was badly managed and caused much complaint from the people. Mr. Covenhoven took the ferry over in August, for two years and nine months, at a rent of $250 a year. At the termination of the lease, Mr. Peter Voorhis took the lease for $350 a year. During all these years, from the 26th of July, 1784, John Stevens had been the owner of the City of Hoboken, but had remained quiet, with only an occasional remonstrance against the management of the ferry. On March 11, 1805, the Common Council of the City of New York ruled that five horse boats and three rowboats, each manned by two honest and sober men, should be placed on the ferry.

On February 1, 1808, the ferry was leased to David Goodwin for a period of three years, at $350 a year.

On December 11, 1809, the following memorial was received by the Common Council of the City of New York:

"I, John Stevens, have been for a considerable time engaged in endeavors to apply the force of steam to navigation and claim to be the first in the country who made efforts for the desirable ends. I am the Proprietor of the right of ferrying from Hoboken to New York and I have been informed that persons have applied for an exclusive right to ferry by means of steam from New York to Jersey Shore which I remonstrate against and pray the Board will consider my rights and claims to that privilege."

This petition and former applications were referred to Aldermen Bingham, Mesier and Carpenter, and on September 17, 1810, a petition was received from Mr. Stevens for a lease of the Hoboken Ferry, which was referred to the Ferry Committee. On October 15, 1810, Mr. Stevens wrote to the Common Council, stating the terms on which he would take a lease. On December 10, 1810, the Committee appointed on the application of Mr. John Stevens for
leasing the Hoboken Ferry with a view to establish thereon a steamboat ferry, submitted the
following report as the result of their negotiations:

**FIRST**—We have agreed to lease the Hoboken Ferry to Mr. John Stevens with its appurtenances
and privileges as now held and enjoyed, from and immediately after the expiration of the
present lease and for and during the term of fourteen years for the rent or sum of $350.00 for
the first year and to increase annually during the said term in such a

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page 23

ratio as would double the rent of the first year in twenty years.

**SECOND**—One steamboat (to be built on such construction as Mr. Stevens may judge best but of
capacity and dimensions sufficient to transport horses, chairs and passengers) must be placed
on said ferry and kept there plying as a ferryboat within two years from and after the
commencement of the said term under the penalty of forfeiting the said lease and to render
the ferry still more accommodating it is further agreed that in four years after the commence-
ment of the said term another steamboat of such improved construction and dimensions as
experience may dictate and of equal capacity at least with the aforesaid boat, should be placed
on said ferry and kept there plying as a ferryboat.

**THIRD**—Such accommodations as may be deemed fit and necessary for the steamboats on this
side of the river shall from time to time be made by the Corporation and in the interim
between the commencement of the term and the readiness of the steamboats the ferry must
be kept on the present establishment or on one equally accommodating.

**FOURTH**—The rent is to be paid quarterly and in default thereof the usual remedies by distress,
reentry, etc., are to be resorted to nor is the toll or fare during the said term to be raised higher
than what is at present received.

Mr. Stevens has acceded to the above terms and as soon as the lease is prepared by
Counsel will on his part willingly execute the same, all of which is respectfully submitted by
your Committee.

(Signed) PETER MESIER
     THOS. CARPENTER PETER HAWES WILLIAM
     HOGHLAND

This report was agreed to, and the same Committee was directed to carry it into effect.
On April 1, 1811, Mr. Hawes, to whom it was

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referred as Counsel, to draft a lease to be executed to John Stevens for the ferry to be navigated by steamboats, reported to the Common Council that same was engrossed, which was approved and ordered to be executed. Mr. Hawes presented the following to the Council:

**RESOLVED,** that a Committee be appointed to inquire and report what alterations are necessary to be made on this side of the river to accommodate the steamboats to be placed on the HOBOKEN FERRY according to the covenants contained in the lease of the said ferry to John Stevens.

This was agreed to and referred to the Steamboat Committee.

"The lease was dated February 5, 1811, and a few weeks later the Paulus Hook Company also obtained a lease, in their case covering only the ferry from the foot of Cortlandt Street to Jersey City. Thereupon it became a race to see which ferry should have the first steamboat.

"On February 9, 1811, Fulton was granted his second patent, his first having been issued on February 11, 1809. In this second patent, in addition to Fulton repeating his basic claim to the right to build long, narrow crafts, Fulton made assertions which startled all concerned:

"'I claim as my invention and exclusive rights the combination of a steam engine with sail to drive a boat, I being the first who has done so and proved by practice the utility of the union of the two powers of wind and steam. Hence as a boat may be rigged

a variety of ways, my invention is not for any particular rig, but for the discovery of and proof by practice of the importance of using sail with a steam engine to drive a boat. I claim as my invention, to place the tiller or steering wheel and pilot or steersman further forward in steamboats than is usual in other vessels; the necessity of which is, that, the boat being long and the deck crowded with passengers, the pilot could not see forward unless near the middle of the boat. Hence, anyone who moves a steersman further forward in a steamboat than is usual in other vessels, shall be considered as using this part of my invention in the convenient arrangement of steamboats.'

"For Mr. Stevens' part, although he never conceded to Fulton a monopoly of the invention, he often spoke openly of the Clermont as the first useful steamboat, by which he meant the first vessel to run as a useful commercial proposition. Mr. Stevens received his first patent on January 3, 1810, not for a steamboat, but for a boiler and a particular combination of machinery; whereas Fulton's patent for a steamboat was received on February 11, 1809 and
his second on February 9, 1811. However, where credit was due Fulton, the Colonel was quite sportsman enough to pay it; but he found the patent in question an exceedingly difficult mouthful to swallow. The claim of any individual to such a ratio was quite untenable. Fulton's merely served to make negotiations with him still more difficult. This the Colonel discovered when he took up with the Monopolists by

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page 26

letter dated February 28, 1811, the matter of his new ferry lease from the City of New York as follows:

" 'I have obtained a lease from the Corporation for the Hoboken Ferry for the term of fourteen years on condition of putting a steamboat on the ferry in two years. I am ready to make you any compensation you desire for your patent, right, etc. I therefore trust you will not put it in the power of any Company to defeat the good intentions of the Corporation for the public accommodations, besides involving me in a litigation which, terminate as it may, cannot benefit you but may prove ultimately very injurious to the establishment of your rights. It is unquestionably in our power to settle this business ourselves. At all events I am fully determined to make no arrangements with the Paulus Hook Company.'

'In this connection the Colonel wrote to his son Robert:

" 'I am at present in great want of your assistance here; before I proceed too far with the engine for the ferryboat, I wish to have your advice about the arrangement of the machinery. The keel, stem, stern and floor timbers are already laid and the boat builder promises to have her finished by the beginning of May. If, therefore, you can safely trust the boat (The PHOENIX) to the management of the Captain and James Lee for a short time, I wish you to come on immediately on the receipt of this.'

"With Robert's frequent help the work progressed at top speed and finally brought the Colonel out the winner of the race. On May 21, 1811 he obtained a

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Inserted plate, document: Patent on the Engine of the Ferryboat Juliana

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page 27
patent on the engine, which consisted of one cylinder firmly bolted to the kelsons of the boat, connected with paddle wheels. Early in September, 1811, the new craft was christened JULIANA in honor of the little experimental twin screw boat of 1804. (This boat was named in honor of the eldest Stevens daughter.)

"In the meantime the ferry authority from the New York Corporation had been sublet to David Godwin at $1000 a year, with the proviso that 'The said Stevens and his family pass and repass, ferriage free, during the term.' "*

This agreement is in effect for Stevens' descendants to this day.

On September 18, 1811, the following advertisement appeared in the Columbian:

HOBOKEN STEAMBOAT

Mr. Godwin respectfully acquaints the citizens of New York and the public at large that he has commenced running a steamboat on the Hoboken Ferry, of large and convenient size, and capable of affording accommodations in a very extensive degree. The boat moves with uncommon speed and facility, and starts from the usual ferry stairs at the Corporation Wharf, foot of Vesey Street, New York, where passage may be taken at any hour of the day.

On the same day the ferryboat made her first trip between Vesey St., New York, and Hoboken, and on September 23, made sixteen trips carrying an average

of one hundred persons each trip. The following appeared in the *Columbian* on September 24, 1811:

Steamboats are rapidly getting into the full tide of successful experiment in this country. Last week one of Mr. Stevens' ferryboats, employed by Mr. Godwin of Hoboken, was started in operation, and yesterday made sixteen trips back and forth from that place to this City, with a probable average of one hundred passengers each trip.

Her machinery, we understand, is somewhat different from that of the North River boats, and we presume she sails considerably faster than any other heretofore constructed in our waters.

"Speed was the most gratifying element in the success of the JULIANA. Nothing so pleased the Colonel as her being able to double Fulton's estimate of 'seven or eight trips in one day.' She was run a short time that fall, was laid up during the winter, and resumed service again on April 12, 1812. She had a good season, and when winter came again, her receipts for the summer months were $4,308 with an item of $210 for a thousand cattle. As an encouragement to passengers, the Colonel, with the assent of the New York Council, erected a new dock and floating stairs opposite the Old Washington Market."* These floating stairs were the forerunners of our present-day bridges. They consisted of stairs built or resting on a pontoon. At the foot of the stairs were rollers, and when the pontoon rose or fell with the tide, the stairs were always accessible, lowering or raising themselves automatically with the pontoon.


"The JULIANA was laid up in the winter and brought out the following spring, but her career was short-lived. Certain acts of the Legislature of the State of New York, conferring on Livingston and Fulton exclusive privileges in the navigable waters of that state, were worked against it. One of these acts provided that if any persons without a license from them should presume to navigate the waters of the State by boats or vessels propelled by force of fire or steam, his boats and engines, tackle and apparel should be subject to forfeit to the grantees of the monopoly. At this time the State of New York claimed the exclusive jurisdiction over the waters of the Hudson and ownership of land covered by their waters. Intending to banish from the North River the use of steam unless by permission, and especially to cripple Mr. Stevens, Livingston and Fulton gave to the Paulus Hook Ferry Company an exclusive right to use steam
ferryboats from any point on the Jersey Shore for a distance of three miles north of the ferry. This, of course, included Hoboken and Weehawken, and in the face of the claims to these exclusive rights and the penalties following encroachment upon them the Colonel was forced to retire his ferryboat."*

"In July the Colonel wrote Robert that in order to avoid actual seizure on the New York side he was keeping his ferryboat at Hoboken. "The Paulus Hook Company having at last determined," he said, "that the JULIANA shall not be permitted to run on any terms whatsoever, I shall set about dismantling—


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page 30

her instantly and send her on to the Connecticut River. On August 3 he wrote again to say that James* started from here with the JULIANA on Thursday evening, July 27, at 9 o'clock and arrived at Killingsworth within ten miles of the mouth of the Connecticut River at 10 o'clock on Friday morning. In proceeding from thence, he was chased by six barges filled with men—they got within four miles of him. He, however, arrived at Saybrook safe at 3 o'clock in the afternoon and proceeded on from thence up the river to Middletown, Connecticut, where the boat was dismantled."+

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page 31

CHAPTER IV
The Horse Boat—Opening of Spring Street Ferry

The Horse Boat

On August 2, 1813, John Stevens sent a petition to the Common Council of New York stating that he had been prohibited from running steamboats on the Hoboken Ferry by Mr. Fulton and suggested that a boat propelled by horses might be considered as an adequate substitute.

"On March 12, 1814, he announced to the municipal authorities of the City of New York the completion of his new invention with the following Memorial:
"The Memorial of John Stevens showeth, That your Memorialist hath constructed a boat to be propelled by horses or mules, which he contemplates to run on the ferry from the foot of Yesey Street to Hoboken and which he trusts will prove a complete substitute for steamboats; and he is at present engaged in building another, which he expects will be ready to run in three months from this time; that these boats promise to be of incalculable value to the intercourse between this city and the Jersey shore, particularly in facilitating the transportation of marketing to the Washington Market. But in order

page 32

to render this improvement of public utility, convenience for the landing of horses, carriages and marketing are indispensably necessary. Your Memorialist, therefore, prays that your Honorable Body would be pleased to cause such accommodations to be constructed for the aforesaid purposes as may appear necessary and proper.'

"The authorities did not act, and he wrote them on March 28, on December 3, and again on May 15, 1815. On the latter date he told them that the horse boat was now in complete operation and asked them to appoint a time when the boat would be ready to take them over. The invitation was accepted and the trip proved a success."*

"The horse boat consisted of three boats of equal

[illustration]

A Horse Boat in 1815

* Winfield, "Hophaghan Hackingh," pp. 43-44.

Page 33

length and breadth, giving however a greater relative length and breadth to the middle boat. These were placed parallel and firmly connected at such distance apart as to leave room on each side of the middle boat for the working of the wheels with floats. It had a circular platform in the center, with cleats to give the horse foothold, and the shaft of the paddle wheel was made to revolve by means of cranks on a small wheel on either side of the shaft, geared to a large wheel on an upright spindle, like a crab or cider mill, with two or four arms extending over the platform, and to these arms, two, four, or eight horses or mules were hitched. The middle boat was ninety feet long by ten feet wide; the deck above thirty-five feet
wide, the horse walk five feet wide, and the floats of the wheel about six feet long, the wheel being ten feet in diameter, and there were 8.72 revolutions of the axis for once around of the horses. The water wheel made about eighteen revolutions in a minute. At first the boat only had one landing end, and when she pulled out of Hoboken she had to turn around in the river in order to land at New York; later on this was remedied and the boat had two landing ends."

In 1815 the horse boat began a successful career. The ferriage at this time for the horse boats was thirty-one cents for chairs, twelve and a half cents for saddle horses, and twenty-five to fifty cents for wagons, depending on whether they were empty or loaded.


Opening of the Spring Street Ferry

On February 8, 1813, the Common Council of the City of New York received a petition from the residents asking for a ferry to be established from Spring Street Basin to Hoboken, and on March 29, 1813, the following was announced by the Ferry Committee:

The Committee on the petition for establishing a ferry at Spring Street Basin reported that from a great number of petitions for and against the establishment of a ferry at Spring Street Dock, having given the matter full and deliberate consideration and from the best of knowledge they have been able to obtain, it appears that the ferry at Greenwich by reasons of its distance from the thickly settled parts of the city is not much frequented and has lately been but illly attended and although your Committee do not consider it expedient to discontinue that ferry at present, yet they are of the opinion that it will contribute very much to public convenience to establish the one requested at Spring Street Basin and they graciously recommend the same to be established with all convenient speed, and in order to give suitable encouragement to it your Committee further recommends that it be rented for the term of four years at the annual sum of $25.00, but the Lessee shall without delay cause to be built at the side of the slip at his own cost and expense a convenient ferry stairs which after the expiration of the term shall be vested in the Corporation and remain for public use. All of which is respectfully submitted.

(Signed) E. W. King

AUG. H. LAWRENCE JOHN VANDERBILT, JR.

This was agreed to, and on May 24, 1813, Mr. John Stevens secured the lease to this ferry.
CHAPTER V

The Swartwout Reign and the Murray Street Landing

The Swartwout Reign

ON January 13, 1817 a memorial was received by the Common Council from John, Robert, and Samuel Swartwout stating that they have received from John Stevens, Esq., the exclusive right of ferriage from Hoboken to New York and have also obtained from him an assignment of the leases from the Corporation for the ferries from Vesey and Spring Streets inclusive and that they propose by the first of May next to run two horse boats and other craft for the accommodation of the public. On April 7, 1817, the Ferry Committee, to whom the memorial was referred, reported:

They have agreed to recommend to this Body the transfer of the lease of the Hoboken Ferry to the Petitioner at present held by John Stevens and that same be extended to them for the term of ten years at the yearly rental of $516.25. Also the lease of the ferry from the foot of Spring Street for the same time for the yearly rental of $25.00, and that they have the liberty to remove the bridge at the North wing of the pier at the foot of Vesey Street, and also the ferry stairs at the foot of Spring Street to first step above (with the consent of Joseph Watkins, Owner of the slip) which will be more for their accommodations.

PROVIDED—that they place on the Lower Ferry two

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and substantial horse boats, each boat to be propelled with not less than eight horses to be completed and running on the ferry in six months from the first of May next, and as many sail ferryboats on the Spring Street Ferry as the Corporation may deem necessary, also that they retain the same rates of ferriage as the New York and New Jersey Steamboat Company (Paulus Hook).

All of which is respectfully submitted.

(Signed) PETER CONROY
WM. ALBERTS
J. MAYSE

On May 12, 1817, the Messrs. Swartwout reported to the Common Council that they had one horse boat plying on the ferry.
The Landing at Murray Street

On May 3, 1817, the landing was changed from Yesey to Murray Street, for the reason that the Yesey Street entrance to the ferry was too near the Washington Market and was always crowded with carts.

On June 8, 1818, the Ferry Committee reported the following:

That on the thirteenth day of April, 1811, a Lease of the Hoboken Ferry was agreed to by this Corporation to Mr. John Stevens for fourteen years and three months from the first day of February preceding, at the rent of $350.00 for the first year with the annual increase of $17.50 for each succeeding year of the said term.

That Mr. Stevens in some manner unknown to your Committee assigned his interests over to Messrs. Swartwout, who have since sold the establishment to Mr. Phillip Hone, and that there is now due to the Corporation the sum of $553.13 for arrears in rent; that in the lease to the said John Stevens there is contained a covenant on the part of this Corporation that they shall at their own expense provide and keep in repairs such accommodations as may be deemed necessary for the lying up of the boats employed on the ferry on the New York side during the said term.

Your Committee, from their personal knowledge of Mr. Hone are satisfied that the public will sustain no injury by placing this ferry under his direction, but have considered the covenant above mentioned as unreasonable and not warranted by the same amount of rent reserved. Your Committee are apparently of the opinion that the lease to Mr. Stevens ought to be surrendered, and upon payment of the said arrearage in rent, they recommend that a new lease be granted to Mr. Phillip Hone for the term of twelve years from the first of May last, at the same rent and annual increase as was agreed to be paid by Mr. Stevens, and that like covenants on the part of the Lessee as are contained in the said lease of Mr. Stevens, submitting however a good and substantial horse boat in the place of a steamboat as required by the lease.

