

### NOTES OF SHIPBUILDING AND THE CONSTRUCTION OF MACHINERY IN NEW YORK AND VICINITY.

Notwithstanding the dark clouds of civil war which hang over our country at the present period, there is considerable activity manifested in our various shipyards and machine shops. It is true that the prominent feature of the work in progress comprises the construction of gunboats, side-wheel steamers, sloops-of-war, iron-clad frigates, floating batteries, &c., for our government, demanded by the exigencies of the times, but they do not monopolize the whole of it, as during the past three months, several magnificent steamships of large tonnage have been constructed for private individuals, and others are now on the stocks, or undergoing the process of completion. Many of these vessels, however, have been sold or chartered for an indefinite period to the government, and are now being used as gunboats or transports.

It is an indisputable fact that the shipping interests of the Northern States have been for the past fifty years steadily on the increase, and but temporarily interfered with by the several financial crises we have passed through in that time. Although we have never boasted of the immensity of our tonnage, we have advanced with that steady and marked progress which has attracted toward us the attention of European countries, and they have expressed their astonishment at our enterprise and energy in naval architecture, and the excellency of our machinery.

Science and art have extended their aid in no other department of handiwork more particularly than in this, and the appreciation of the fact that our models of vessels, and the skill and ingenuity manifested in their construction, are universally regarded as of a superior order, is practically shown by numerous foreign nations, who fly their ensigns over the decks of many formidable men-of-war composing their fleets, whose construction is due to American skill and American ingenuity. And more than this, many of their citizens are owners of vessels of fine models, well constructed, sent forth from our yards and now plying their seas.

If more evidence of this character is required to prove our assertion, we think the fact that special agents have recently been sent to this country by foreign powers to superintend the erection of vessels intended for them, now being commenced at the yard of one of our most successful ship-builders, will certainly be sufficient.

During the past few days we have visited the several shipyards and machine shops to be found within New York and vicinity, and as a result of our observations and inquiries, we present herewith annexed a review of the operations for the past three months including those now in progress. It will give an impression of the state of the business; but the most indubitable evidence, to our minds, of the great activity existing, is the merry chorus of the ringing axes and clanking hammers that strike the ear at every turn.

#### THE STEAMER SANTIAGO DE CUBA.

The hull of this vessel was built by Messrs. J. Simonson & Co., Greenpoint, L. I.; machinery was constructed at the Neptune Iron Works, New York; the owners are Messrs. Valenti & Co., St. Jago de Cuba; her intended service, New York to Santiago; superintendent of construction, Mr. Wm. D. Phelps.

*Hull.*—Length on deck, 240 feet; breadth of beam, molded, 38 feet; depth of hold, 19 feet 6 inches; depth of hold to spar deck, 27 feet; frames, molded, 15 inches; sided, 18 inches, and are 26 inches apart at centers; draft of water at lead line, 14 feet; rig, brigantine; tonnage, 1,650 tons.

*Engines.*—Vertical beam; number and diameter of cylinders—one of 66 inches; length of stroke of piston, 11 feet.

*Boilers.*—Two, return flue; length of boilers, 30 feet; height of same, exclusive of steam chimney, 12 feet; breadth, 12 feet.

*Water Wheels.*—Diameter, over boards, 29 feet; length of blades, 9 feet 6 inches; diameter of shaft, 17 inches; material, iron.

This vessel was intended as a pioneer of a line of steamers between the port of New York and St. Jago de Cuba, but is now in the service of the United States. Her frames are of white oak, hachmetac, chestnut, &c., which are square, fastened with copper and treenails. Her keel is of white oak, and her floors are filled in solid to the floor timber heads, fore and aft. She has iron straps, diagonally and double laid,  $4\frac{1}{2}$  by  $\frac{7}{8}$  inches, extending from her bilge to second deck, secured to frames by  $\frac{7}{8}$ -inch bolts and an

iron strap of same dimensions, running entirely around the ship inside. All her arrangements were such that at the time she was finished she was surpassed by few steamships afloat.

#### THE STEAMER PAQUETTE DE MAULE.

The hull of this vessel was built by Messrs. Lawrence & Foulkes, Williamsburg, L. I.; the machinery was constructed by the Neptune Iron Works, New York; owner, Mr. George K. Stevenson, Valparaiso; intended service, Valparaiso to Maule, Coast of Chili.

*Hull.*—Length on deck, 165 feet; breadth of beam, molded, 29 feet; depth of hold, 9 feet; depth of hold to spar deck, 9 feet 6 inches; frames, molded, 12 inches; sided, 6 inches, and are 24 inches apart at centers. These frames are square, fastened with copper and treenails, and are strapped with diagonal and double laid braces,  $4\frac{1}{2}$  by 7-16 inches; draft of water at lead line, 8 feet 6 inches; rig, brigantine; tonnage, 400 tons.

*Engines.*—Vertical beam; number and diameter of cylinders, two of 32 inches; length of stroke of piston, 8 feet.

*Boilers.*—Two, return flue; do not use blowers.

*Water Wheels.*—Diameter, over boards, 24 feet; material, wood.

This vessel is of white oak and locust and constructed in the most thorough manner. She is the first vessel ever built in this country for the trade for which she is intended, and this fact may be considered a recognition of the superiority of our naval architecture, as those steamers previously employed where the *Paquette de Maule* is to run have never fulfilled the requirements of the locality. The interests of the government have heretofore secured the patronage of ship owners there for English ship builders, but by the untiring exertion of Messrs. Lawrence & Foulkes, American skill achieves another triumph.

