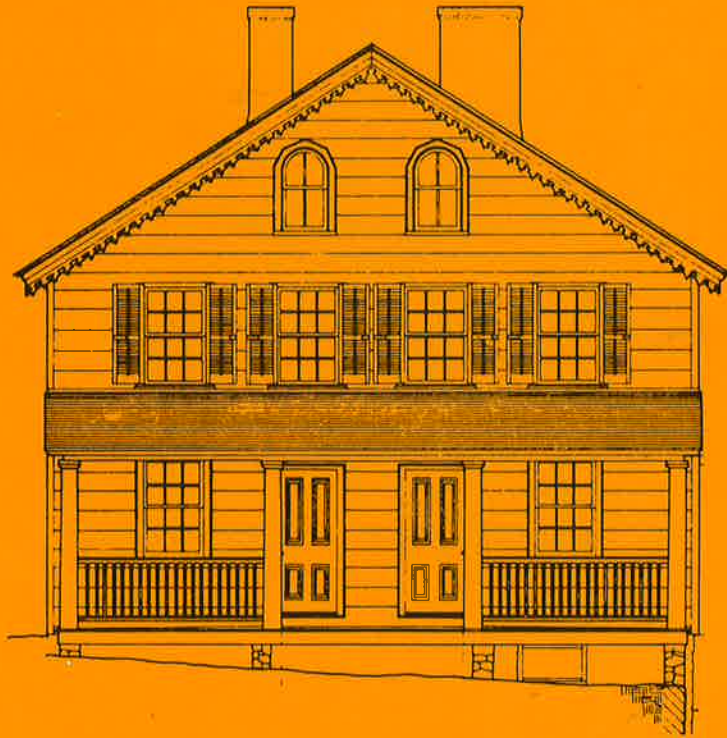




**The Delaware Ship and Boat
Building Industry, 1830-1940+/-:
An Historic Context**

**Center for
Historic Architecture and Engineering**



**University of Delaware
Newark, Delaware**

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DELAWARE PUBLIC ARCHIVES

by

Dean A. Doerrfeld

with

David L. Ames
Bernard L. Herman
Rebecca J. Siders

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shipbuilders in the area, Harlan & Hollingsworth, listed themselves in that year as "Machinists," producing "Machinery of all kind and Iron Boats."⁹ Outside of New Castle County, the state's shipbuilding industry centered in Murderkill Hundred, Kent County, where Samuel Lorchard and John Lank erected two small schooners and two sloops respectively.

By 1860 the state's shipbuilding industry expanded considerably. Although Wilmington continued to lead the state in the production of vessels, new ship yards appeared in Broadkiln and Cedar Creek hundreds. A total of twelve ship yards produced vessels worth over \$637,000, making shipbuilding second only to flour milling in the state's economy. In addition to the actual ship yards, the construction of vessels supported numerous ancillary industries. All located within Wilmington and clustered near the confluence of the Brandywine and Christina Rivers, two shipsmiths, a sailmaker, a mast and spar maker, a block and pump maker, and an upholsterer of "Car and Steam Boat Furnishings" manufactured the finished materials needed in the construction of vessels. Both Harlan & Hollingsworth and Pusey & Jones listed themselves as producers of iron steam boats as well as machinists and manufacturers of engines and boilers. Outside of New Castle County, Noah Magee, Samuel Martin, and William G. Prettyman operated yards on the Broadkiln River and each produced a single schooner. Along the Mispillion, James N. Deputy erected two schooners, and H.D. Deputy and William A. Scribner built a single schooner each. Each of the vessels constructed in lower Delaware sold for \$9,000. Prices for vessels launched in the Wilmington area ranged from \$7,000 to \$15,000 but presumably varied considerably in size. Wages of ship yard workers appeared fairly consistent throughout the state. The specialized skills of the sailmakers employed by the firm of Weaver & Femenick demanded slightly more than average yard workers and each received about \$50 monthly. Workers in the well established firms of E. & C. Moore or William Thatcher could expect to earn from \$35 to \$40 monthly. Ship yard workers in Sussex County earned an average of \$39 monthly regardless of which yard employed them.