The present landing place of the ferry on this side of the river is at the foot of Murray Street, a situation too remote from the market to afford proper accommodations to the country people who bring their produce for sale, and is moreover destitute of every convenience of landing, having neither pier, floats, nor bridge. The situation at the foot of Yesey Street, where the petitioners are desirous of placing it, would obviate many of the difficulties which now exist: piers are already run out from it and it would afford a tolerable landing place at a very little
expense. But at that place, which is very much confined and constantly crowded with carts, and is immediately at the side of the market, your Committee deems it an improper place for a ferry and under the circumstances they recommend that the said ferry be permanently located at the foot of Barclay Street as soon

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page 38

as ground in the vicinity shall have been filled in and properly regulated, and for that purpose that the right of the Corporation to the bulkhead in front of that street be granted to Mr. Hone during the said term, and in the meantime that the landing place shall continue where it now is, at the foot of Murray Street: that the right of ferriage granted to Mr. Hone on the New York side shall extend from the Northerly bounds of the limit granted to the New York and New Jersey Steamboat Company, North Battery or Hulbert Street.

(Signed) E.W. KING

G. BUCKMASTER JOHN P. ANTHONY

This was approved by the members of the Common Council, and on August 10, 1818, lease was drawn up to Mr. Phillip Hone. On August 14, 1819, the ferry pier at Barclay Street was completed, and ferry landing was established at the foot of that street on that day.

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page 39

CHAPTER VI

The Hone Management

HONE started in the enterprise without duly considering the rights of others, and, as Colonel Stevens always insisted, in disregard of the covenants in the lease to the Swartwouts which had been assigned to him when he purchased their interest in the ferries.

"In June, 1818, Hone made the following announcement: 'The Corporation of the City of New York having granted to the subscriber a lease of the Hoboken Ferry, he has associated with him in that establishment Mr. Phillip De Peyster, who will have the sole charge of conducting the same. All applications, therefore, respecting the ferry will be made to him. Two horse boats are now in complete operation, with good accommodations for passengers and carriages, etc. One of them will in future start from each side of the river punctually at every hour from five o'clock in the morning until eight o'clock in the evening.'
"It will be observed from this that communication with Hoboken ceased at eight o'clock. No evening entertainments could be indulged in by New Yorkers with reasonable expectation of getting back home the same night. Hone's management became a source of great annoyance to Colonel Stevens. The latter owned 'a public house at Hoboken, chiefly supported

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page 40

by the custom of the ferry, and the resort thereto from the city as a place of entertainment.' Hone not only prevented the Colonel's public house from entertaining in the evening, but against all precedent and good order kept in his said ferryboats a "bar" for the sale of such refreshments as were furnished at the Colonel's ' '76 house.' Worse than all these, Hone kept his horses and mules at work fifteen hours without rest or intermission, while on the short ferries to Brooklyn they were changed two or three times a day. This crippled the ferry, caused a tedious, uncomfortable and uncertain passage over the river, discouraged visitors, diminished the Colonel's revenue, and depreciated his property. But why should Hone whip up his overworked and hungry mules when the thirsty passengers were 'cabined, cribbed, confined' on his boat, and must patronize the 'bar' on board, or endure thirst unsuaged? The longer the voyage, the more money in his purse. The Colonel thought of the ease and rapidity of conveyance to Staten and Long Islands by means of Fulton's steamboats; he saw the multitudes flocking to the resorts there provided, and then turned with disgust to the mules tramping their circular treadmill in a lazy, indifferent effort to get the boat to Hoboken, and its passengers to the refreshments awaiting them at his 'public house.' His wrath was kindled against Hone. He saw his great invention in the hands of others, and as he thought (perhaps justly) working irreparable injury to his hotel and other property.

"That part of the public, however, which was in

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page 41

THE HONE MANAGEMENT

clined to look upon the humorous side of things, poked fun at his boat and the method of its propulsion. One of the visitors to Hoboken has left a record of his trip across the river. He says, 'We embarked on an aquatic conveyance, called by the people of these parts a horse boat. But I am inclined to think that this novelty is a mere sham, a trick upon travellers. There are a dozen sorry nags in this contrivance, which go round in a circular walk, with halters on one end and beams at the other extremity. How this orbicular movement can promote the rectilinear advancement of this mammoth boat is to me a mystery. And as we were six hours in crossing the river, I suspect that they go and come with the tide; and that the horses are a mere catchpenny, to bring their masters the trigesimosecundal part of a dollar more on every head
than the customary ferriage levied on passengers. However, the unhappy quadrupeds appeared to strain very severely, and in their hinder quarters very particularly; indeed, every sinew of the latter part seemed to be over-exerted, while the neck, head and forelegs moved glibly enough, which is certainly a natural curiosity.'

"Notwithstanding the condition to which Hone had reduced the ferry, he held on to it, much to the annoyance and disgust of Colonel Stevens. Because of the inconveniences attending the crossing, the people of the City were not attracted to his beautiful island in the Hudson; its shady groves were not frequented; its city, begun with so much confidence in 1804, remained unbuilt. The Colonel was convinced

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page 42

that this state of affairs would not change for the better so long as the ferry was thus managed. He tried to compromise his differences with Mr. Hone. He offered to continue the lease to him without further controversy if he would close the 'bar' on the boats and give up the lease he had obtained from the City of New York. This was refused and preparations were made for a battle royal."*

On September 16, 1819, Phillip Hone was granted by the Common Council the exclusive rights to establish a ferry to New Jersey from the North boundary of his present lease to the foot of Charlton Street and the exclusive right of establishing a ferry to Hoboken, from thence up to Christopher Street, for the term of fifteen years, at the same rent which was reserved for Charles Watts (exclusive rights for establishing a ferry from Christopher Street to Weehawken for the rent of one cent for the first five years, $50 annually for the second five years, and $250 annually for the last five years), also that his present lease be extended so as to expire at the same time at the annual rent of $800 for the period of time which may be extended, provided he will forthwith put two good sailboats on the ferry, and also put a horse boat on the same on or before the first of May next. Also provided he procures landing for same on each side of the ferry at his own expense, the landing in New York to be at any place within two hundred feet of the foot of Spring Street, but not

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page 43

within the slip. On October 2, 1820, the lease was granted by the City of New York.
"On Tuesday, August 29, 1820, between four and five P. M., Colonel Stevens, on advice of his counsel, Richard Stockton, went on the ferry wharf at Hoboken, and there in the presence of Lucas Van Boskerck and John Lee, informed John Van Boskerck, the ferrymaster, that he did then make entry to defeat the estate granted by the lease on account of the breaches of the covenants, and he then and there demanded the immediate surrender of the possession of the ferry house, wharf, and appurtenances. All these demands were refused, as he expected they would be. The suit, begun with so much formality, was never pushed to judgment."*

On March 5, 1821, a petition of Phillip Hone, Lessee of the Hoboken Ferry, was received by the City of New York Common Council stating that, "as Lessee of the ferry, he had covenanted to put another horse boat on said ferry, which he was about doing when he was served with a Declaration of Ejectment from Mr. John Stevens, Proprietor of the City of Hoboken, for the purpose of reentering on the said ferry. As the issue of said suit is uncertain, he prays he may be excused for putting said boat on the ferry until the termination of the suit, and should that be adverse to petitioner's claim, that the Corporation would assign to him some other place for the ferry on the Jersey Shore."

On April 16, 1821, a remonstrance from a number of inhabitants against the petition of Phillip Hone respecting his lease for the Hoboken Ferry was received, which prayed he might not be released from the conditions to run a horse boat from the foot of Spring Street or to remove the ferry on the Jersey Side from Hoboken. This remonstrance was referred to the Ferry Committee for action.

On the same day a memorial was received from John Stevens stating that he was the proprietor of the ferry at Hoboken on the Jersey side: "That he gave to Messrs. Swartwout a lease of said ferry for ten years, in which lease was a clause that the same should not be assigned, without the consent of the petitioner. That without his consent the Messrs. Swartwout assigned the lease to Mr. Phillip Hone. That Mr. Hone keeps on board his boat a 'Bar' in which refreshments are sold, it is much to the injury of the House of Entertainment ('76 House) established by Petitioner at Hoboken and praying that if the Corporation should assign to Mr. Hone a different landing place on the Jersey side, that they would assign to Petitioner a convenient landing for his boats on the New York side."


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page 44

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page 45
CHAPTER VII

Reappearance of Steamboats

HOWEVER, in May, 1821, all controversies were settled by compromise. On May 28, a petition was received by the Common Council from Phillip Hone, John C. Stevens, and Robert L. Stevens, stating that they had made an agreement for the transfer and purchase of the right of ferriage heretofore granted by the Corporation to Phillip Hone conditionally, and petitioning that the same be approved by the Corporation. On August 20, 1821, the Ferry Committee to whom was referred the petition reported as follows:

The Committee on ferries to whom was referred the petition of Phillip Hone, John C. Stevens and Robert L. Stevens stating that they have made a conditional agreement for the transfer on the one side and the purchase on the other of all rights of ferriage heretofore granted by the Corporation to Phillip Hone, and requested the Corporation to transfer the lease of the ferry from Barclay and Spring Street to Hoboken to John C. Stevens and Robert L. Stevens.

REPORT—That Phillip Hone holds a lease from the Corporation of the ferry from Barclay Street to Hoboken dated August 10, 1818, for twelve years from the first of May, 1818, and it will consequently expire on the first of May, 1830, at an average rent of $595.00 per annum from the first of May, 1821. That by the conditions of this lease Hone has to keep upon this ferry a suitable number of good and substantial boats sufficiently large, and adapted as well, to transport horses and carriages, as passengers and in addi-
reentering the ferry and that he, being ignorant of the cause of Mr. Stevens' proceedings, and aware of the uncertainty of the decision of the Juries and of the time which it might take to settle the question, did not think it prudent to incur the expense of building a teamboat and he petitioned the Corporation on the 26th of February last to grant him a reasonable extension of time to put the teamboat on the said ferry until after the result of Mr. Stevens' suit should be known and whereas John C. Stevens and Robert L. Stevens agree to make very great improvement on the said ferries by putting on the ferry from Barclay Street to Hoboken in the place of two teamboats now running a very superior steamboat from ninety to one hundred feet on deck and forty-two foot beam, the boat to be built of the best cedar and oak, and the said John C. Stevens and Robert L. Stevens further agree that if the steamboat does not accommodate the public as well as the two teamboats now on said ferry, that they will at any time during the lease, when required by the Corporation, put on one teamboat, in addition to the said steamboat, and the said boats to be approved by the Corporation. And whereas also John C. Stevens and Robert L. Stevens are to put on the ferry from Spring Street to Hoboken in addition to the two sailboats now in use, a good and substantial teamboat to be propelled by not less than eight good horses by the first of May, 1822 (the said boats to be approved by the Corporation).

Therefore Your Committee having duly examined the business are decidedly of the opinion that the Public will be much better accommodated by having a steamboat in place of the two teamboats now running on the ferry from Barclay Street to Hoboken since (among other advantages they believe that the steamboat will make the passage in less than half the time taken by the teamboats).

Your Committee therefore recommends the adoption of the following resolutions:

Resolved: That above John C. Stevens and Robert L. Stevens place on ferry from Barclay Street to Hoboken a steamboat of the dimensions above stated, and to be approved by the Corporation in addition to the sailboats now on said ferry, and Phillip Hone surrendering to the Corporation the lease which he now holds of said ferry, that the Counsel Board be instructed to prepare in conformity to the tenor of this report, a new lease to John C. Stevens of the said ferry from Barclay Street to Hoboken for the period of nine years from the first of May, 1821, at the rent of $595 per year payable monthly, and

Further resolved that upon John C. Stevens and Robert L. Stevens placing on the ferry from Spring Street (without the slip and within two hundred feet of the foot of
said Street) to Hoboken one good and substantial teamboat in addition to the two sail boats now in use on said ferry on or before the first of May, 1822 and Phillip Hone surrendering to the Corporation the lease which he now holds on the said ferry that the Counsel of the board be instructed to prepare in conformity to the tenor of this report a new lease to John C. Stevens and Robert L. Stevens of said ferry from Spring Street to Hoboken for fourteen years from the first of May, 1821, at the following rents: for the first five years, one cent per year, for the next five years, $50 per year and for the last five years, $200 per year, payable quarterly, and that said lease shall contain an extension of the lease of the ferry from Barclay Street to Hoboken for five years (which will cause both leases to expire on the first of May, 1835) at a rent of $800 per year payable quarterly for the time extended.

**RESOLVED** that the leases mentioned in the proceedings and resolutions be so drawn as to comprehend of the conditions, restrictions, etc., which are contained in the corresponding leases to Phillip Hone and that the foregoing resolutions shall not be binding upon the Corporation until the leases which are to be approved by the Counsel shall be ordered to be executed by them, and the counterpart thereof shall be executed by the said John C. Stevens and Robert L. Stevens.

Respectfully submitted,
(Signed) THOMAS S. TOWNSEND
JOHN P. ANTHONY
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"Colonel Stevens now memorialized the Legislature of New York for relief from the odious monopoly granted to Livingston and Fulton, for it had rested, and was then resting very heavily upon him. He had learned from experience that horses and mules were a weak substitute for steam, and when his boats put into competition with it were a sad failure. His prayer was 'that such permission may, by a law of this State, be made as will secure to him and to his lessees the quiet and peaceable occupation and enjoyment of such rights as appertain to him as proprietor of said Hoboken Ferry on the New Jersey side, and to them as lessees of said ferry as well on the New York side as on the New Jersey side.' He insisted that the grant to Livingston and Fulton was nugatory, but for the sake of peace was willing to make them a reasonable compensation 'for their grant of a right to run steamboats on the said Hoboken Ferry.'

"The day when this grant would be repudiated and the Legislature defied was near at hand. The right of that State to exclusive navigation on waters dividing two States was being discussed by lawyers. It had been taken into the courts, and was nearing its final adjudication. The more it was examined, the more untenable seemed the claim. Its supporters were few, its opponents were many."
"The new lessees obtained from the City of New York a lease requiring that they should place on the Barclay Street ferry a steamboat, the speed of which should be such as to make an equal number of trips per diem with the two teamboats then plying. This requirement was directly antagonistic to the acts of the Legislature. To meet it the Messrs. Stevens immediately began the construction of a steamboat of very superior accommodations,' which was confidently expected to surpass every other ferryboat on the river, and capable of making more trips than the teamboats in less than half the time.

"The Legislature of the State of New York did nothing to modify their grant to Livingston and Fulton, or to aid Colonel Stevens to restore steam to his ferry. Failing to get relief from that source, he turned upon their licensees, and informed the proprietors of the Paulus Hook Ferry that it was the purpose of the proprietor and lessees of the Hoboken Ferry to place thereon one or more steamboats. To this information he added the following offer and defiance: 'Provided, we are left undisturbed in running steamboats on the Hoboken Ferry, we are ready and willing to stipulate (now) that steamboats of similar construction shall be placed on the Paulus Hook Ferry. By such arrangement the two ferries will be placed nearly in the same relative position they now are, and a saving of nearly one-half the present expense will be effected. We would wish you to give us a speedy and definitive answer to the above proposition. It is, however, to be distinctly understood that whether the above proposition is or is not acceded to, we are fully determined to run steamboats on the ferry to and from Hoboken to New York.' With this bold defiance to the monopolists and their licensees, to the Legislature of New York and its unjust enactments, the controversy, so far as Colonel Stevens was concerned, ended."


CHAPTER VIII

The Hulbert Street and Canal Street Ferries

ON November 3, 1821, the Hoboken Steamboat Ferry Company was incorporated.
On April 22, 1822, the steam ferryboat HOBOKEN was completed and Messrs. Stevens requested the members of the Common Council to view the operation of the boat that day, which request was accepted. The following appeared in one of the newspapers at that time:

The Steamboat HOBOKEN, moves through the water at nine miles an hour. It is 98 feet long on deck, 26 feet wide, with a draft of only 3 1/2 % feet, about 200 tons burden and between 9 and 10 feet deep in the middle of her hold. She can afford accommodations for at least one hundred persons.

On April 29, 1822, the following resolution was adopted by the Common Council of the City of New York:

RESOLVED that the steamboat which was exhibited to the members of this Board by John C. Stevens and Robert L. Stevens as the one which they intend to place on the ferry from Barclay Street to Hoboken is approved of by this board as a boat fully complying with the report of the Ferry Committee upon the subject of granting a lease to said John C. Stevens and Robert L. Stevens.

The HOBOKEN started running on May 11, 1822,

and on May 14, 1822, the following appeared in the New York Evening Post:

The beautiful steam, ferryboat, built by Messrs. Stevens, to ply between this city and Hoboken commences its trips. The construction of this boat, which unites all that is desirable in speed, convenience, safety and economy, is highly creditable to the gentlemen who planned it, and in fact, to the mechanical ingenuity of the country.

Thereafter the HOBOKEN made trips "every hour by St. Paul's Church clock."

Hulbert Street Ferry

On August 24, 1822, a request from John C. Stevens and Robert L. Stevens was received by the Common Council requesting permission to remove the Hoboken Ferry from the Foot of Barclay Street to such other place as the Board might deem advisable during the continuance of the Yellow Fever, which was raging at that time, and on September 3, 1822, the following appeared in The Centennial of Freedom, a newspaper in Newark, N. J., reading:

The Hoboken Ferry has been removed because of Yellow Fever to the North Battery at the Foot of Hulbert Street, opposite St. John's Church. This is near the market, at present in
Hudson Square.

On October 27, 1822, the ferry was returned to Barclay Street.

