

lies the solution of this problem. Let us not forget that the sun still shines above these threatening clouds, that a just God still presides over the destinies of men. WALTER M. CAMP.

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*THE PROGRESS OF STEAMSHIP BUILDING.*

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Ship building since the trial trips of the first steamboat on the Hudson river, has been remarkable for its growth and great variety of improvements in construction.

It was in 1807, as every school boy acquainted with United States history knows, that the first attempt to apply steam to water navigation was made. The Clermont was the first boat propelled by steam, and Robert Fulton was the inventor and experimenter. She was a success without an apology.

Her trial trip from the Jersey to the New York side of the East River attracted an incredulous crowd, which had assembled to laugh, but subsequently was moved to wonder and applause. On her trips up and down the Hudson she averaged a speed of about five miles an hour.

Fulton had a very obscure picture of the future when he said of his invention: "Although the prospect of personal emolument has been some inducement to me, yet I feel infinitely more pleasure in reflecting on the immense advantage that my country will derive from the invention."

In 1814 the United States' government authorized the construction of a steam frigate, one of Fulton's ideas. She was launched in the same year, the 27th day of October, and on July 4, 1815, she made fifty-three miles in eight hours.

This was the United States first step towards establishing a steam navy.

Fulton died on the 24th day of February, 1815.

*The first Ocean Steamship* was launched at New York, August 22, 1818—the Savannah. Her trial trip from New York to Savannah was accomplished in seven days. She left for Liverpool soon after, arriving in twenty-five days from

Savannah, being the first steamship that ever crossed the Atlantic.

You will notice the fact that the first river steamer and first ocean steamer were both built in New York.

In 1838 two foreign ocean steamers entered New York. The Britannia, the first Cunarder to cross the ocean, made the port of Boston on the 18th day of July, 1840, after a voyage of fourteen days and eight hours. It was in 1850 that the Great Eastern was launched on the Thames, a vessel whose huge dimensions made it practically useless.

Let us not overlook Ericsson, who in the War of the Rebellion, built his Monitor and defeated the rebels' Merrimac in her own waters, thus opening the way for the Union's preservation.

In the construction of ships the Americans have always lead in making improvements. The American builder displaced the round, blunt prows of the English model with one sharply cut. When iron was substituted for wood in the material used in building boats some doubted its general adaptability. You remember what Livingstone said in his book on African travels. He was putting together a small iron steamer on the banks of one of the rivers in that territory, and the natives stood around and jeered him, telling him it would certainly sink. By utilizing iron in ship building we have lighter, stronger and, in the water-tight compartments, safer ships.

Other factors that have been powerful in revolutionizing the modes of primeval steamship navigation are the round bottom keel hull; the propeller or screw, doing away with paddles or sidewheels, making a neater and handier vessel, sharper "lines," triple expansion engines, improved boilers, etc.

This brief sketch may suffice to call the attention of readers to the advance made in the construction of all kinds of steam crafts, in their models, machinery and fittings. From the Clermont and Savannah to the Plymouth and City of New York the history is well worth studying.