The Decline of the Wooden Ship

Although Delaware's shipbuilding industry appeared to lag behind the rest of the nation in the size and number of ships constructed, the types of vessels constructed by the state's ship yards placed them in a position that assured a continuous market. Between 1866 and the turn of the century, the large wooden packet and clipper suffered a serious decline. The high cost of construction, and diminishing prices of steel and iron, made these huge ships, often grossing more than 3,000 tons and measuring 300 feet in length, uneconomical to own or operate. New York City, one of the primary building centers for large ships and barks, experienced a sharp decline in output from forty vessels in 1855 to none in 1862. The small coastal sloop and schooner, however, continued to be in demand long after the market for

⁹ United States Census of Manufactures, Delaware manuscript returns, 1850.

Wm. A. Scribner - 1874, 1880
George P. & Asher J. Hudson - 1892

No identified builder:

1863, 1864, 1866, 1867(2), 1868 (2), 1872

Milford--Ships under 20 Tons

Ships with identified builder:

E. M. Wallace & Sons - 1935 (3), 1936 (8), 1937 (5), 1938 (2), 1939, 1940
E. M. Wallace also listed as Master Carpenter at Hoopers Island, Maryland in 1932.
Wm. H. Wallace - 1935 (4), 1936 (3), 1938
George Gillespie, Sr. - 1935 (6), 1936 (3)
James B. Gillespie - 1936 (6), 1938, 1939 (3)
Wm. G. Abbott - 1898 (5), 1922, 1928 (2), 1930 (2)
Valvert L. Fox - 1939

No identified builder:

1899

Frederica--Ships over 20 Tons

Ships with identified builder (Master Carpenter):

Nathaniel Lank - 1884, 1886, 1888 (2), 1889 (2), 1890 (3), 1892
Thomas Lacey and Nathaniel Lank - 1870, 1871, 1874, 1875
R. R. Postles - 1907

No identified builder:

1846, 1867 (2), 1869, 1873

Frederica--Ships under 20 Tons

Ships with identified builder (Master Carpenter):

R. R. Postles - 1934 (2)
Wm. E. Holliger - 1934 (2)
W. Marion Stevenson - 1934

Lebanon--Ships over 20 Tons

Ships with identified builder (Master Carpenter):

Henry Deputy - 1887
Maloney & Shif - 1872
Wm. Maloney - 1873
S. C. Wells - 1881
Hendrickson & Wells - 1883

Milton--Ships over 20 Tons

Ships with identified builder (Master Carpenter):

Cornelius C. Davidson - 1887 (2), 1891 (3)
David H. Atleins - 1887
James P. Davidson - 1891, 1892, 1894, 1906 (3)
Rouse J. Potter - 1907 (2), 1913
Theodore S. Wilson - 1879
J. L. Black & Bros. - 1883

No identified builder:

1859, 1864 (2), 1866 (2), 1868, 1870, 1873

Milton--Ships under 20 Tons*Ships with identified builder (Master Carpenter):*

Rouse J. Potter - 1915

J. D. Short - 1936

Wilmington

The predominant builder of ships in Wilmington was the Harlan and Hollingsworth company, constructing over 80% of all Wilmington's vessels prior to 1915 (total number of vessels about 190). The other major builder of ships, exclusively iron vessels, was the Pusey and Jones Company. While Pusey and Jones did construct complete vessels, the business appears focused on marine engines and boilers as the company experienced extended periods with no shipbuilding activity. For example, active in the 1860s and 1870s, shipbuilding declined slowly until the 1890s when no ships were built. By the late 1890s, activity resumed and continued into the early twentieth century. Both firms remained active into the nineteen-teens with Harlan and Hollingsworth again proving the more active of the two firms. Between 1918 and 1921 the firms built numerous ships for the transportation of oil and for the United States Shipping Board. Pusey and Jones held contracts with the USSB for vessels of 1750 net tons and built five in 1918; six in 1919; and four in 1920. Harlan, now known as the Bethlehem-Harlan Works erected larger ships, approximately 5100 tons, for the USSB (1918-9; 1919-5; 1920-7) as well as five heavy tankers for Sinclair in 1921. Harlan constructed two vessels in 1916 and three in 1917.