*Canal Street Ferry*

On January 6, 1823, a petition of John C. Stevens of New York City and Robert L. Stevens of Hoboken was received by the Common Council of the City of New York, stating "that they are the Lessees of the Corporation of the ferry from Barclay Street to Hoboken; that some time about the 23rd of August, 1821, a resolution passed the Board granting to the Petitioners under certain conditions the rights to establish a teamboat ferry from the vicinity of Spring Street Basin to Hoboken, which resolution has not yet been acted on; that they consider a steamboat as infinitely preferable on that ferry to a teamboat, and, though more expensive, they would place one on it, provided they had the sanction of the Corporation; therefore, having established a steamboat on the Barclay Street ferry, a prosecution has been commenced against them by the New York and New Jersey Steamboat Company, but they are well satisfied that from the Charter of the City the Corporation possesses the exclusive rights of granting the right of ferries to steamboats or boats propelled in any manner that is not secured or prohibited by a patent from the United States. They, therefore, pray that a grant may be made to them by the Corporation of the right to the ferry from Spring Street to Hoboken and to place thereon a steamboat." This petition, after being read, was referred to the Ferry Committee.

On July 21, 1823, the Ferry Committee reported on the petition of John C. Stevens and Robert L. Stevens as follows:

The Committee on Ferries, to whom was referred the petition of John C. Stevens and Robert L. Stevens praying that a grant may be made to them by the Corporation of the right to a ferry from Spring Street to Hoboken, have had the subject under consideration and beg leave to offer the following report:

The Petitioners state in their petition that they are the Lessees of the Corporation of the ferry from Barclay Street to Hoboken; that some time about the 23rd of August, 1821, a Resolution
passed the Board granting to the Petitioners under certain conditions a teamboat ferry from
the vicinity of Spring Street to Hoboken, which resolution has not yet been acted on, that they
consider a steamboat as infinitely preferable to the horse boat and though more expensive
they would place one on it provided they had the sanction of the Corporation therefor, but
having established a steamboat on Barclay Street Ferry, a prosecution has been commenced
against them therefor by the New York and New Jersey Steamboat Company, but they are
well satisfied that from the Charter of the City the Corporation possesses the exclusive rights
of granting the right of ferries to steamboats or boats propelled in any manner that is not
secured or prohibited by a patent from the United States.

Shortly after the petition was presented the Committee thought it inexpedient to report in
favor of the prayer of the Petitioner so far as it related to the guarantee required by the
Petitioner. They have since however determined to put a good and substantial steamboat in
immediate operation at their own risk if the Board will grant them the right of a ferry from a
place located in the vicinity of Canal Street to Hoboken. It has long been an opinion very
generally entertained that such a ferry ought to be established; and the Committee are
disposed to believe that this establishment has been the plan contemplated by the Messrs.
Stevens. It will not only tend to the advantage of a part of the city advancing more rapidly in
improvement than perhaps in other districts embraced within these limits, but can

not fail to be a great public accommodation. The Committee would therefore recommend
that a grant be made by the Corporation to John C. Stevens and Robert L. Stevens to a right of
ferry from the vicinity of Canal Street to Hoboken agreeably to the terms of the following
resolutions:

**RESOLVED**—That above John C. Stevens and Robert L. Stevens putting on the ferry to be
established at the vicinity of Canal Street a good and substantial steamboat of similar size,
construction and efficiency to one now in use at the Barclay Street ferry, to be approved by
the Ferry Committee for the time being, the Counsel of the Board to be instructed to prepare
a lease to them of such ferry for the term of fifteen years from the first day of May last at and
under the following yearly rents—for the first five years the yearly rent of one cent if lawfully
demanded, for the next five years the yearly rent of $50.00 and for the residue of the term
the yearly rent of $200.00 payable quarterly.

**RESOLVED**—That for the first five years the ferry shall be located about eighty feet West of
Washington Street at a certain street or intended street of thirty feet wide not yet named
which street extends from Canal Street Basin on the North side and ground of Alexander L.
Stewart on the South side, the first eighty feet thereof being filled up and the residue under
water excepting such part as is occupied by the bulkhead erected on the South side of the said
basin; and that for the residue of the said term the ferry shall be located at such place in the vicinity of Canal Street as shall be designated by the Corporation.

RESOLVED—That the said lease contain a clause granting to John C. Stevens and Robert L. Stevens, the exclusive right of ferry from the North Battery to Christopher Street and also a clause requiring that the steamboat shall leave the aforesaid Canal Street Ferry for Hoboken once at least in every hour from sunrise to sunset.

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page 57

RESOLVED—That the lease to Messrs. Stevens shall contain the usual covenants and shall be inoperative until the lease held by Mr. Hone for the ferry at Spring Street dated October 2, 1820 be surrendered by Mr. Hone to the Corporation.

RESOLVED—That the said John C. Stevens and Robert L. Stevens comply with so much of the terms of the first resolution as relates to putting a steamboat on the ferry by the first of November next.

(Signed) GEORGE ZIBRISKIE  
ASA MANN  
E. W. KING

This resolution was approved by the Board and adopted.

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page 57

CHAPTER IX

From 1823 to 1863

ON the first of September, 1823, the ferryboat PIONEER made its first trial trip and on the same date an invitation was received from Messrs. Stevens by the members of the Common Council to witness a trial of the boat, intended for the Spring Street Ferry, on Friday, September 3, 1823, at 4:30 P.M., which was accepted.
The boat was much faster than the HOBOKEN. It had a ladies' cabin below deck, carpeted and warmed by open fireplaces; and a further temptation to the ladies was the installation of two large looking-glasses. The boats were a success, and, with the horse-boats, transportation facilities to Hoboken were greatly increased.

The ferryboat FAIRY QUEEN came out in April, 1825, and was placed on the Canal Street Ferry, bringing an end to the horse boats. This boat was rebuilt in 1851 and named the PHOENIX.

Following the FAIRY QUEEN came the NEWARK, in 1828; and the PASSAIC was built in 1844. She was taken off the Hoboken Ferry later and sent to Newark, New Jersey. The ferryboat JOHN FITCH was built in 1846, followed by the JAMES RUMSEY in the same year. In 1853 the JAMES RUMSEY was destroyed by fire while lying in the slip at Barclay Street, New York City. Her machinery was afterwards placed in the ferryboat PATERNON, which was built in 1854. The ferryboat JAMES WATT was built in 1851. She was destroyed by fire on August 2, 1870. The ferryboat CHANCELLOR LIVINGSTON was built in 1853. This boat was chartered by the United States Government in 1861 for a transport and was in this service for one year. Following her came the ferryboat HOBOKEN, which was built in 1861. This boat was chartered to the United States Government in 1862 and was lost in the Burnside Expedition in the same year. In the year 1863 the Stevens family built another ferryboat and called her the HOBOKEN.

Business was very brisk during these years, and the population of the City of Hoboken increased rapidly, so that it was incorporated as a city on March 28, 1855. It can be safely said that during this period the ferry had much to do with the building up of the City of Hoboken.

[Inserted plate] illustration: A Ferryboat of 1825- the Fairy Queen
**Ferry Tariffs, 1825 and 1853**

*With* the coming of steamboats, more frequent trips being made and better accommodation, the Messrs. Stevens at once saw they needed another tariff and on September 26, 1825, the following was approved:

For every single person, in the steam, horse or other boats ........................................................................................................... **$0.12**

An ordinary market wagon, loaded, covered or uncovered with two horses and driver ............................................ **50**

Do—with one horse and driver .......................................................................................................................... **37 ½**

Do—drawn by four horses and driver .......................................................... **1.00**

(N.B. A load of a market wagon is to consist of vegetables, fruit, meats and poultry: a few bags of flour, such as five or six, which is generally the most a farmer carries at once to sell at market, may be considered a market article.)

Do—drawn by two horses loaded with iron, steel, lead, paint, cider, spirits, grain, flour in barrels, bags, boxes or otherwise, and other heavy articles and driver .......................................................................................................................... **1.00**

Do—drawn by four horses and driver .......................................................... **1.50**

Do—drawn by two horses, loaded with paper, hemp, cotton, yarn, furniture, or other kind of light goods and driver .......................................................................................................................... **1.00**

Do—drawn by four horses and driver .......................................................... **1.50**
Do—or a cart empty drawn by one or two horses,
and driver ................................................................. .50

Do—when drawn by one horse with an ordinary load, such as a hogshead of rum
or a similar weight and driver ........................................... .75

Large Pennsylvania wagon, or a similar one empty,
drawn by two horses, and driver ....................................... 1.00
Do—with load ................................................................. 2.00

For every additional horse to such wagon................................................................. .18

Coach, coachee, chariot or covered wagon drawn
by two horses, and driver and four persons ................. 1.00

A two wheel carriage, that is to say, chair, sulky,
etc. drawn by one horse, and two persons .......................................... .37 ½

Phaeton, drawn by two horses, and two persons. .......... 1.00

Sleigh, drawn by one horse, and one or two persons ....... .50

Do—drawn by two horses, with one or two persons .......... .87 ½
Loaded sleighs to be rated the same as loaded wagons.

Pleasure wagons drawn by one horse, with one or
two persons ............................................................................. .50

Do—drawn by two horses, with four persons................................. 1.00

A coach, coachee, chariot or covered wagon................................. 1.00

Phaeton ................................................................. .62 ½

Chaise, top chair or sulky ................................................................. .44

Sleigh ................................................................. .30
Horse and cattle each .................................................. . .................................................. .22
Sheep, calf or hog ............................................................. .................................................. .06
Large trunk or chest ................................................................................. ............. .12 ½
Small do do ............................................................................................................. .06
Bushel of salt ............................................................................................................. .02
Pipe or hogshead of wine, spirits or molasses................................................................. .75
Barrel of do .............................................................................................................. .12 ½

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page 61

Barrel of beef, pork, flour or fish .................................................................................. . ......................... .12 ½
Plank of every kind, each .................................................................................................. .01 ½
Boards, do do ................................................................................................................ .01
Side of sole leather............................................................................................................ .02
Do—of upper leather ......................................................................................................... .01
Raw hide ....... ................................................................................................................. .03
Iron, steel, lead, per cwt..................................................................................................... .06
Desk ................................................................................................................................... .37 ½
Large table......................................................................................................................... .09
Small do .............................................................................................................................. .04
Mahogany chair ................................................................................................................ .02
Common do ................................................................. .01
Basket or bag of fruit of two bushels ............................................ .04
Bag of grain ........................................................................... .03
Bag of flour or meal ................................................................ .03
Crate of earthen ware ............................................................ .25
Tierce of earthen ware ............................................................. .25
Feather bed ............................................................................ .06
Clock case .............................................................................. .12 ½
Chest of tea ............................................................................ .12 ½
Dyewood, indigo and copperas, per cwt ...................................... .06
Gunpowder, per cwt., only when properly secured..................... .25
A large bale of cotton .............................................................. .25
An empty hogshead or pipe ...................................................... .12 ½
Do—barrel ............................................................................... .03
Shad, per hundred .................................................................... .25
Cabbage, per hundred ............................................................. .19
Specie, per $1,000.00 ............................................................. .12 ½

and all other articles and things in like proportion.

Dated September 26, 1825.
The above tariff was kept in effect until 1853, when the ferries began to show a loss in revenue. From the year 1844 to 1853 the expenditures of the ferries amounted to $1,042,907.00, while receipts amounted to $970,123.00, a loss of $72,784.00. Owing to this loss, on March 14, 1853, the following rates were established:

Every person on foot, above ten years old ................................................................. .03

Under ten years and above five years ................................................................. .02

Man and horse, or horse only .................................................................................. .09

Ordinary four wheel trucks, loaded, two horses
with one person ........................................................................................................ .37 ½

Ordinary do, light, do ............................................................................................ .25
do wagons, or market wagons, including loads of green clover and grass, two horses and one person ................................................................. .25

For every additional person ..................................................................................... .03

Ordinary wagons or market wagons, including loads of green clover or grass, one horse and one person ......................................................... .12 ½

For every additional person ..................................................................................... .03

A coach, coachee, chariot, barouche, phaeton, pleasure wagon or sleigh with more than one seat, two horses and one person ......................................................... .30

For every additional person ..................................................................................... .03

A light pleasure carriage, barouche, pleasure
wagon, one horse and one person ........................................................................... .12 ½

For every additional person ..................................................................................... .03
A cart with driver, one horse, loaded or empty............. .12 ½

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[inserted plate] illustration. Ferryhouse, Hoboken, N.J., 1850

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page 63

A wagon loaded with straw, or hay, with two horses
and one person ........................................................................................................................................... .50

Do do do do with one horse .37 ½

Any kind of carriage or sleigh without horse................................................................. ½ price

A wheelbarrow and one person, loaded or empty. . 06

A hand cart and one person, loaded or empty............................................................. .08

Cattle, single or in droves ............................................................................................... each .15

Calves, sheep or hogs .................. .03

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[page 64]

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page 65

CHAPTER XI
The Christopher Street Ferry and the Hoboken Ferry from 1863 to 1885
IN July, 1836, the Christopher Street Ferry was started, connecting Hoboken with Christopher Street, New York. The opening of this ferry caused the abandonment of the Spring and Canal Street Ferries.

The popularity of the steam ferries was increasing rapidly, and other companies in the New York harbor were replacing their old boats with steam. The steam ocean travel was building up, so that on March 3, 1843, an Act of Congress organized the Steamboat Inspection Service. In 1853 an Act was passed to include all ferryboats, but it was not until June 4, 1864, that the ferryboats, their pilots, and engineers were brought within the provisions of the law for the inspection of the former and the license of the latter.

The first night boat to be placed on the ferries was the PHOENIX, in the summer of 1856.

During the Civil War the Messrs. Stevens saw business increasing, with the result that they had to start a building program. The ferryboat MORRISTOWN came out in 1864. This boat was built by John Stuart of Hoboken, was 682 gross tons, 547 net tons,

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page 66

198 feet long, 44 feet wide, with a draft of 12 feet. Following her was the JAMES RUMSEY, which was built in 1867 by John Stuart of Hoboken. This ferryboat was 206 feet long, 44 4/10 feet wide, 11 4/10 feet draft, 547.37 net tons, and 671.64 gross tons. The ferryboat WEHAWKEN was built in 1868. She was a duplicate of the JAMES RUMSEY.

The ferryboat HACKENSACK was built in 1871 by John Stuart of Hoboken. She was 917.22 gross tons, 757.01 net tons, 215 feet long, 50 feet wide, with a draft of 12.03 feet. The SECAUCUS was built by John Stuart of Hoboken in 1873. This boat was 214 feet long, 46 1/2 feet wide, with a draft of 12 6/10 feet. Her gross tonnage was 971, net tonnage 792, single deck, wooden hull, and cost $121,140.00. She was sold to the Carteret Ferry Company on November 20, 1920, to run between Carteret, New Jersey, and Linoleumville, New York.

The MOONACHE was built in the year 1877 by John Stuart of Hoboken at a cost of $60,000.00. She was 197 6/10 feet long, 45 feet wide, with a draft of 13 1/2 feet, gross tonnage 810.94, and net tonnage 624.46. This boat was sold to the New York and College Point Ferry Co. in March, 1907.

The next boat to come out was the LACKAWANNA in 1881 by Ward Stanton & Company at Newburgh, New York. This boat was the first steel hull ferryboat to be built, and cost $76,000.00. She was 822 gross tons, 645 net tons, 200 feet in length, 35 feet wide, with a draft of 13 feet. In 1907 this boat was sold to the Norfolk and Washington Steamboat Com-
pany of Washington, D. C., but it was sunk by a collision in the Potomac River and was never raised.

The steel hull ferryboat HOBOKEN was built in the same year the LACKAWANNA was built, by Ward Stanton & Company of Newburgh, New York. She was 891 gross tons, 714 net tons, 198 feet long, 35 feet wide, with a draft of 12 feet, and cost $88,000.00. This ferryboat was sold on December 6, 1910 to J. R. Haas of the Brooklyn and Manhattan Ferry Company for $16,000.00.

The ferryboat PAUNPECK was built in 1882 by Ward Stanton & Company, Newburgh, New York. She was 820 gross tons, 627 net tons, 199 feet long, 35 feet wide, draft 12 feet, and had a steel hull. Cost $88,082.07. This boat was sold to the Westchester Ferry Company in May, 1923, for $65,000.00 and has since been running between Yonkers, New York, and Alpine, New Jersey.

The ferryboat HOPATCONG was built in the year 1885 by John Bigler & Company, Newburgh, New York. She was launched on July 7, 1885, and delivered September 5, 1885. Cost, $25,000.00. She was 843.13 gross tons, 615.21 net tons, 197 6/10 feet long, 35 3/10 feet wide, with a draft of 13 feet. While this ferryboat was lying in her slip at the D. L. & W. R. R. Terminal on the night of August 7, 1905, she was completely destroyed by fire. The hull of this boat, which was steel, was turned into a coal barge.

The ferryboat MUSCONETCONG was built in the same year as the HOPATCONG, by John Bigler of Newburgh, New York, at a cost of $40,000.00. She

was 197 4/10 feet long, 35 3/10 feet wide, draft 13 feet, 842.66 gross tons, 614.30 net tons, had a single deck and a steel hull. The boat was launched on September 15, 1885, and delivered to the Ferry Company a month later. She was sold to the Westchester Ferry Company in 1923 for $85,000.00 and put on the run between Yonkers, New York, and Alpine, New Jersey, on May 20, 1923.
CHAPTER XII

On the Performance of a Double-Screw Ferryboat

Following is an abstract taken from the Transactions of the Society of Mechanical Engineers for the year 1889-90, as written by E. A. Stevens:

"The first propeller boat used for ferry purpose was constructed in the first decade of this century by my grandfather, John Stevens, and made a run between Hoboken and Barclay Street, my uncles, John C. Stevens and Robert L. Stevens, acting respectively as pilot and engineer.

"The engines of this vessel are at present in the Stevens Institute; and while the vessel would hardly be classed as a ferryboat in our understanding of the word, it is a curious coincidence that she was run over the very route on which the BERGEN is now serving.

"About forty years ago my uncle, Robert L. Stevens, and my father, E. A. Stevens, went so far as to have an estimate made by Hogg & Delamater, predecessors of the Delamater Iron Works, for a screw ferryboat for the Hoboken Ferries.

"In 1867 a patent was obtained by Edwin L. Brady of New York for a screw-propeller ferryboat. Two vessels of nine hundred tons burden were built under this patent. If they were used as ferryboats at all, it was to a very limited extent. They were used subsequently at the mouth of the Mississippi River as agitating dredges. It is believed that the washing of the levees caused by the quick water from the screws was so serious as to cause their use as ferryboats to be abandoned.

"Some twenty years ago Mr. Brady consulted on the matter of screw ferryboats with the late Captain Woolsey of the Jersey City Ferries, General McClellan, and Mr. William W. Shippen, then President of the Hoboken Land and Improvement Company. It was Mr. Brady's idea at the time that boats could be built under proper conditions.

"About the same time, it is said, a single-screw vessel was used with only partial success, on the Connecticut River, to transfer cars across the stream.

"About, if not at, the same time, Mr. Francis R. Stevens, of Hoboken, made a model for a double-ended-propeller ferryboat, to which I will refer later, the subject having been
considerably discussed by the Management and by Professor R. H. Thurston, then of Stevens Institute and now of Cornell University.

"In August 1879, the OXTON, a double-ended boat with twin screws at each end, was placed in service on the Mersey, between Birkenhead and Liverpool, England. Since that time a number of similar vessels have been built and operated on the same route. The landings are made from the side of the vessels and not over her ends, as is the practice in this country. The vessels are considered successful, having great manoeuvering power, and being more economical than the sidewheel vessels, which they replaced.

[inserted plate] picture. The First Double-Screw Ferryboat in the World- the Bergen

"Four years ago a paper was read before this Society in Boston by Mr. William Cowles of New York containing general drawings of a proposed screw ferryboat, and comparing it closely with the prevailing type of ferryboat in use in the New York Harbor, and with an improved compound sidewheel boat suggested by him.

"Mr. Cowles proposed using a toggle-joint on each side of his engine so as to give proper submersion for his screws, which he further proposed to protect from ice by guard braces, and by a false stem projecting down in front and connected with a shoe running from the keep. He further proposed using a double smokestack, carried up on the divisions between the cabins and the team gangway.

"The problem of constructing a screw ferryboat has been a long-standing one with the Hoboken ferries. Early in the 70's, as previously noted, Mr. Francis B. Stevens, of Hoboken, got up a model and some preliminary drawings for such a vessel. The Management, though not prepared for so radical a departure, kept the question before their minds as a possibility. Early in 1885 it became evident that two new boats must soon be built, and the question was raised whether they should be made propeller boats or not. With some reluctance it was decided that there was not sufficient time to mature the necessary plans, as it became evident that the subject needed careful and close study. Accordingly the ferryboats MONTCLAIR and ORANGE were built, the last sidewheel boats to be built for the ferries.
"These boats were built at Newburgh, New York, and came out in 1886. They were 215 feet long, 62 feet-6 inches wide, with an indicated horsepower of 600. Gross tonnage 1095 with a net of 901 tons. They came out as single-deck boats and were the largest the Ferry had built up to that time. (On July 3, 1907, they were put in commission on the Christopher Street Route, having upper decks placed on them, and are the only sidewheel boats the D. L. & W. R. R. has today.)

"The service demanded of a New York ferryboat calls for some peculiar features of construction.

"The weight of the loads carried, both in passengers and teams, as well as the strain caused by the ice, and the danger of collision, all call for a hull of great rigidity. Beyond this, the vessel must have great stability, to resist burying by the head as well as heeling. She must be able in floating ice, and should attain a speed of about 12 miles an hour in service.

"The main characteristics of the BERGEN's model are a full flaring upper body, fine under-water body, with a full water line, a sharp V-shape midship section, and the peculiar cutting away of the ends to bring the rudders and screw within the perpendicular of the stems.

"The shape of the water-lines and upper body were determined by consideration of power in ice and stability.

"The middle section, in order to give an unbroken line for the shafting, had to have a certain depth. It

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[inserted plate] picture. The Last Sidewheel Ferryboat to be Built for the Ferry- the Montclair

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page 73

was found that with the required displacement the form adopted was about the only practicable one.

"The experience of the Hoboken Ferry, with balanced rudders hung under the keep and supported from above, having been very favorable both as regards efficiency, strength, and ease of repair, it was decided to use a rudder as nearly similar to the ones in use as conditions would allow.

"The question as to motive power presented four alternatives:
First. One engine, driving a line of shaft with universal flexible joints, there being an angle in the shaft on each side of the engine, as proposed by Mr. Cowles.

Second. One engine, without such joints, and with a straight shaft.

Third. Two engines, each driving independent shafts at an angle to each other, as is the case of the Steamer ST. IGNACE, which was launched in December, 1887 at Detroit, Mich. She had two compound engines, each one driving a propeller at opposite ends of the boats; the forward engine propeller being small and less powerful than the after one.

Fourth. Two engines, either with or without flexible joints in their shafts, driving two propellers at each end as in the Mersey boats in England.

"This last plan was rejected on account of the lesser protection from ice afforded the screws, and the fear of trouble in riding upon the racks, as is often done when entering a slip with a strong wind and tide.

"The advantages of the first and third methods were a deeper submersion of the screw and a flatter midship section. The disadvantages were the insecurity of the flexible joints in the first method; and in the third, the increased cost of construction and operation.

"The second plan was adopted, and immediately arrangements went forward to the building of a ferryboat for the proposed experiment."

CHAPTER XIII

On the Performance of a Double-Screw Ferryboat (continued)

On October 25, 1888, the ferryboat BERGEN was launched at the yard of the Delamater Iron Works, Newburgh, New York. She was 203 feet in length, 62 feet wide, with a draft of 10 feet, except at ends where the steel shoes, which supported the rudder, increased the draft six
The steam machinery consisted of a triple expansion engine, coupled to a line shaft, which ran the whole length of the vessel, having a screw propeller at each end, so that both screws were operated when the engine was in motion, one pushing and one pulling, and two cylindrical boilers.

The hull and boilers of the BERGEN were designed by the Hoboken Ferry Company, but the engine was designed by Mr. J. Shields Wilson of Philadelphia, Pa. A number of engineers gave advice and encouragement; among the latter may be mentioned Mr. Frank Kirby, who designed the ST. IGNAE at the Detroit Dry Dock Company, Detroit, Mich., and Messrs. Herman Winter and Andrew Fletcher of New York. The propellers were of the four-blade type, eight feet in diameter, with nine and a half foot pitch. The boat was lighted by the Pintoch System of gas. The seating capacity was increased thirty per cent in doing away with the space occupied as in the sidewheel boats. The average steam pressure was 140 pounds with the engine making 140 revolutions per minute. She had a steel hull and single deck, costing $135,835.00.

On her trial trip a large celebration was held in honor of the new invention in steam ferryboats. Captain G. Beckwith was the Pilot in command, with Charles Moore, a steamship engineer, as Chief. Mr. Moore remained in charge about six weeks; then he resigned, and Mr. John Barr was made Chief in his place, but prior to this taking place, Mr. Barr was First Assistant and William Kane the Second Engineer.

After the BERGEN had been in service a while, it was decided to try out the experimental trips. The following report is from an article written by Professor J. E. Denton:

"The objects of the experiments undertaken were to determine the relative economy of the BERGEN as compared to the best type of paddle-wheel ferryboat having the common style of overhead beam engine, a jet condenser, and drop-return flue boilers. The paddle boat selected for this purpose was the ORANGE, one of a pair of steel boats designed in 1887 by Mr. Francis B.
Stevens, and representing the best modern example of its class of ferryboats. The programme carried out was as follows:

"1. The steam consumption, boiler evaporation, horse-power, and speed were determined for each boat during 14 hours of regular ferry service.

"2. Each was run to Newburgh and return, a distance of 120 miles, without stoppage, and the steam consumption per horse-power determined at the maximum capacity of the boilers. Also, the evaporative economy of the boilers, starting with new wood-fires, was determined during an interval of 14 hours, and the speed was measured by an estimate of the probable velocity of tides, and a log whose correction coefficient was approximately known.

"3. The speed of the BERGEN was determined at the maximum horse-power for which the engines were designed, by opposite runs over a one-mile course, after allowing the boiler pressure to accumulate above the average pressure which the boilers can maintain for more than a few minutes.

"4. One of the screws of the BERGEN was removed, and the power and speed determined by runs over a two-mile course, first with the single screw pushing and then with it pulling the boat at equal speeds of revolution of the engine.

On August 15, 1889, the ORANGE was run over the 120-mile course.

On September 15, 1889, the BERGEN was run over the same course.

On September 28, 1889, the test with the one screw was made.

The principal conclusions drawn from the experiments are as follows:

"1. The steam used per horse-power for all purposes is 25 lbs. per hour for the beam engine and 22 lbs. for the triple engine, under their average conditions of ferry service; but the consumption of the BERGEN'S main engine is only 18.3 lbs. per hour per H.P., the direct-acting steam feed and circulating pumps, etc., consuming about 3.7 lbs. per indicated horse-power.

"2. The steam consumption of both engines does not sensibly differ while in intermittent ferry service from that found during continuous working of the engine.
"3. The economy of the drop-return flue boiler of the ORANGE is practically the same as the locomotive type in the BERGEN, both boilers evaporating on the average about 8 1/2 lbs. of water per lb. of bituminous coal, under ordinary working conditions, thus making the consumption of coal per hour per H.P. about 2.9 for the beam engine, 2.6 lbs. for the BERGEN's, for all purposes, and 2.15 lbs. for main engines alone.

"4. The speed of the boats under all conditions is practically in accordance with the law of cubes, and by the application of this law it appears that for a still-water speed of 12.6 statute miles an hour the following statements are practically true: The paddle-wheel boat would require 642 H.P., and would


make 24 1/2 revolutions per minute with a slip of 26 per cent.

"The screw boat, using double screws, would require 680 H.P., an engine speed of 145 revolutions, and the slip would be 12 1/2 per cent.

"The screw boat, using one screw at the stern, would require 584 H.P., 152 revolutions per minute, and the slip would be 18 per cent.

"The screw boat, using one screw at the bow, would require 692 H.P., 162 revolutions per minute, and the slip would be 18 per cent, but the recoil upon the hull, of the water which the screw acts upon would make the apparent slip about 22 per cent.

"5. The screw at the bow, using the same horsepower as the screw at the stern for equal revolutions, propels the boat slower than the screw at the stern by an amount practically equal to the equivalent of the extra resistance due to the increase of the velocity of the boat by an amount equal to the velocity of slip of the screw.

"6. By calculations based upon the accepted relations between the slip of the screw and the velocity of the boat, it appears that, in order for the double screw to produce the same speed as a single screw of the same diameter at the stern, the slip of the latter must be to the former
in the ratio of 18:11, and therefore the cause of the extra power consumed by the two screws, as compared with the one screw, is the fact that the slips are as 18:12.6 instead of 18:11.

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page 80

To alter this ratio of slip, the diameter of the two screws must be greater than that of the one screw."

After the trials the following comments were made by Mr. Stevens:

"In point of handling, the BERGEN compared very favorably with any ferryboat on the river. Her greater draft makes her exceptionally steady on her helm, while it is found that she can turn as readily as other boats.

"She can stop in a shorter distance notwithstanding her higher speed.

"Practically, the BERGEN is preferred by passengers and pilots alike. While the boat is by no means perfect, she is the best boat we have, has proved a successful experiment, and will furnish a type for our future boats."

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page 81

CHAPTER XIV

Opening of the Fourteenth Street Ferry

The Fourteenth Street Ferry was opened on May 1, 1886, connecting Fourteenth Street, Hoboken, with Fourteenth Street, New York, and Captain Spicer, formerly of the ferryboat LACKAWANNA, was placed in charge.

During the first week of the opening of the ferry, passengers were carried free of charge. Mr. King, then owner of the greater part of Weehawken, had the honor of being the first passenger carried. During the first week the crowds became so large and unruly that a misleading sign was put up reading "3 cents," which greatly reduced the crowd and avoided any further trouble.
For the first few years this ferry was operating there was very little patronage. The boat ran on a half-hour schedule up until midnight and hourly from midnight to 7 A.M. A collector sometimes would have one three-cent ticket as the result of his eight hours on duty. Sometimes the boat would make several trips without the gates being opened for a passenger or vehicle to board. When a passenger or a vehicle came aboard at Hoboken the boat immediately pulled out, made the trip to New York, discharged the load and promptly returned to Hoboken for another prospect.

In the year 1914 work on a new ferryhouse was started, the old slips being torn out and new ones built. They were placed in commission in the same year, but, owing to the war, work on the building had to be discontinued. On December 2, 1926, work was again commenced on the dismantling of the old structure and the completion of a new building. The new ferryhouse was opened for traffic at 12 o'clock noon, on January 9, 1928.

[inserted plate] picture. Building of the Fourteenth Street, Hoboken, Ferryhouse, 1886

CHAPTER XV

From 1888 to 1893

On November 12, 1888, twelve ferryboats were sold to the Hoboken Ferry Company, which was organized to take care of the Ferries, by the Hoboken Land & Improvement Company. The ferryboats were the MORRISTOWN, MOONACHE, LACKAWANNA, PAUNPECK, HOBOKEN, SECAUCUS, MONTCLAIR, JAMES RUMSEY, HACKENSACK, HOPATCONG, ORANGE, and MUSCONETCONG. The Hoboken Ferry Company was incorporated on June 12, 1889.

The next two ferryboats to be built for the Hoboken Ferry Company were the HAMBURG and BREMEN. These boats were of the propeller type, due to the success of the ferryboat BERGEN, which marked the passing of the side-wheel boats. The HAMBURG was built in the year 1891 by Thomas S. Marvel & Company at Newburgh, New York. She was 1266 gross tons, 833 net tons, 219 feet long, 40 feet wide, with a draft of 16 feet. This boat had a double deck, being the first double-deck boat to be placed on the ferries, had a steel hull, and was of eight hundred horsepower. Her cost was $180,843.02. Although this boat was a double-deck boat, she could not
take on or discharge passengers from the upper deck. In the year 1905 the upper decks on the BREMEN and HAMBURG were altered to take on or let off passengers, at a cost of $40,285.00.

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page 84

The ferryboat BREMEN was built in the same year as the HAMBURG, at the yard of Thomas S. Marvel & Company, Newburgh, New York. She was 219 feet long, 40 feet wide, draft 16 feet, with a double deck, steel hull, 1266 gross tons, 822 net tons, and had engines of one thousand horse-power, costing $180,775.00.

In the year 1892 an upper deck was placed on the ferryboat SECAUCUS which proved too heavy. It was removed and placed on the ferryboat BERGEN.

When the BERGEN came out, she had gas and oil lights. Electric lights were installed on June 13, 1906. The upper deck was remodeled to load passengers at a cost of $3,500.00, and new boilers were put in in June, 1906, at a cost of $6,000.00.

In the year 1893, the NETHERLANDS was built at Newburgh, New York, by Thomas S. Marvel & Company. This boat was 191 feet long, 62 feet wide, draft 16 feet, gross tons 1129, net tons 689, 800 horsepower, steel hull, and cost $211,652.62. When she came out, she was a single-deck boat. In the year 1905 an upper deck and an upper cabin saloon were placed on her at a cost of $45,907.56. This was the last boat that the Stevens family or the Hoboken Land and Improvement Company built during the time they had full charge of the Hoboken Ferry. No more ferryboats were built until the Delaware, Lackawanna & Western Railroad Company took control of the Hoboken Ferry Company.

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[inserted plate] picture. A View from the River of the Hoboken Ferryhouse, 1890

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page 85

CHAPTER XVI

Early Ferry Management and the Eldridge Purchase
The Early Ferry Management

The first Superintendent of the Hoboken Ferry was named Palmer. He was followed by Captain Chase, who came from a little town on the Hudson River, but the records do not show in what year. Captain Charles Woolsey succeeded Captain Chase in the spring of 1883, but Captain Chase remained active about the ferry until the fall of 1883, when he died.

On the 16th of April, 1883, Captain Spicer was in command of the ferryboat LACKAWANNA. She was on the Barclay Street Ferry as the fifth boat. At 10:15 A.M. she was coming up from Barclay Street to Hoboken. Captain Longstreet was Master of one of the Pennsylvania Railroad ferryboats, and was coming over from New Jersey to New York. Captain Spicer blew one whistle to Captain Longstreet; this was answered by two from the Pennsylvania Railroad ferryboat, resulting in the Pennsylvania boat striking the Hoboken ferryboat on the port side, taking out one-half of the ladies’ cabin. One man on the LACKAWANNA had his legs cut off, and a woman had her feet taken off. The damage to the Hoboken ferryboat amounted to a large sum of money. The Local Inspectors of the Port of New York found Captain Spicer to blame for the collision. This did not satisfy Captain Spicer. During the Civil War, Captain Spicer had been Port Captain for the Union Army in one of the Southern Ports, and he knew if he took his case to Washington he would come out all right. This he did and won. Captain Spicer never went back on the boats again, as he was made Superintendent of the Fourteenth Street Ferry; he was with the ferry as long as the Stevens family had control. The Hoboken Land and Improvement Company looked out for him until he died, only a short time ago.

Major Ramon M. Cook, who was in the ticket box, was made Assistant Superintendent to Captain Woolsey, William Peterson was made Night Superintendent, and William Smith, Chief Engineer.

The Eldridge Purchase

On January 1, 1896, the Fourteenth Street Ferry was turned over to the Eldridges, Roswell Eldridge being President and Louis Eldridge Secretary & Treasurer. The Eldridges came from Long Island, where they had charge of the Astoria Ferry running from Ninety-second Street, New York City to Astoria, also the Long Island Railroad Ferry. In the East River they were known as the Union Ferryboat Company, and in the North River their name was The New York and Hoboken Ferry Company. However, the original name remained and the ferries from Hoboken to New York still were called "The Hoboken Ferry Company."
When the ferries were turned over, Captain John Harvey, who came from the Thirty-fourth Street Ferry in the East River, was appointed Superintendent, Captain Woolsey resigning. He later went with the Merritt & Chapman Derrick & Wrecking Company of New York.