In the 1920s, Pusey and Jones continued produced heavy tankers and freighters, Bethlehem's Harlan Works constructed vessels in 1923 and 1926, but then vanishes from the Port Registry by 1927. The Dravo contracting Company began building vessels in Wilmington in the early 1930s. Listings for the 20s and 30s area as follows: 1923--Bethlehem (1) Pusey & Jones (4); 1925--Pusey & Jones (4); 1926--Bethlehem (3); 1927--Pusey & Jones (1); 1928--Pusey & Jones (1); 1929--Pusey & Jones (1); 1930--Pusey & Jones (5); 1931--Pusey & Jones (4); 1932--Dravo (2); 1933--Pusey & Jones (1); 1934--Dravo (2); 1936--Pusey & Jones (1); 1937--Pusey & Jones (1); 1938--Dravo (2) Pusey & Jones (2); 1939--Pusey & Jones (2); 1940--Pusey & Jones (2); 1941--Pusey & Jones (2).

In addition to those ships raised in Wilmington in 1939, numerous ships from Bethlehem's Leetsdale, PA works; Sun Shipbuilding and Dry Dock of Chester, PA; and American Bridge Company of Ambridge, PA were first enrolled at Wilmington. The same type of registry took place in 1937 when the St. Louis Shipbuilding Company enrolled over a dozen tankers at the Port of Wilmington. It is possible that these companies contracted idle yard space (possibly Bethlehem's idle Harlan works) in Wilmington. Dravo Contracting Corporation, although the number of ships with Wilmington listed as port of construction are small, was very active in Pittsburgh and Neville Island, PA. Again this may imply that Dravo's Wilmington facility was physically constructing the vessels, but the registry form listed the company's corporate address.

Other Wilmington yards included Enoch Moore who consistently built one or two vessels each year, and established a family business that stretched from the early nineteenth century (Moore appears in the 1814 Wilmington directory) until the turn of the century when Enoch Moore, Jr. operated the shipyard. Jackson and Sharp, another long-lived Wilmington yard operated throughout the second half of the nineteenth century, constructing from one to three ships annually. Moore and Jackson and Sharp constructed only wooden vessels with Moore erecting two-masted schooners of about 50 tons and 60 feet in length, and Jackson and company building larger barges and steam powered vessels approaching two hundred tons and 100 feet in length. Among the less well-established Wilmington yards were Nes and Levy of the 1890s; A. J. Barnett and Sons active in 1872 and building three, three-masted schooners of 465 tons/145 feet, 454

Anthony Winn, Block Manufacturer: \$500 invested; raw materials--3 tons lignum vita [sic] worth \$120, 2500 feet ash worth \$75, iron and brass bushings worth \$500; 2 employees w/\$35 monthly wages; products--"Blocks of Various Sizes and Kinds" worth \$1500.

Wm. & A. Thatcher, Shipbuilders: \$50,000 invested; raw materials--300,000 feet lumber worth \$16,000, 30 tons iron worth \$2000, naval stores worth \$800, misc. worth \$700; 6 HP of steam power used for sawing; 40 employees w/\$1400 monthly wages; products--1 steam tug and 1 steam frey? [frug?] lt. boat worth \$20,000, repairs on old vessels worth \$28,200.

Weaver & Femenick, Sailmaker: \$1000 invested; raw materials--15,000 yds canvas worth \$950, rope, etc. worth \$180; 3 employees w/\$150 monthly wages; products--17 sets? sails worth \$4250, repairs worth \$2280.