On January 1, 1897, the Eldridges took over the lower ferries of the Hoboken Ferry Company. These ferries had been in the Stevens family for seventy-five years from November 3, 1821, to January 1, 1897.

When Captain Harvey took charge, he appointed Captain George Heffren as his Assistant and Mr. Samuel Saul as Chief Engineer to succeed William Smith. Mr. Saul did not remain as Chief Engineer very long, and Captain Harvey appointed John M. Emery in his place. Mr. John Werner was appointed Assistant Engineer.

Major Cook went on day duty as Assistant to Captain Heffren. Mr. McLaughlin, who was in the ticket box at Fourteenth Street, and had come from Thirty-fourth Street with Captain Harvey, was placed on night duty in Major Cook's place as Night Superintendent.

The Eldridges had control of the Hoboken Ferries from 1896 to 1903, when the Delaware, Lackawanna & Western Railroad Company took the ferries over.

During the seven years the Eldridges had the ferries, they treated the pilots very fairly. They raised the wages from $115 to $135 per month, and when the news got around that the Railroad was to have control of the ferries, the pilots felt very bad about it, for Captain Harvey had been very kind. But to the men's surprise they found out that the Railroad was going to give them more than they had received in the past. The only men who did not think they had received a square deal were the employees in the ticket boxes. When Captain Harvey took the ferries over, these men were receiving $90 a month and had no ticket chopper, but as soon as the ferries were turned over, Captain Harvey reduced the wages of these men to $75 a month and put on ticket choppers.
CHAPTER XVII

The Acquisition of the Ferry by the Delaware, Lackawanna and Western Railroad Company

When the Delaware, Lackawanna & Western Railroad Company took the ferries over in April, 1903, leasing them from The Hoboken Ferry Company, they saw they had to build larger and faster boats for the Barclay Street Ferry.

In 1904 the keel was laid for the ferryboat SCRANTON at the Newport News Ship Building and Dry Dock Company of Virginia. She was 1462 gross tons, net 676 tons, 230 feet long, 62\(\frac{1}{2}\) feet wide, draft 16 feet, and cost $211,478.85. This boat was delivered to the Fourteenth Street shops on February 1, 1905. Captain A. Housman was sent down to Newport News to take her out on the trial trip, and when she was placed on the Barclay Street route Captain Housman and Captain William Moran were placed in command of the boat. She was started on the Barclay Street route at 6:30 A.M. on February 13, 1905.

At the time of the acquisition, the officials of the Delaware, Lackawanna & Western Railroad Company were W. H. Truesdale, President, B. D. Caldwell and E. E. Loomis, Vice Presidents, L. Bush,

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page 90
Chief Engineer, T. W. Lee, General Passenger Agent, and P. F. Flynn, Freight Traffic Manager. During the year 1904 Captain George Heffren resigned as Assistant Superintendent, and Captain Alfred Hickman, who was Captain of the ferryboat HAMBURG on Barclay Street, was appointed his successor.

The large ferryhouse at Twenty-third Street, New York, was completed during this year. This house was built by the Erie Railroad, The Delaware, Lackawanna and Western Railroad Company, and the Central Railroad of New Jersey. The Erie Railroad had two slips, the Delaware, Lackawanna and Western had three slips, and the Central Railroad of New Jersey had one slip. The Fourteenth Street ferry was moved up to Twenty-third Street, New York, from Fourteenth Street, New York, on November 1, 1904. The old ferryhouse was torn down and the slip taken out.

At 12 o'clock noon on November 1, the ferryboat LACKAWANNA was the last boat to leave Fourteenth Street, New York. The ferryboat MOONACHIE was the first boat to leave Fourteenth Street, Hoboken, for Twenty-third Street, New York, at 12 noon. Captain George Heffren was in command of this boat.

On March 1, 1905, Captain John Harvey resigned as Superintendent of the Hoboken Ferry Company (The Delaware, Lackawanna & Western Railroad Ferry), as it was called at that time, and the follow-
ing notice was posted in the Ferry Waiting Rooms on the same day:

THE DELAWARE, LACKAWANNA & WESTERN RAILROAD CO.

THE HOBO肯EN FERRY COMPANY OFFICE OF PRESIDENT

New York, March 1, 1905

Mr. John M. Emery is hereby appointed Superintendent of The Hoboken Ferry Company and of the Ferry Department of the D. L. & W. R.R. Co., vice Captain John Harvey resigned. Mr. Benjamin Schoppe is appointed Chief Engineer of the D. L. & W. R.R. Co., also Chief Engineer of the floating and lighterage equipment of the Railroad Company vice Mr. John M. Emery promoted.

Effective this date.

(Signed) W. H. TRUESDALE,

President.

Mr. Schoppe had as his Assistant Chief, Mr. John Werner, and Mr. Charles Emery was the Chief of the Electrical Department of the ferry. About a year after this, in 1906, when Mr. Werner resigned, Mr. Charles Emery was appointed in his place as Assistant Chief Engineer.

In the same year that Captain Emery was appointed, three ferryboats were built for the Company by the Newport News Ship Building and Dry Dock Company at Newport News, Virginia.

The ELMIRA was of 1460 gross tons, net 675 tons, 231 feet long, 62 1/2 feet wide, with a draft of 16 feet, 1400 horse power, and cost $211,572.25. This boat arrived from Newport News, at the Fourteenth St.

shops of the Ferry Company on February 25, 1905, and was placed in commission on the Barclay Street route Monday, March 6, 1905, at 7 A. M. Captain George E. Bouton and Captain Ernest Van Gilder were placed in command, with Chief Engineer Fletcher Van Gieson, Sr.
The BINGHAMTON was of 1462 gross tons, net 676 tons, 231 feet long, 62 1/2 feet wide, with a draft of 16 feet, 1500 horse power, and cost $211,572.25. This boat arrived from Newport News at the Fourteenth Street shops of the Ferry Company on Sunday, March 26, 1905, at 6:45 A.M. She was placed in commission on the Barclay Street route on April 3, 1905, in place of the ferryboat HAMBURG. Captain Oren D. Relyea and Captain Arthur Compton were placed in command of her with Mr. George Schomp as Chief Engineer.

The ferryboat SCANDINAVIA was of 1462 gross tons, net 676 tons, 231 feet long, 62 1/2 feet wide, with a draft of 16 feet, 1400 horse power, and cost $211,467.14. This boat arrived at the Fourteenth Street shops of the Ferry Company from Newport News on Tuesday, April 25, 1905, at 6 A.M., and was placed in commission on the Barclay Street route as day boat, Monday, May 1, 1905, at 6 A.M. Captain Thomas Jones was placed in command of her with Chief Engineer James Decker.

On May 1, 1905, Mr. W. McLaughlin, who was Night Superintendent, was placed on day duty as Assistant to Captain A. Hickman, and Major Cook was put back in the ticket box at Twenty-third Street,

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page 93

New York. William Ryan was appointed Night Superintendent. Major Cook was retired on pension on February 26, 1907. William Ryan was released as Night Superintendent on January 1, 1908, and William Smith, who was in the ticket box at Fourteenth Street, was made Night Superintendent in his place.

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[page 94] blank

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page 95

CHAPTER XVIII

The Fires of 1905

The year 1905 will long be remembered by The Hoboken Ferry Company as a disastrous year for fires.
On August 7, 1905, the ferryboat HOPATCONG, together with the Hoboken Ferry Terminal and Delaware, Lackawanna & Western Railroad Depot were completely destroyed by fire; and on December 20th of the same year the Twenty-third Street Ferry Terminal, New York, was badly damaged.

At 10:57 P. M. on August 7, 1905, fire was discovered around the smokestack of the ferryboat HOPATCONG, which was lying in the north Christopher Street slip at the Hoboken Terminal. Fire was discovered by a number of employees at about the same time; Captain William G. Berton, who was pilot of the ferryboat MUSCONETCONG, which was lying alongside the HOPATCONG, loading passengers, saw the reflection of the blaze while he was writing up his log in the pilot house. He immediately blew the fire alarm, and also blew to let go, his intention being to get a line on the HOPATCONG and pull her out into the stream. Before he could do so, in about one minute's time, the entire upper deck of the HOPATCONG was ablaze, and the flames had communicated to the shed of the ferryhouse, so that by

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page 96

the time the MUSCONETCONG had proceeded as far as the end of the Hamburg Pier (which is at present, Pier No. 6, Army), the shed over the Barclay Street slips was ablaze.

| Captain Patrick Doran, who was on the tug IDLEWILD, was the first tug captain at the fire. He was proceeding up the North River to Pier 58, when he saw the blaze on the HOPATCONG, about the same time it was discovered by Captain Berton. He immediately let go of the boat he had in tow and went to place a line on the Hopatcong. By the time he reached the ferryboat and had secured her with a line, the heat was so intense that they had to play the hose on his deckhand, who was on the deck of the ferryboat. The tug MONTCLAIR assisted him in pulling out the HOPATCONG. The ferryboat BINGHAMTON, which was lying in the north Barclay Street slip, was pulled out by the tugs J. S. SMITH and MARION, but she had caught fire and her upper structure was badly damaged. The HOPATCONG was towed to Weehawken flats off Weehawken, New Jersey, where she burnt to the water's edge.

From the ferry sheds the fire spread to the railroad depot, which was also completely destroyed.

The following is taken from the Observer, dated August 8, 1905:

"Where the Lackawanna Railroad depot and the ferryhouses of that company stood yesterday, today there is nothing but a mass of ruins. Those portions of the buildings that remained upright after the great fire were pulled down by a gang of over three hun-

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dred laborers. So thorough were the ravages of the flames that the pile at no place is more than five feet high.

"With rapidity that startled even those who were doing the work, the great task of clearing up and building temporary accommodations went ahead, and by seven o'clock this morning there were ferryboats to both the Barclay and Christopher Street houses of the company and the trains of the main line and the Boonton branch of the road were arriving and discharging their passengers on time.

"Those who came east on the Morris and Essex Division were all discharged at Newark and told to get to New York as best they could, either over the Pennsylvania or Central Railroads or the trolley cars of the Public Service Corporation.

"By tonight, when the rush begins, it is promised that another ferry slip will be in operation at the lower ferry and that passengers will be slightly accommoded.

"Though all of their wires at the terminal went down, their sheds were consumed and the entire system in Hoboken and North Hudson was thrown into disorder, the Public Service Corporation by 11:30 o'clock had all of their lines running over the regular routes on the usual schedule. General Superintendent Albert H. Stanley in the absence of District Superintendent Newton N. Bolen, who is on a vacation, appeared upon the scene of the fire at one o'clock this morning and is still superintending the work of putting everything to rights. The rush hour tonight will be a pleasant dream compared to the nightmare of this morning and Mr. Stanley guarantees that no one will be delayed a minute longer than usual after once boarding a trolley ear tonight after five o'clock.

"While the two bar rooms of the Duke's House are practically gutted, Martin Daab's living apartments overhead were completely burned away, and the place wears an appearance of desolation. Mr. Daab spent the morning receiving the condolence of his friends over his loss, and hundreds of wishes that he would soon have his hotel in condition again.
"The ferryboat HOPATCONG is almost a total loss, having been burned to the water's edge. The new crack speed-maker BINGHAMTON, which at first was thought to have been severely damaged, upon investigation was found to have had but the forward part of its upper salon burned, and the damage is trifling compared to that to the other property of the company.

"It was due to great energy on the part of the crews of the tugboats that the BINGHAMTON and BREMEN did not suffer the fate of the HOPATCONG. The HOPATCONG is beached off Weehawken, and the BINGHAMTON is in dry dock at the W. A. Fletcher Dry Docks.

"Captain John M. Emery, Superintendent of Ferries of the Lackawanna Railroad, said today that by this evening the traveller on the ferryboats will not know that a fire ever occurred so far as the schedule of the running of the boats is concerned.

"Two slips will be in operation at Fourteenth Street, and two more at the lower ferry. The boats will be run on the shortest possible schedule, and no captain will travel on a time limit, but all will have instructions to go against time as fast as they can.

"E. E. Loomis, Vice President of the Lackawanna Railroad, made the statement today that $1,000,000.00 would be a small figure at which to place the loss sustained by the company. Fire Chief Irvin G. Applegate cut Mr. Loomis' figure in half, while others say that $300,000 would be ample and sufficient to cover all loss."

By 6 A. M., August 8, Captain Emery had the following ferry service arranged for:

Two boats for foot passengers from Hoboken Terminal to Barclay Street.

Two boats for foot passengers from Hoboken Terminal to Christopher Street.

Two boats for passengers and teams between Barclay Street, New York and Fourteenth Street, Hoboken.

Two boats for passengers and teams between Christopher Street and Fourteenth Street, Hoboken.

On August 10, 1905, the temporary ferry sheds were completed, and work was started within a week from that time on the new Ferry Terminal and Railroad Depot.
The Twenty-third Street Terminal of the Delaware, Lackawanna & Western, the Erie Railroad, and the Central Railroad of New Jersey was destroyed on the morning of December 20, 1905, the fire being caused by painters.

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page 100

The following is from the Observer, dated December 20th:

"The two new ferryhouses and racks of the Central Railroad of New Jersey and the Delaware, Lackawanna & Western Railroad Company, near the foot of Twenty-third Street, were practically destroyed by fire this morning. The D. L. & W. loss is $425,000.00. The Central loss will be nearly as much more. At 12:30 the fire was under control.

"The Company expects to conduct its traffic on something like schedule time by using nearby ferry slips of the Pennsylvania Railroad and Erie Railroad.

"A gang of 150 men were sent over from Fourteenth Street, Hoboken, to clear away the debris from the north pier, so that the boats may run from Fourteenth Street in the morning.

"Herman Von Dolen, who had charge of the newsstand at the Lackawanna Ferry House was missing, but he later turned up at his home, having taken refuge on the tug ORANGE when the fire broke out.

"The fire started near the waiting room of the D. L. & W. R. R. ferryhouse, the more northerly of the two, and which ran from Twenty-second to Twenty-third Street, along the North River. A brisk wind was blowing from the north, spreading the flames with remarkable speed through the entire structure. The building was soon a mass of flames, which communicated to the Central ferryhouse, located along the river front from Twenty-first to Twenty-second Street.

"The spread of the flames was aided by the tardy arrival of the fire fighters. This was due to a defective fire alarm box at the foot of Twenty-third Street. It would not work, and a mounted policeman had to gallop several blocks before he found a box that was in working order.

"The ferryboat HAMBURG, on which there were five hundred passengers, was in the Lackawanna slip when the fire broke out, but its pilot quickly pulled out into the stream away from danger. A number of painters were at work on this structure and they had to run for their lives.
"The two ferryhouses occupied a space about five hundred feet long and one hundred and fifty feet wide. The buildings were about fifty feet high, having two stories. At 11:30 o’clock the whole place was ablaze and great flames and volumes of smoke were belching high into the air. Chief Crocker, who was then on the scene, said both ferryhouses and slips would be totally gutted.

"The Erie and Pennsylvania ferryhouses are located just north of the burning buildings, but the wind was away from them, and the firemen thought they were in no danger. Their boats were running and landing passengers in the Pennsylvania slip, which is furthest removed from the scene of the fire.

"Surmounting the Delaware, Lackawanna & Western Railroad house was a tower, about one hundred feet high, near the top of which was set a clock. This clock stopped running at 10:55 a.m. Half an hour later the tower collapsed and fell into the burning ruins and into the street.

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page 102

"John Horner, ticket agent of the D. L. & W., is the only person injured, so far as known. He carried out $41,000.00 in money and tickets from the safe and had to make a couple of trips to do it. He was burned and scorched about the face and arms on his second trip, an incident which shows the rapidity with which the fire spread.

"The painters, it appears, were responsible for the fire. They were engaged in covering and painting pipes under the ferryhouse. The process was to cover the pipes with cotton, then bind them with canvas and finally to paint them with a preparation known as asphaltum. It is necessary to heat the asphaltum and this should have been done in the street, but, instead, the men prepared it under the ferryhouse where they were at work. Some of this caught fire, which spread to the painted pipes, and these helped to carry the flames quickly to all portions of the building.

"The D. L. & W. R. R. and the C. R. R. of N. J. Twenty-third Street Terminals have been in use for only a few months, everything being new and the paint on the huge girders of the shed roof being scarcely dry. It looked within fifteen minutes after an alarm had been turned in, as if there was little chance of saving anything. The fact, however, that the breeze from the river was not very strong, saved the ferryhouses of the Erie and Pennsylvania Railroad, directly to the north.

"There was a general scattering on the part of waiting passengers and cabmen to escape the fire
engines, and small crafts in the river as well as several ferryboats were hurried out of the reach of the flames, which were soon licking up the piling of these ferry slips. Three alarms were turned in and Fire Chief Crocker himself arrived with the engines brought by the second alarm.

"The section in which the fire broke out is, outside of the Grand Central Station, probably the most important passenger terminal in the city. Until recently only the Pennsylvania and Erie Railroads maintained a ferry service from Twenty-third Street, but with the installation of boats by the D. L. & W. and Central roads, the number of passengers using Twenty-third Street, coming and going, has been doubled. It is only recently that the ferryboat slips and houses of the D. L. & W. R. R. were wiped out by fire in Hoboken, work on the new station being in progress at the present time.

"Police reserves were ordered to the scene from the Charles Street, West Twentieth Street, West Thirty-first Street and West Thirty-seventh Street stations.

"The fire appeared to be fiercest between the ferry-houses of the Central and the Lackawanna, and was eating both ways. The front of these buildings is sheeted with copper, which the flames melted like so much tinfoil, and it dripped off into the street. The fire boats NEW YORKER and McCLELLAN fought the fire from the river.

"At the foot of Twenty-third Street is the Erie ferryhouse, a two-story frame shack, and the firemen practically abandoned the other places to try and save this, as it was feared that if it caught, the row of ferryhouses, including the Pennsylvania, would go.

"A. H. Jakin, one of the managers of the Central Railroad, proved his bravery by rushing through the fire to the second story of the Central offices. With R. Shumann and a man named Rosenberg he saved over $200,000.00 worth of money and tickets. Jakin knelt by a large safe while the fire was burning about him and opened it, getting the valuables out. He had to be dragged out, and was overcome. He was taken to the Erie ferryhouse, where he was revived.

"Mr. McLaughlin and Captain Hickman, night and day superintendents of the Lackawanna ferries in Hoboken, are handling the traffic in Hoboken, as well as they can in the absence of John M. Emery, who went over to New York on a tug immediately after the fire broke out. Two boats are being run from Fourteenth Street to Christopher Street; one boat is plying between the Twenty-third Street slip at the lower Hoboken ferry to Christopher, and there are three
boats running on the regular Christopher Street ferry, making six boats in all running into that slip every hour.

"When the fire started, the Lackawanna ferryboats were running from Fourteenth Street into the Pennsylvania Railroad slips at Twenty-third Street. The Central Railroad later on started sending its boats into the same slip. This crowded the Lackawanna out and the company was obliged to send its Fourteenth Street boats to Christopher Street."

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page 105

CHAPTER XIX

From 1905 to 1908

On September 2, 1905, the new Twenty-third Street Terminal was connected to the lower terminal of the Delaware, Lackawanna & Western Railroad. Ferry service was started uptown on that day, and two boats were placed on this route, the HAMBURG and the BREMEN.

On September 10, 1906, the ITHACA, the last of the five boats to be built by the Newport News Ship Building and Dry Dock Company of Newport News, Virginia, was delivered to the Hoboken Ferry Company. She was 231 feet long, 62 1/2 feet wide, draft 16 feet, 1462 gross tons, 676 net tons, and 1600 horse power. Captains Alfred Housman and William Moran were placed in command of her, with John Barr as Chief Engineer. The boat was put on the Barclay Street route in the place of the ferryboat SCRANTON, and the SCRANTON was made extra boat.

These five boats were the finest type of ferryboats to be found in existence, as they brought about a radical departure in ferryboat construction. From the "straight nose" bows of the side wheel, to the sharp "cut away" bows of the propeller, they became the fastest boats on the river, and are the forerunners of the present type of New York Harbor ferryboat.

On October 1, 1906, three boats were placed on the Twenty-third Street route from the lower ferry from

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page 106

6:40 A. M. to 10 A. M. and from 4 P. M. to 7 P. M. Captain Bade went on the day boat. It was on this day that the new Twenty-third Street Terminal, New York, was opened to the public.
Captain Emery did not have any labor difficulties from 1905 until 1906—when trouble came about through a collision between the iron steamboat PERSEUS and the ferryboat BERGEN, in charge of Captain O. D. Relyea. The Twenty-third Street ferryboat was coming up from the lower ferry to Twenty-third Street, New York, and in making her slip at Twenty-third Street, Captain Relyea saw the iron steamboat coming down the river. Captain Relyea blew the PERSEUS one whistle. This was answered by two from the PERSEUS. The PERSEUS hit the Twenty-third Street ferryboat on the port side, doing considerable damage to both vessels.

The Captain of the PERSEUS was a member of the Harbor Union No. 1, but Captain Relyea was not a member, and when the case came up before the Local Inspectors, although Captain Relyea was in the right, he was suspended for one hundred days. Captain Emery did not like this, for he knew Captain Relyea was in the right; and to suspend a man just because he did not belong to the Harbor Union, he considered very unjust. At the time of this collision there were seventeen pilots on the Hoboken Ferry who belonged to the Harbor Union No. 1. Captain Emery gave these men their choice of resigning from either the Harbor Union or the ferry. The men resigned from the Harbor Union. This was the first break between Captain Emery and the Harbor Union and Captain L. Dow, who was the head of the Harbor Union at that time.

The next two boats to be added to the Hoboken Ferry were the LACKAWANNA and HOPATCONG.

The LACKAWANNA, which was formerly the WOODBURY, was built by Harlan, Hollingsworth & Company at Wilmington, Delaware, in the year 1905. She was 195 feet long, 40 feet wide, draft 15 feet, double deck, steel hull, 1400 horse power, 857 gross tons, net 583 tons, and cost $148,381.50. This boat was purchased by the Delaware, Lackawanna & Western Railroad on May 23, 1907, from the Norfolk & Washington Steamboat Company, and renamed the LACKAWANNA on July 8th of that year. She arrived at the Fourteenth Street yards of the ferry on Thursday, May 30, 1907, at 10:30 A. M. and was reconstructed for upper deck service by extending the upper deck for approaches. Her trial trip took place on September 30 at 4:05 P. M., and her final trial trip on October 2, 1907. She was put in commission on Christopher Street ferry service Thursday, October 3, 1907.

The HOPATCONG was built, as was the LACKAWANNA, by Harlan, Hollingsworth & Company at Wilmington, Delaware, in 1905. She was 195 feet long, 40 feet wide, draft 15 feet, double deck, steel hull, 1400 horse power, 857 gross tons, net 583 tons. This boat, which was named CALLAHAN, was purchased by the Delaware, Lackawanna & Western Railroad from the Norfolk & Washington Steamboat.
Company, Washington, D. C., on May 23, 1907, at a cost of $127,500.00. The old ferryboat LACKAWANNA was accepted by the Norfolk & Washington Steamboat Company as part payment for the CALLAHAN and WOODBURY, with the additional amount of $220,000.00.

On August 30, 1907, the Delaware, Lackawanna & Western Railroad sent Captain A. Compton, Fletcher Van Gieson, Sr., and William Kane to Newport News to bring this boat to Hoboken. At the time she was running between Newport News and Jamestown, Virginia. She was delivered to the Hoboken Ferry Company on Tuesday, October 15, 1907, being towed to Hoboken by the tug SCRANTON; also the ferryboat had her own engines going on the way up. The boat arrived at Fourteenth Street, Hoboken, at 12:30 P.M., Friday, October 18, 1907. She was sent to James Shewan & Sons Dry Dock, Brooklyn, at 3 P.M., Friday, October 18, 1907, for reconstruction work suitable for double deck service. Her trial trip was made on February 4, 1908. She was placed in commission as day boat on the Twenty-third Street ferry route Monday, February 17, 1908, at 4 P.M.

In 1908 John Stuart was pensioned. This man had been a great factor in building up the Hoboken Ferry. He was boss carpenter for the Ferry and, as far as the records show, he began his career with the Ferry in the year 1863. From that time until 1885, he built seven ferryboats for the Ferry Company, and all of these boats were a success. Soon after being pensioned, he died.

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page 109

CHAPTER XX

The New Delaware, Lackawanna & Western Railroad Terminal at Hoboken

The new Lackawanna Terminal at Hoboken was opened to the public at six o'clock in the morning on February 25, 1907. The following is from the New York Tribune dated February 24, 1907:

"The Delaware, Lackawanna & Western Railroad's new Hoboken Terminal station will be ready for business to-morrow morning. Yesterday about one hundred and fifty guests of the company inspected the facilities that are planned to give the patrons of the road, whether suburbanites or long distance travellers, everything in the way of comforts demanded. George A. Cullen, the general passenger agent, was in charge, and piloted representatives of various industries and professions around. From the Lackawanna Management there were also present B. D. Caldwell, Vice-President, who looks after the traffic end of the road; E. E. Loomis, Vice-President; George W. Hayler, Assistant General Passenger Agent; the architect, Kenneth
Murchison; the advertising manager, Frederick P. Fox, and his assistant, James Fister, and Joseph E. Snell, Superintendent of buildings, representing L. Bush, who designed the train shed, the only one of its kind, it is said, in the country.

"After the guests were taken through the main building and into the outlying parts, and had thoroughly digested the advantages of the station to the traveling public, luncheon was served in the buffet by the dining room service. The main dining room was open for inspection, but the buffet was used to show how quickly meals could be served.

"When a demand by the guests for a speech was made, Mr. Cullen was ready. He had been in consultation with Phoebe Snow, who had prepared for him several stanzas, which he was graciously permitted to recite. But first Mr. Cullen welcomed the guests, and they couldn't help but feel that he meant every word he said. Then he attacked the verses. They were as follows:

Miss Phoebe Snow
Her greetings sends
To one and all
    Her gallant friends:

To those who share
    With her her joys
Here—everywhere,
    Her railroad boys.

To those who wield
    The facile pen
In largest field-
    Newspapermen.

[inserted plate]Illustration. The Delaware, Lackawanna & Western Railroad Terminal, Hoboken, N.J., 1907

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page 111
To him who first With her—all hail!
Whom could she mean But Prex Truesdale?

To one whose skill And taste so nice
Have wrought, this buil- Ding, Loomis, Vice.

To Caldwell who Doth fill each car
And keeps the stock Way over par.

To one whose art We look upon;
It takes each heart, Murchison.

"Everybody wanted to know at once who the original Phoebe
Snow was, and with much reluctance Mr. Cullen said that she
was a Miss Marion Murray, a model. He would not admit that
she wrote the verse, but refused to say who was the author.

"There were other speakers—Messrs. Caldwell and
Murchison of the Lackawanna, Mayor Steil of Hoboken,
Palmer Campbell, president of the Hoboken Land and
Improvement Company and Harry D. Vought, secretary of the
New York Railroad Club.

"As soon as the fire of August 7, 1905, destroyed the old
station, the Lackawanna management decided to replace it
with one that would combine everything excellent in a new
terminal structure and approaches.

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Temporary buildings and facilities were prepared as quickly as possible and the regular traffic
was not impeded. This makeshift arrangement had to provide for two things, that the patrons
of the road should have ready access to their trains and that the builders of the new terminal
should not be obstructed in their work. This was accomplished, with the result that the
structure has been practically completed without blocking the trains that daily carry fully a
hundred thousand passengers.

"It was on March 25, 1906, that the first actual concrete construction was begun. With the
Lackawanna's several experiences with fire, it was early determined that the new building
should be fireproof. Now even the racks and desks in the ticket office are of metal. Concrete,
copper, steel, wrought iron and stone were employed in the carrying out of the scheme of
construction. The train sheds are built of concrete, steel and glass and are a departure from
the usual great arch scheme. The sheds cover fourteen tracks and are 607 feet in length, but are a succession of sheds, one over each track, and connected with the next forming a continuous roof with the most improved ventilation possible. There is no waste of heat in a great vaulted roof. There is no smoke-clouded space above the locomotives, no drafts to chill passengers, no waste of room.

"Much thought was laid upon the forethought displayed in providing an emergency hospital in the station, although it was insisted that it would not often be called in use, if its utility depends upon wrecks.

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page 113

"The great building, having a frontage of 750 feet on the Hudson, was erected on piling with steel and concrete foundations. The waiting room and ferry concourse are on the main floor, which is on the line of the tracks. The waiting room, 100 feet long and 90 feet in width, is finished in limestone and bronze. On the second floor are a restaurant, an emergency hospital and a barber shop. The restaurant, when completely finished, will be done in old gold and mahogany. It overlooks the river, and an outside dining room on the balcony, facing east, will be used in the summer months.

"The ferries are reached by three approaches. Elevators run from the street levels to the ferry concourse, and there are stairways and an inclined plane. The concourse itself is 70 by 600 feet in dimensions. The concourse and the waiting rooms are designed to house 40,000 persons at one time.

"The great building will be covered with copper, and topping the structure will be a tower, 225 feet high. By day this will carry a flag, and at night it will be ablaze with electric lights. The six ferry slips are supported by arches, which, in turn, will be upheld by ornamental piers, and at night they will be brilliantly illuminated. It is the intention of the officers of the Lackawanna to make the Hoboken Terminal the most conspicuous place on the Hudson at night.

"As a sort of supplement to the great terminal there is a ferry slip connected with a building that will serve for the use of immigrants. As an immigrant station it will have every possible facility for the new arrivals from the Eastern Hemisphere. The ferry slip will be used by a ferryboat plying between Hoboken and Ellis Island exclusively.

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page 114
"The first train out of the new terminal will leave at 6 o'clock tomorrow morning, on the Morris & Essex Division. The last out of the temporary station will leave tonight at 11:45 o'clock, and immediately thereafter every available employee will be pressed into service to remove the various departments to the new structure."

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page 115

CHAPTER XXI

The Ferries during the Hudson-Fulton Celebration

ON January 1, 1909, Captain E. T. Hallock, who was Superintendent of the Lighterage Department of the Delaware, Lackawanna & Western Railroad was pensioned off, and on the same date Captain John M. Emery was appointed Manager of the Marine Department of the Railroad. Captain Hallock's offices were on the end of Pier 2, Hoboken, and when Captain Emery took charge, he transferred the offices to the terminal building. Mr. J. F. McDavitt, who was Chief Clerk to Captain Hallock, was appointed to hold that position under Captain Emery, with Captain W. F. Cogan in charge of the Lighterage Department as Assistant Manager.

During the months of September and October, 1909, the Hudson-Fulton Celebration was held in New York Harbor. During this celebration the Delaware, Lackawanna & Western Railroad Ferries transported seven thousand eight hundred and eighty-one passengers on account of parades. On September 25 the fatal collision between the ferryboat HALPCONG and Ward Line Steampship SENECA occurred during a Hudson-Fulton marine parade, resulting in the death of one passenger and the injury of five others on the ferryboat. The following is the report

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page 116

of the ferryboat Captain, William Bade, to the Local Steamboat Inspectors:

"I left Hoboken Lackawanna Terminal at 8:45 P.M. and proceeded up the river westward of the warships in line with the other steamers of the parade, under one bell, stopping and backing when necessary. When off 110th Street, New York City, I saw a steamship, which afterwards proved to be the SENECA of the Ward Line, off my port bow showing a dim red light. I blew him one whistle and put my wheel to port. There was no answer from the SENECA. I then blew one whistle the second time and the SENECA answered with two whistles. I stopped and immediately blew the alarm whistle and backed full speed, also blowing three whistles to indicate that I was
backing. The Steamship SENECA struck the HOPATCONG forward of midship on the port side, cutting through the guards to the hull, but did not go through the hull. One passenger, Miss Frances Stevens, was so badly injured she died on the way back to Hoboken. Five other passengers were slightly injured. The extent of the damage to the HOPATCONG is unknown at this time. The tide was ebb, the wind N. N. W. and the weather clear."

Captain Bade was exonerated by the Local Inspectors of all blame for this collision, and the Ward Line paid the damage to the ferryboat, which amounted to $11,807.79.

The Delaware, Lackawanna & Western Railroad Company had three ferryboats in the Hudson-Fulton Celebration parades: the ITHACA, with Captain Hous-

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The ITHACA made two trips in the parades. On the first trip she carried 937 passengers, and on the evening trip she carried 862 passengers, making a total of 1,799 passengers.

The LACKAWANNA made two trips. The first trip, she carried 560 passengers, and on the evening trip she carried 1,003 passengers, making a total of 1,563 passengers.

The HOPATCONG made two trips. On the first trip she carried 600 passengers, and on the evening trip she carried 1,003 passengers, making a total of 1,603 passengers.

On October 1, 1909, the ferryboat LACKAWANNA, with Captain Relyea in command, left Hoboken Terminal at 8:40 A. M., with 600 passengers, to participate in the naval parade at Cornwall-on-the-Hudson, returning to the Hoboken Terminal at 6:50 P. M.

On the same day the ferryboat ITHACA, with Captain Bird in command, left Hoboken at 8:40 A. M., with 750 passengers, to participate in the naval parade at Cornwall-on-the-Hudson, returning to the Hoboken Terminal at 6:45 P. M.

On Sunday, October 26, 1909, the ferryboat LACKAWANNA, under command of Captain Bird, left Hoboken Terminal at 3:35 P. M., with 400 passengers encircled the fleet of warships lying at anchor.

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page 118
in the Hudson, and returned to Hoboken Terminal at 5:40 P. M.

On the same date the ferryboat ITHACA, under command of Captain Housman, left Hoboken Terminal at 8:45 A. M. with 492 passengers, encircled the fleet of warships lying in the Hudson, and returned to Hoboken at 1:15 P. M. The ITHACA left the terminal again at 3:20 P. M. with 674 passengers, circled the fleet, and returned to Hoboken at 5:40 P. M.

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page 119

CHAPTER XXII

Opening of the Hudson Tubes and the Retirement of Captain Hallock

Opening of the Hudson Tubes

Autobiles were fast coming into use about this time, so that orders were issued early in 1908 that only four cars could be carried on a ferryboat on one trip, two in the front part of the boat and two in the rear. This was done as a safeguard against fire hazard, for in case a car caught fire, the gates would be opened and the car pushed overboard. To this day the order has not been rescinded, although as many as forty automobiles have been carried on one Lackawanna ferryboat at one time.

On February 25, 1908, the Hudson Tubes were opened, connecting New Jersey with New York. The first train was started for Hoboken from New York City by a button pressed by President Roosevelt, seated in the White House in Washington, D. C. At an interview after the opening, Captain Emery said that from a money standpoint the railroad ferries had been affected only slightly by the tunnel to Hoboken. He admitted, however, that the number of passengers carried to and from Hoboken was smaller than the week before.

"Forty per cent of our business," he said, "is carrying commuters, who pay us to take them from their homes in New Jersey to Manhattan. If they do not choose to cross the Hudson in our ferries, it does not mean any monetary loss to us. Then, too, the tunnel cannot carry automobiles, and a large part of our business consists of transportation of trucks and automobiles. We get twenty-five cents each for automobiles, and for trucks from twenty-five to fifty cents. On the first day
the tunnel opened, our fares dropped off two thousand. But the next day the shortage was only eight hundred, and it has continued to grow less each day since.

"I do not believe the tunnel will cut into us very much, even after the entire system is in full operation. Anyway, the number of commuters in New Jersey is constantly growing, so there will be enough business for all of us."