Harlan & Hollingsworth, "Iron Steam Vessel, Steam Engine & Boiler, and Railroad Car Manufacturer": \$250,000 invested; raw materials--600 tons iron castings worth \$40,000, 1000 tons puddled iron plate worth \$60,000, 200 tons boiler plate worth \$25,000, 400 tons wrought iron worth \$24,000, 600,000 feet lumber and timber worth \$130,000, misc. and 1000 tons anthracite and bituminous coal worth \$33,500; 70 HP in 3 steam engines; 600 employees w/\$18,000 monthly wages; products--12 steam vessels worth \$400,000, steam engines and boilers worth \$50,000, railroad cars of various kinds worth \$100,000.

Broadkiln Hundred--Sussex County

*** The Next Four Firms Were Sequentially Listed in the Census ***

R. Paynter, Saw Mill: \$2000 invested; raw materials--100,000 feet logs worth \$1000; used water power; 1 employee w/\$20 monthly wages; products--100,000 feet ship timbers.

Noah Magee, Shipbuilder: \$5000 invested; raw materials--75,000 feet lumber worth \$1800, 5 tons iron worth \$350; 7 employees w/\$39 monthly wages; products--1 schooner worth \$9000.

Samuel Martin, Shipbuilder: \$5000 invested; raw materials--100,000 lumber worth \$2300, 5 tons iron worth \$350; 6 employees w/\$39 monthly wages; products--1 schooner worth \$9000.

Wm. G. Prettyman, Shipbuilder: \$6000 invested; raw materials--80,000 lumber worth \$2000, 5 tons iron worth \$350; 7 employees w/\$39 monthly wages; products--1 schooner worth \$9000.

Morgan & Narding, Saw Mill: \$10,000 invested; raw materials--120,000 feet logs worth \$1200; 20 HP steam power; 4 employees w/\$100 monthly wages; products--120,000 feet ship timber worth \$2400.

Cedar Creek Hundred--Sussex County

P. F. Causey, Saw and Flour Mill: \$3000 invested; raw materials--50,000 feet log worth \$580, used water power, 1 employee w/\$25 monthly wages; products--50,000 feet ship timber worth \$1000.

C.S. Watson, Saw Mill: \$2000 invested; raw materials--50,000 feet log worth \$580, used water power, 1 employee w/\$25 monthly wages; products--50,000 feet ship timber worth \$1000.

Wm. V. Coulter, Saw and Flour Mill: \$3000 invested; raw materials--100,000 feet log worth \$1000, used water power, 1 employee w/\$25 monthly wages; products--100,000 feet ship timber worth \$2000.

James N. Deputy, Shipbuilder: \$8000 invested; raw materials--200,000 feet lumber worth \$4000, 10 tons iron worth \$750; 20 employees w/\$39 monthly wages; products--2 schooners worth \$18,000.

Wm. A. Scribner, Shipbuilder: \$4000 invested; raw materials--100,000 feet lumber worth \$4000, 5 tons iron worth \$375; 10 employees w/\$39 monthly wages; products--1 schooners worth \$9,000.

H.D. Deputy, Shipbuilder: \$4000 invested; raw materials--100,000 feet lumber worth \$4000, 5 tons iron worth \$375; 10 employees w/\$39 monthly wages; products--1 schooners worth \$9,000.

1870

Kenton Hundred--Kent County

Henry H. Pennell, Steam Saw Mill: \$1000 invested; 1-10HP steam engine running 2 high pressure saws; 4 male employees over 16 years old; \$2000 annual pay; operated 12 months; raw materials--logs worth \$5000; products--ship planks worth \$10,000.

Misphillion Hundred--Kent County

Thomas R. Adkins, Saw Mill: \$1200 invested; 2 steam engines developing 28HP running 2 high pressure saws and 1 plane; 3 male employees over 16 years old; \$450 annual pay; operated 6 months; raw materials--8000 feet white oak logs worth \$4800; products--100,000 vessel lumber worth \$9500.