_The Retirement of Captain Hallock_

On February 1, 1909, Captain Hallock was honored by all hands of the Lackawanna Ferries. The following article appeared in the _Observer_, on that day:

"Engineers, firemen, deckhands and oilers of the Lackawanna fleet of tugs have expressed their appreciation of Captain Hallock, who is now acting in an advisory position to Captain John M. Emery, General Manager of the Marine Department of the Lackawanna Railroad, by presenting him with a handsome Morris chair, a strong traveling trunk and a fine cellarette for his den at home, in which to keep soda water and cigars.

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page 121

"The presentation of the articles occurred in the directors' room of the Lackawanna Terminal at Hoboken, where not very long ago Captain Hallock was presented with a handsome loving cup. All of the engineers, firemen, deckhands and oilers of the fleet were present, and, at the conclusion of the speeches that were made, congratulated Captain Hallock on his retirement from active duty, and also themselves on the fact that he had not severed his connection with the company entirely.

"Benjamin Schoppe acted as Master of Ceremonies, and introduced H. W. Heiler, who made the speech of presentation. Captain Hallock was too much overcome to make any extended speech in reply, and simply thanked the men for their kindness in remembering him.

"When Captain W. F. Cogan was called upon for a speech, he stated that he would not make a speech, but would tell a story, and his story was an interesting one. It was of the first trip on a tugboat that he and Captain Hallock had ever taken, and Captain Cogan gave a vivid recital of the happenings of the trip, which proved to be an exciting one. Speeches were made by Captain Emery, William Linn, and William Gilligan, Chief Engineer of the Cornell Steamboat Company, who has been a friend of Captain Hallock for many years.

"The committee which arranged the event was composed of Benjamin Schoppe, H. W. Heiler, J. Banks, and J. B. Riley."
CHAPTER XXIII

The Race between the Ferryboats Lackawanna and Ithaca

AFTER the ferryboat Lackawanna came into the service in 1907, there appeared a great deal of rivalry between the Captains of the Lackawanna and Ithaca as to which boat was the faster. The Captain of the Ithaca claimed that his boat could outdistance the Lackawanna and the Captain of the Lackawanna was as strong in his opinion that he could out-race the Ithaca. To settle the dispute a race was arranged between the two boats on October 1, 1909, between Hoboken, New Jersey, and Newburgh, New York, and return. In this race the Lackawanna was a badly beaten boat.

Following is an article written in the Observer on October 5, 1909:

"Railroad and steamboat men in and about New York harbor would like to have repeated, at an early date, the famous race between the ferryboats Ithaca and Lackawanna of the D. L. & W. R. R. between Hoboken and Newburgh.

"The Ithaca, with picked coal and her engines keyed up to the highest notch of safety in the matter of speed, ran neck and neck with the Lackawanna a good part of the way up the river and towards the end of the journey ran ahead of her rival with the ease and grace of a salmon jumping from an inexperienced spearsman.

"The Lackawanna, like the rival that beat her decisively, also had picked coal and everything in readiness for the race.

"Newburgh is estimated, river measurement, at something like sixty to sixty-five miles from Hoboken. The run was made by the Ithaca in three hours and thirty minutes. The time of the Lackawanna from Hoboken to Newburgh was three hours and forty-eight minutes.

"On the return trip the Ithaca ran faster if anything, although with the conflicting currents that
lurk in the many bays, Tappaan Zee, for instance, it would be a pretty difficult matter to pass expert judgment on this point.

"The time of the ITHACA from Newburgh to Hoboken was three hours and thirty-five minutes. The time of the LACKAWANNA over the same course was three hours and fifty-five minutes.

"Thousands who travel daily on the two boats that figured in the speed contest little realize that they are capable of moving faster than the average battleship.

"Captain Arthur Bird was at the wheel of the ITHACA when she made the speed test trip. Her Chief Engineer was John Barr. Orren Relyea was skipper of the LACKAWANNA and John Heidkamp was Chief Engineer.

"The test has caused much elation among the members of the ITHACA'S running crew, as it accords them

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page 125

the honor of 'carrying a broom at her masthead' as queen of the fastest fleet of ferryboats afloat.

"As long as ferryboats have been crossing the Hudson, there seems to be no record of there ever having been a race arranged between the crack boats of the different fleets. For some time the LACKAWANNA has been boasting of its unusually fast boats. River men claim the Phoebe Snow adherents have a right to make this boast when the road has boats in her fleet that can travel between eighteen and nineteen miles an hour.

"A run to Newburgh and back would make a race between the fastest ferryboats in New York harbor, pilots and engineers say, that would give the next two generations something to read and talk about."

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page 127

CHAPTER XXIV
Pensions and Wages of the Ferry Men

Pensions

ON October 25, 1915, Mr. Benjamin Schoppe, Chief Engineer of the Marine Department, died, and Mr. Charles Emery, Assistant Chief Engineer was appointed in his place.

On the same day, through the efforts of Captain John M. Emery, he secured for the men on the ferry a pension. Although these men had been working for the Delaware, Lackawanna & Western Railroad only since 1896, the Railroad nevertheless gave them a pension. The following pilots were pensioned:

Captain Thomas Smith of ferryboat NETHERLANDS, Barclay Street route.

Captain John Groules of ferryboat MUSCONETCONG, Fourteenth Street route.

Captain Buckhout of ferryboat PAUNPECK, Fourteenth Street route. This man was fifty years on the ferry.

Captain George Hoagland of ferryboat NETHERLANDS, Christopher Street route.

Captain Thomas Jones of the ferryboat SCANDINAVIA, Barclay Street route. This man went blind and through Captain Emery’s efforts he not only secured a pension, but he received over $400 back pay.

Captain Ludlow of the ferryboat PAUNPECK, Fourteenth Street route.

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page 128

The following engineers were pensioned:

G. Rouse, Chief, on Christopher Street ferry.

E. Clark, Chief, on Christopher Street ferry.

John Barr, Chief, on Barclay Street ferry.

Isaac Smith, Chief, on Fourteenth Street ferry.

D. Blanched, Chief, on Fourteenth Street ferry.

D. Haggarty, Chief, on Christopher Street ferry.
The following quartermasters were pensioned:

William B. Lane, Quartermaster, on Christopher Street route.

Louis Gilman, Quartermaster, on Fourteenth Street route.

Steve Harris, Quartermaster, on Fourteenth Street route.
This man was over eighty-five years of age.

Wages of the Pilots

From November, 1863, to June, 1926, the ferry pilots received the following monthly wages:

November, 1863 .......................................................... $ 65.00
November, 1865 .......................................................... 75.00
April, 1867 ................................................................. 80.00
January, 1871 ............................................................. 100.00
January, 1880 ............................................................. 105.00
November, 1895 .......................................................... 115.00
January, 1897 ............................................................. 120.00
April, 1901 ................................................................. 125.00
October, 1902 ............................................................. 135.00
December, 1906 .......................................................... 145.00
April, 1910 ................................................................. 153.70
May, 1917 ................................................................. 165.00
November, 1917 ......................................................... 170.00
The World War and Labor Strikes

On April 6, 1917, the United States entered the World War on the side of the Allies against Germany and her Allies, but it was not until November, 1918, that the railroads and ferries were taken over by the Government.

Commencing on May 15, 1918, the ferries transported for embarkation purposes 242,330 officers and men, and beginning on December 2, 1918, they transported for debarkation purposes 127,432 officers and men, a total of 369,762 officers and men. The ferryboat SCANDINAVIA was used exclusively for this purpose, although other boats were used when the SCANDINAVIA could not accommodate the number transported. The largest number transported in one day was on August 8, 1919, when 9,803 soldiers were taken to New York City to participate in the Victory Parade.

The ferries remained under control of the Government until March 1, 1920, when they were returned to private ownership.
From November 7, 1918, to April 1, 1920, there were five labor strikes on the ferry. Four of these strikes occurred when the ferry and railroad were under Government control. From 1910 to 1920, except when the ferries were under Government control, there had been only two strikes.

On April 1, 1909, Captain L. B. Dow, who was at the head of the Harbor Union No. 1, called a strike of the tugboats. This did not include the ferryboats. When the strike was called, Captain Dow led the men to believe that there was $35,000 in the Harbor Union treasury, but when the strike had been on only a few days, the men found out that instead of $35,000 in the Union there was only $300.00. This did not make the men feel very friendly towards Captain Dow. After the strike had been on three weeks, it was lost, and the men claimed that Captain Dow had sold them out to the railroads.

The next strike that was called was on November 7, 1918, by a man named James Maher, who had succeeded Captain Dow as the head of Harbor Union No. 1. This strike included the ferries. Some of the men went off the ferries, but the boats were not tied up and continued in operation. The strike lasted four days and the men lost out.

The next strike called was on January 1, 1919. This one included the ferries. Some of the men went off duty, but the ferries kept running and after three days the strike was broken. The men again lost out.

On March 4, 1919, another strike of tugs and ferries was called. The ferries kept running, although the strike lasted eight days. The men lost out, and some of them came back.

The next strike was on October 11, 1919. This strike was for deckhands, bridgemen, and gatemen.

There were few of the D. L. & W. R. R. men who went out. After the strike was on for five days, it was called off, the men again losing out.

The last strike was on April 1, 1920. In the year 1920 all the railroads went back to private ownership. The Erie Railroad turned their tugs over to the Phoenix Transit Company, which was to operate them. By doing this, they could work the men ten hours a day instead of eight. Mr.
Maher called a strike on April 1st. This included all ferries, as well as tugboats. Mr. W. H. Truesdale, President of the Delaware, Lackawanna & Western Railroad Company, issued a notice to the men that his railroad had no intention of turning their tugs over to private ownership, and as the Railroad Labor Board had given them eight hours a day, his road was going to live up to this agreement. In spite of this, when the strike was called there were some of the men and pilots of the ferry who went out. The men lost out.

Throughout all the strikes Captain Emery kept the ferries running, and most of the men who went out did not receive their jobs back.

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page 135

CHAPTER XXVI

From 1918 to 1931

Early in the year 1918, owing to the clamor of patrons against the German names of BREMEN and HAMBURG, some minor changes were made on these ferryboats and the names were changed to MAPLEWOOD and CHATHAM.

On July 16, 1919, while the ferryboat CHATHAM was tied up on the north side of Fourteenth Street, Hoboken, fire was discovered on the upper deck by the night watchman at 11:05 P. M. Before any effective streams of water could be applied, or in less than three minutes, the upper deck of the CHATHAM was ablaze. The ferryboat PAUNPECK lay in an adjacent slip, and she was towed out into the stream along with the ferryboat CHATHAM by the tugs and fireboats which responded to the alarm. Although every effort was made to save the boats, the CHATHAM'S upper structure was badly damaged and the PAUNPECK was slightly scorched. This fire necessitated an entire new upper structure on the ferryboat CHATHAM.

In September, 1921, Captain A. L. Hickman died, and Captain George B. Snyder succeeded him on October 1st of the same year.

The last two boats to be added to the Delaware, Lackawanna & Western Railroad fleet were the HOBOKEEN and BUFFALO in 1922.
The ferryboat HOBOKEN was built by the John W. Sullivan Company at Elizabethport, New Jersey. This boat was 221 feet long, 62 feet wide, draft 10 feet, 1292 gross tons, 879 net tons, single deck, steel hull, two compound engines, two Scotch boilers, 180 pounds of steam, 1900 horse power, and cost $355,399.00. The keel was laid on March 16, 1922, and the boat was launched on October 10 of the same year. Her trial trip was on December 20 and she was placed in service on the Fourteenth Street route on December 28. Captains William Bade and Arthur Compton were placed in command of her.

The ferryboat BUFFALO was built by The John W. Sullivan Company at Elizabethport. She is 221 feet long, 62 feet wide, draft 10 feet, single deck, steel hull, 1900 horse power, two compound engines, two Scotch boilers, 180 pounds of steam, 1292 gross tons, 879 net tons, and cost $355,399.00. The keel was laid on March 16, 1922, and the boat was launched November 20, 1922. Her trial trip was on February 5, 1923; and she was placed in commission on the Fourteenth Street route on February 6, 1923. Captains George T. Runton and Ralph R. Stray were placed in command.

These two ferryboats are capable of carrying forty-five automobiles each and are used for vehicle and passenger traffic.

In February, 1924, Mr. Henry R. Newkirk, Assistant Manager in the Ferry Department, passed away at Moses Taylor Hospital, Scranton, Pa. He

had been with the Lackawanna Railroad for twenty-two years.

During the same month, work was started on the passenger bridge across West Street, New York City, running from the Delaware, Lackawanna & Western Railroad ferryhouse to the north-east corner of Barclay Street. It was opened for passengers part of each day on December 31, 1924, and was completed and opened for traffic on February 13, 1925.

On June 25, 1925, Mr. William H. Truesdale resigned as President and accepted the Chairmanship of the Board of Directors of the Delaware, Lackawanna & Western Railroad Company, Mr. J. M. Davis being appointed in his place.
In July, 1926, the ferryboat LACKAWANNA was lengthened twenty feet two inches, the boat being cut in two and the work done at the Tietjen & Lang's Dry Dock, Hoboken, at a cost of $110,000.00 At the same time two new Scotch boilers were placed in the boat. She resumed service on October 11 of the same year.

During the month of September, 1926, the ferryboat HOPATCONG was lengthened twenty feet two inches, the same as the LACKAWANNA at the Tietjen & Lang's Dry Dock, Hoboken, at the same cost. She also had two new boilers installed at that time, and resumed service in December of the same year.

On November 8, 1926, the Electric Ferries, Inc., started operation from Twenty-third Street, New York, to Weehawken, New Jersey. Although at first the Lackawanna's regular traffic at Fourteenth

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page 138

Street, New York, was decreased, it soon increased, so much so that a third boat had to be placed in operation on the Fourteenth Street route.

The Holland Vehicle Tunnel was opened for traffic on November 12, 1927. Vehicle traffic on the Lackawanna ferries dropped off immediately from thirty to forty per cent. Regular service was continued until January 1, 1928, when an extra crew was taken off the Christopher Street route. On January 3, 1928, the Christopher Street ferry was closed at 9 P. M. and all day Sundays, releasing one roustabout crew. However, at the end of the year 1930, ferry traffic has returned to about normal, with the exception of Sundays, and is increasing daily.

Today the ferries make a total of 810 trips every 24 hours, carrying annually 25,000,000 passengers and 2,933,000 vehicles.

While it is true that ferryboats have been superseded in many sections of the United States by bridges and tunnels, the growth of vehicle and passenger traffic in the metropolitan district of New York is so rapid that possibly another hundred years will elapse before this system of transportation is abandoned.

THE END

====

[index]

[page 139]
Index

A
Abiel, John, 12
Alberts, Wm, 36
Alpine, N. J., 67, 68
Anthony, John P., 38, 48
Applegate, Irvin G., 99
Armistice, 9
Assembly of Nineteen, 3
Astoria Ferry, 86

B
Bade, Captain William, 116, 117, 136
Banks, J., 121
Barclay Street, 37, 38, 45-49, 51-55, 57, 69, 85, 89, 90, 92, 99
Barr, John, 76, 105, 124, 128
Bayard:
   Samuel, 6, 7
   Stephen, 7
   William, 7, 11, 13
Bear Market, 11
Beckwith, Captain G., 76
Bergen, Ferryboat, 69, 72 75-
   78, 80, 83, 84, 106
Berton, Captain William G.,
   95
Bigler & Company, James, 67
Bingham, Alderman, 22
Binghamton, Ferryboat, 92,

Bolen, Newton, 97
Boston, Mass., 71
Bouton, Captain Geo. E., 92
Brady, Edwin L., 69, 70
Bremen, Germany, 5
Bremen, Ferryboat, 83, 84, 98,
   105, 135
Brevoort, Henry, 12
Brewerton, Geo., 12
Bridge, 137
Britain, 7
British Army, 14
Brooklyn, N. Y., 40
Brooklyn & Manhattan Ferry
   Company, 67
Buckhout, Captain, 127
Buckmaster, G., 38
Buffalo, Ferryboat, 135, 136
Bush, L., 89, 110

C
Caldwell, B. D., 89, 109, 111
Callahan, Ferryboat, 107
Campbell, Palmer, 111
Canal boat, 17
Canal Street, 52, 54-57, 65
Carmer, Alderman, 18
Carpenter, Thomas, 22, 23
Carteret, New Jersey, 66
Carteret Ferry Company, 66
Carteret, Governor Phillip, 7
Castle Point, 5, 11
<table>
<thead>
<tr>
<th>96, 98</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bird, Captain Arthur, 117, 124</td>
</tr>
<tr>
<td>Birkenhead, England, 70</td>
</tr>
<tr>
<td>Blagge, Benjamin, 12</td>
</tr>
<tr>
<td>Blanched, D., 128</td>
</tr>
<tr>
<td>Bogert, James, 15, 18</td>
</tr>
<tr>
<td>Celebration, Hudson-Fulton, 115-118</td>
</tr>
<tr>
<td>Centennial of Freedom, 52</td>
</tr>
<tr>
<td>C. R. R. of N. J., 90, 97, 99, 100-104</td>
</tr>
<tr>
<td>Chancellor Livingston, Ferry boat, 58</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>124</th>
</tr>
</thead>
<tbody>
<tr>
<td>page 142</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>121</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charlton Street, 42</td>
</tr>
<tr>
<td>Chase, Captain, 85</td>
</tr>
<tr>
<td>Chatham, Ferryboat, 135</td>
</tr>
<tr>
<td>Christopher Street, 42, 55, 65, 72, 99, 104, 138</td>
</tr>
<tr>
<td>Civil War, 65</td>
</tr>
<tr>
<td>Claes:en:</td>
</tr>
<tr>
<td>Dirck, 5</td>
</tr>
<tr>
<td>Sybout, 5</td>
</tr>
<tr>
<td>Clark, E., 128</td>
</tr>
<tr>
<td>Clermont, Steamboat, 25</td>
</tr>
<tr>
<td>Clickener, Cornelius V., 8 Cogan, Captain W. F., 115, 121</td>
</tr>
<tr>
<td>Columbian, 27, 28 Commission of Forfeited Estates Haring, 7 Common Council, 11, 12, 14-</td>
</tr>
<tr>
<td>16, 19, 21, 22, 24, 28, 31, 34-36, 38, 42, 45, 51, 53, 57</td>
</tr>
<tr>
<td>Compton, Captain Arthur, 92, 136</td>
</tr>
<tr>
<td>Connecticut, 30</td>
</tr>
<tr>
<td>Connecticut River, 30, 70</td>
</tr>
<tr>
<td>Conroy, Peter, 36</td>
</tr>
<tr>
<td>Continental Army, 13</td>
</tr>
<tr>
<td>Continental Congress, 7</td>
</tr>
<tr>
<td>Daab, Martin, 98</td>
</tr>
<tr>
<td>Davis, J. M., (Frontispiece), 137</td>
</tr>
<tr>
<td>De Peyster, Phillip, 39</td>
</tr>
<tr>
<td>Decker, James, 92</td>
</tr>
<tr>
<td>Delamater Iron Works, 69, 75</td>
</tr>
<tr>
<td>Delaware, 7</td>
</tr>
<tr>
<td>D. L. &amp; W. R. R. Co., 67, 72, 84, 87, 89-91, 95, 99, 100, 109</td>
</tr>
<tr>
<td>Denton, Prof. J. E., 76 Detroit, Mich., 73, 75</td>
</tr>
<tr>
<td>Detroit Dry Dock Company, 75</td>
</tr>
<tr>
<td>Dikeman, John, 12 Doran, Captain Patrick, 96 Dow, Captain L., 107, 132</td>
</tr>
<tr>
<td>Duke's House, 98</td>
</tr>
<tr>
<td>Dutch West India Company, 3, 4</td>
</tr>
<tr>
<td>East River, 86, 87</td>
</tr>
<tr>
<td>Eldridge: Louis, 86, 87 Roswell, 86, 87 Electric ferries, 137</td>
</tr>
<tr>
<td>Elizabethport, N. J., 136</td>
</tr>
<tr>
<td>Elmira, Ferryboat, 91</td>
</tr>
</tbody>
</table>
Continental Troops, 14
Cook, Major Ramon M., 86, 92, 93
Cornell Steamboat Company, 121
Cornell University, 70 Cornwall-on-the-Hudson, 117
Corporation Dock, 11-14, 27
Cortlandt Street, 24
Covenhoven, Garret, 21
Cowles, William, 71, 73
Crocker, Chief, 101
Cullen, George A., 109, 110
Curtenius, Peter T., 12

Emery:
Charles, 91, 127
Captain John M., 87, 91, 98, 99, 104, 106, 115, 120, 121, 127, 133
English, 7
Erie Railroad, 90, 99, 101-104, 133
Fairy Queen, 57
Ferriage, 18, 19, 33, 59-63
Ferryboat, 23, 29
Ferryboats:
Bergen, 69, 72, 75-78, 80, 83, 84, 106

Ferryboats (continued):
Binghamton, 92, 96, 98
Bremen, 83, 84, 98, 105, 135
Buffalo, 135, 136
Chancellor Livingston, 58
Chatham, 135
Elmira, 91
Fairy Queen, 57
Fitch, John, 57
Hackensack, 66, 83
Hamburg, 83, 84, 90, 92, 101, 105, 135 Hoboken (1822), 51, 52, 57
Hoboken (1861), 58
Hoboken (1863), 58
Hoboken (1881), 67, 83
Hoboken (1922), 135, 136
Hopatcong (1885), 67, 83, 95, 96, 97, 98 Hopatcong (1907), 107,

Ferryboats (continued):
Scandinavia, 92, 127, 131
Scranton, 89, 105
Secaucus, 66, 83, 84
Watt, James, 58
Weehawken, 66
Ferry, Hoboken, 8, 11
Filkin, Francis, 12
Findsay, Alderman, 18
Fires:
Chatham, 135
James Watt (1870), 58
Twenty-Third St. Terminal,
99-104
First double-screw ferryboat, 69-80.
First steam ferryboat, 23-30
First steel hull ferryboat, 66
Fister, James, 109
Fletcher, Andrew, 75
Fletcher Dry Docks, W. & A., 98
Flynn, P. F., 90
Forest:
Jan de, 7
Susanna, 7
Fort Amsterdam, 4, 5
Fourteenth Street Ferry, 81, 82, 85-87, 90, 98, 99, 104, 137, 138
Fourteenth Street Shops, 89, 91, 92, 100, 108
Fox, Frederick P., 109
France, 9
Fulton, Robert, 24, 25, 28, 29, 31, 40, 48-50

G
Gautier, And., 12
Germany, 131
Gilbert, Alderman, 15
Gilligan, William, 121
Gilman, Louis, 128
Goodwin, David, 21, 27, 28
Grand Central Station, 103
Greenwich, 34
Groules, Captain John, 127

Hickman:
Captain Alfred, 90, 92, 104, 135
Robert, 7
Hicks, Whitehead, 12
Hoagland, Captain George, 127
Hoboken, Ferryboat, (1822), 51, 52, 57
Hoboken, Ferryboat, (1861), 58

----------
page 144
Hoboken, Ferryboat, (1863), 58
Hoboken, Ferryboat, (1881), 67, 83
Hoboken, Ferryboat, (1922), 135, 136
Hoboken House, 17
Hoboken Land and Improvement Company, 70, 83, 84, 111
Hoboken Steamboats, 27
Hoboken Steamboat Ferry Company, 51
Hoboock, 11, 13-16
Hoboock Ferry, 13, 14, 18-20
Hoebuck, 11, 13
Hogg & Delamater, 69
Hoghland, William, 23
Holland, 3, 5
Holland Vehicle Tunnel, 138
Hone, Phillip, 36-48, 56
Hopatcong, Ferryboat (1885), 67, 83, 95-98
Hopatcong, Ferryboat (1907), 107, 115, 116, 137
Horner, John, 102
Horse boats, 31, 32, 36, 39, 41-44, 54
Housman, Captain A., 89, 105, 116-118
Hudson, Henry, 3

Heffren, Captain George, 87, 90
Heiderkamp, John, 124
Heiler, H. W., 121

Hudson-Fulton Celebration, 115-118
Hudson River, 3, 29, 41
Hudson Square, 52

Lane, William B., 128
Lawrence:
Aug. H., 34
Sylvanus, 15
Hudson Tubes, 119, 120
Hulbert Street, 38, 51, 52
Hurler, C., 15
Idlewild, Tug, 96
Indians, 3-6
Inspection, steamboats, 65, 116
Invention, 24, 25
Ithaca, Ferryboat, 105, 116-118, 123-125
J
Jakin, A. H., 104
Jamestown, Va., 108
Jans, Susanna, 5
Jansen, Michael, 6
Jersey City, N. J., 24
Jones, Captain Thomas, 92, 127
Journal, New York, 12
Juliana, Ferryboat, 27-30
K
Kane, William, 76, 108
Kieft, William, 5
Killingsworth, 30
King:
   E. W., 34, 38, 56
   James G., 81
King’s Bridge, 14
Kirby, Frank, 75
L.
Labor strikes, 131
Lackawanna, Ferryboat
   (1881), 66, 81, 83, 85, 90
Lackawanna, Ferryboat
   (1907), 107, 117, 123-125, 137
Leasings:
   Covenhoven, 21
   D. L. & W. R. R., 89
   Eldridge, 86-87
   Goodwin, 21
   Hedden, 20
   Hone, 36, 38, 42
   Lawrence, 15
   Smith, 16, 17
   Stevens, 16, 24, 34, 45
   Swartwout, 75
   Talman, 12
   Van Alen, 14
   Voorhis, 21
   Wiessenfels, 15
Lee:
   James, 26
   John, 43
   T. W., 90
Linoleumville, N. Y., 66
Linn, William, 121
Liverpool, England, 70
Livingston, 29, 48-50
Long Island, 40, 86
Long Island Railroad Ferry, 86
Longstreet, Captain, 85
Loomis, E. E., 89, 99, 109, 111
Ludlow, Captain, 127
M
Maher, James, 132, 133
Manhattan, 3, 4, 17
Mann, Asa, 48, 56
Maplewood, Ferryboat, 135
Marion, Tug, 96
Marvel & Company, Thomas S., 83, 84
Massachusetts, 7
Mathew, David, 12
Mayes, J., 36
McClellan, Fireboat, 103
McClellan, General, 70
McDavitt, J. F., 115
McLaughlin, William, 87, 92, 104
Memorial, 21, 31
Merritt & Chapman Derrick & Wrecking Company, 87
Mersey River, England, 70
Mesier:
    Abraham, 12
    Peter, 22, 23
Middletown, Conn., 30
Mississippi River, 70
Monopolists, 25, 50
Montclair, Ferryboat, 71, 83
Montclair, Tug, 96
Moonachie, Ferryboat, 66, 83, 90
Moore, Charles, 76
Moran, Captain William, 89, 105
Morris & Essex Division, 97, 114
Morristown, Ferryboat, 65, 83
Moses Taylor Hospital, 136
Murchison, Kenneth, 109, 111
Murray, Miss Marion, 111
Murray Street, 36-38
Musconetcong, Ferryboat, 67, 83, 95, 96, 127
N
Netherlands, Ferryboat, 84, 127
New York & College Point Ferry Company, 66
New York & Hoboken Ferry Company, 86
New York & New Jersey Steamboat Company, 36, 38, 53
New York, 6-8, 12-17, 22, 26, 27, 29, 33, 35, 37-39, 42, 44, 49
New York Evening Post, 52
New York Journal, 12
New York Railroad Club, 111
New York Tribune, 109
New Yorker, Fireboat, 103
Newark, N. J., 52, 97
Newburgh, N. Y., 66, 67, 72, 75, 77, 83, 84, 123-125
Newport News, Va., 89, 91, 92, 105, 108
Newport News Shipbuilding & Dry Dock Company, 89, 91, 92, 105
Newkirk, Henry R., 136
Nicoll, Isaac, 16
Norfolk & Washington Steamboat Company, 66, 67, 107
North River, 11-14, 17, 29, 86, 96, 100
North River boats, 28
North Battery, 38, 52, 55
Observer, 96, 100, 120
Old Washington Market, 28
Orange, Ferryboat, 71, 76, 78, 83
New Amsterdam, 5
New City of Hoboken, 8
New Jersey, 4, 13, 42
New Netherlands, 3, 5

Orange, Tug, 100
Oxton, 70
Paauw, Michael, 3, 4
Palmer, Superintendent, 85

====

Passaic, Ferryboat, 57
Patent, 24-27, 53, 69
Patroon, 4
Paterson, Ferryboat, 58
Paulus Hook, 12, 13, 18, 19
Paulus Hook Company, 24, 26, 29, 36, 50
Paunpeck, Ferryboat, 67, 83, 127, 135
Pavonia, 4
Pennsylvania Railroad, 85, 97, 100-104
Periauger, 17
Perseus, Steamboat, 106
Peterson, William, 86
Philadelphia, Pa., 13, 75
Phoebe Snow, 110
Phoenix, Ferryboat, 57, 65
Phoenix, Steamboat, 26
Phoenix Transit Company, 133
Piers, 9
Pioneer, Ferryboat, 57
Pontoon, 28
Potomac River, 67
Powles Hook, 12
Public Service Corporation, 97
Putten, Aert Teunissen, Van,

Rumsey, James, Ferryboat, (1867), 83
Runton, Captain Geo. W., 136
Ryan, William, 93

Sailboats, 11, 42, 46-48
Sandy Hook, 5
Saul, Samuel, 87
Saybrook, Conn., 30
Saint Ignace, Steamer, 73, 75
Saint John's Church, 52
Saint Paul's Church, 52
Scandinavia, Ferryboat, 92, 127, 131
Schomp, George, 92
Schoppe, Benjamin, 91, 121, 127
Scranton, Ferryboat, 89, 105
Scranton, Pa., 136
Scranton, Tug, 108
Secaucus, Ferryboat, 66, 83, 84
Seneca, Steamship, 115, 116
Seventy-six House, 40, 44
Shewan & Sons Dry Dock, James, 108
Shippen, William W., 70
R
Rates, 18, 19, 33, 59, 60-63
Revolutionary War, 7
Relyea, Captain Oren D., 92, 106, 117, 124
Riley, J. B., 121
River Mersey, England, 70
Roosevelt, President Theodore, 119
Rouse, G., 128
Rowboats, 11, 17
Rumsey, James, Ferryboat, (1846), 57

Spring Street Ferry, 31, 34-36, 42, 44-48, 53, 54, 56, 57, 65
Stanley, Albert H., 97
Staten Island, 4, 40
Steamboat Inspection Service, 65, 116
Steamboat, 23-25, 28, 29, 31, 37, 45, 47, 49, 50, 54
Steam engines, 24
Stevens:
E. A., 69, 80
Miss Frances, 116
Francis R., 70, 71, 76
Colonel John, 7, 8, 16, 21, 22, 24-30, 34-37, 39-41, 43-48, 50-57, 59, 69
Robert, 26, 29, 45-48, 51-57
Stevens Institute, 69, 70
Stewart, Alexander, 55
Stockton, Richard, 43
Stray, Captain Ralph R., 136

Shumann, R., 104
Smith:
Isaac, 128
Joseph, 16, 17
Captain Thomas, 127
William, 86, 93
Smith, Tug J. B., 96
Snell, Joseph E., 109
Snyder, Captain George B., 135
Society of Mechanical Engineers, 69
Soldiers, 8, 9
Spicer, Captain, 81, 85

Tietjen & Lang's Dry Dock, 137
Town, John, 17
Townsend, Thomas S., 48
Tribune, New York, 109
Truesdale, William H., 89, 91, 111, 133, 137
Tubes, Hudson, 119, 120
Tunnel, Holland Vehicle, 138
Twenty-third Street, 90, 92, 99, 100-106, 137

Union Ferryboat Company, 86
United Netherlands Co., 3
United States Government, 9

Van Alen, John, 14
Van Boskerck:
John, 43 Lucas.
<table>
<thead>
<tr>
<th>Name</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steil, Mayor</td>
<td>111</td>
</tr>
<tr>
<td>Van Dolen, Herman</td>
<td>100</td>
</tr>
<tr>
<td>Stuart, John</td>
<td>65, 66, 108</td>
</tr>
<tr>
<td>Van Geldert, Alderman</td>
<td>15</td>
</tr>
<tr>
<td>Stuyvesant:</td>
<td></td>
</tr>
<tr>
<td>Van Gieson, Sr., Fletcher</td>
<td>92, 108</td>
</tr>
<tr>
<td>Van Putten, Aert Teunissen</td>
<td>5</td>
</tr>
<tr>
<td>Sullivan &amp; Company, John W.</td>
<td>136</td>
</tr>
<tr>
<td>Van Vorst:</td>
<td></td>
</tr>
<tr>
<td>Van Giler, Captain Ernest</td>
<td>92</td>
</tr>
<tr>
<td>Talman, Harmanus</td>
<td>11</td>
</tr>
<tr>
<td>Vanderbilt, Jr., John</td>
<td>34</td>
</tr>
<tr>
<td>Tariff, 18, 19, 33, 59-63</td>
<td></td>
</tr>
<tr>
<td>Vanderbilt, Jr., John</td>
<td>34</td>
</tr>
<tr>
<td>Teamboats, 46-49, 53, 54</td>
<td></td>
</tr>
<tr>
<td>Vehicle Tunnel, Holland</td>
<td>138</td>
</tr>
<tr>
<td>Thirty-fourth Street Ferry, 87</td>
<td></td>
</tr>
<tr>
<td>Verlet:</td>
<td></td>
</tr>
<tr>
<td>Thurston, Prof. R. H.</td>
<td>70</td>
</tr>
<tr>
<td>Talman, Captain</td>
<td>7</td>
</tr>
<tr>
<td>Wages, 87, 88</td>
<td></td>
</tr>
<tr>
<td>Tariff, 18, 19, 33, 59-63</td>
<td></td>
</tr>
<tr>
<td>Wages, 87, 88</td>
<td></td>
</tr>
<tr>
<td>Washington Market, 31, 36</td>
<td></td>
</tr>
<tr>
<td>Washington Street, New York City, 55</td>
<td></td>
</tr>
<tr>
<td>Washington Street, New York City, 55</td>
<td></td>
</tr>
<tr>
<td>Washington Street, New York City, 55</td>
<td></td>
</tr>
<tr>
<td>Watt, James, Ferryboat</td>
<td>58</td>
</tr>
<tr>
<td>Watts, Ferryboat</td>
<td>58</td>
</tr>
<tr>
<td>Watts, Ferryboat</td>
<td>58</td>
</tr>
<tr>
<td>Watts:</td>
<td></td>
</tr>
<tr>
<td>West Hoboken Hill</td>
<td>6</td>
</tr>
<tr>
<td>Westchester Ferry Company, 67, 68</td>
<td></td>
</tr>
<tr>
<td>Wiessenfels, Charles F., 15 Wilmington, Delaware, 107</td>
<td></td>
</tr>
<tr>
<td>Wilson, J. Shields, 75 Winter, Herman, 75</td>
<td></td>
</tr>
<tr>
<td>Woodbury, Ferryboat</td>
<td>107</td>
</tr>
<tr>
<td>Woodbury, Ferryboat</td>
<td>107</td>
</tr>
<tr>
<td>Woolsey: Captain</td>
<td>70</td>
</tr>
<tr>
<td>Woolsey: Captain</td>
<td>70</td>
</tr>
<tr>
<td>Y</td>
<td></td>
</tr>
</tbody>
</table>
Charles, 42
John, Jr., 12
Weehawken, N. J., 6, 29, 42, 81, 96, 98, 137
Weehawken, Ferryboat, 66
Werner, John, 87, 91
Yellow fever, 52
Yonkers, N. Y., 67, 68
Z
Zibriskie, George, 56