#### THE STEAMER MERCEDITA.

The hull of this vessel was built by Mr. Edward Lupton, Williamsburg, L. I.; the machinery was constructed by Messrs. Murphy, McCrady & Worden, New York; owners, Havana and New York Steam Navigation Company; intended service, New York to Havana.

*Hull.*—Length on deck, 195 feet; breadth of beam, molded, 30 feet; depth of hold, 11 feet 3 inches; depth of hold to spar deck, 19 feet; frames, molded, 14 inches; sided,  $7\frac{1}{2}$  inches, and are 30 inches apart at centers. They are square fastened and strapped with wooden braces; draft of water at lead line, 10 feet; rig, three-masted schooner; has two athwartship bulkheads; tonnage, 838 tons.

*Engines.*—Vertical direct acting; number and diameter of cylinders, two of 30 inches; length of stroke of piston, 2 feet 8 inches.

*Boilers.*—Two, horizontal tubular, constructed in the best manner.

*Propeller.*—Diameter, 10 feet; pitch, 18 feet; number of blades, 4; material, cast iron.

This vessel is the first of four steamships intended to ply between Texas, New York and Havana. She was constructed with a view to attain great strength and speed. She is built of white oak, hachmetac and chestnut, and is ceiled with yellow pine. Instead of using iron straps as braces for her frames, she has every four feet over her ceiling, diagonal oak braces, 9 by  $2\frac{1}{2}$  inches, being 5 inches in thickness, running from her upper deck clamp to 15 inches below floor heads, each intersection being bolted with iron, and all the treenails passing through the ship, and wedging in these braces, thus forming, it is asserted, greater strength than was ever before attained in a vessel of her class. She is fitted with all the modern improvements, and cost at completion \$95,000.

#### THE STEAMER SHANTUNG.

The hull was built by Mr. Thomas Collyer, New York; machinery was constructed by Neptune Iron Works, New York; owners, Messrs. Everett & Co., China; intended service, coast of China.

*Hull.*—Length on deck, 150 feet; breadth of beam, molded, 25 feet 6 inches; depth of hold, 10 feet; depth of hold to spar deck, 17 feet 6 inches; frames, molded, 12 inches; sided, 5 and 6 inches, and are 26 inches apart at centers; they are square, fastened with copper and treenails, and are braced with iron straps, diagonally and double laid,  $3\frac{1}{2}$  by  $\frac{3}{4}$  inches, extending entirely around them; draft of water at lead line, 7 feet; rig, fore-topsail schooner; tonnage, 445 tons.

*Engines.*—Vertical beam; number and diameter of cylinders, one of 36 inches; length of stroke of piston, 10 feet.

*Boilers.*—One, return flue, located in hold; uses blowers.

*Water Wheels.*—Diameter, over boards, 22 feet; material, iron.

This steamer is constructed of white oak and chestnut, and put together in a masterly manner. Her model seems to be without fault, and bespeaks great speed. Thereputation which Mr. Collyer has achieved in China for building steamships is surpassed by no other constructor. He has sent to the Chinese seas some eight or ten vessels, all of which have beat in many an exciting race the boasted steamers of England.

#### THE STEAMER HONDURAS.

The hull was built by Mr. Thomas Collyer, New York; the machinery was constructed by the Neptune Iron Works, New York; owners, Messrs. S. H. Ackerman and others, New York; intended service, Honduras to Cuba.

*Hull.*—Length on deck, 150 feet; breadth of beam, molded, 26 feet; depth of hold, 10 feet; frames, molded, 12 inches; sided, 5 and 7 inches, and are 28 inches apart at centers. They are square, fastened with copper and treenails, and have iron straps, diagonally and double laid,  $3\frac{1}{2}$  by  $\frac{3}{4}$  inches, running around them; draft of water at lead line, 7 feet; rig, schooner, two masts; tonnage, 375 tons.

*Engines.*—Vertical beam; number and diameter of cylinders, one, of 36 inches; length of stroke of piston, 8 feet.

*Boilers.*—One, return flue, located in hold; does not use blowers.

*Water Wheels.*—Diameter, over boards, 22 feet; material, iron.

This vessel is built of white oak and chestnut, and has water-wheel guards for half width, and slatted underneath. She is of beautiful model, and is expected to be very fast. She is supplied with all the necessary pumps, &c., required by a sea-going steamer.

#### THE STEAMER FLAMBEAU.

The hull was built by Messrs. Lawrence & Foulkes, Williamsburg, L. I.; the machinery was constructed by Messrs. Henry Esler & Co., South Brooklyn, L. I.; owners, Messrs. P. J. Forbes & Co., China; intended service, coast of China.

*Hull.*—Length on deck, 185 feet; breadth of beam, molded, 30 feet; depth of hold, 11 feet; depth of hold to spar deck, 18 feet; frames, molded, 14 inches; sided, 8 inches, and are 30 inches apart at centers. These frames are square, fastened with copper and treenails, and are strengthened in the best possible manner by iron straps, diagonally and double laid, 4 by  $\frac{1}{2}$  inches, extending around them. Draft of water at lead line, 10 feet 6 inches; rig, brigantine; tonnage, 791 tons.

*Engines.*—Vertical beam; number and diameter of cylinders, one, of 50 inches; length of stroke of piston, 5 feet.

*Boilers.*—Two, return tubular, constructed in the best manner, and located in hold.

*Propeller.*—Diameter, 10 feet; pitch, 18 feet; number of blades, 4; material, iron.

This steamer, as mentioned above, was intended for the coast of China, but owing to the admirable cargo-carrying capacities she possesses she was chartered by the government at the period of her completion. She is built in a masterly manner, of white oak, chestnut, &c., and is of beautiful model. The builders of her machinery had two objects in view at the time of its construction, viz., great strength and speed, and the trial trip of the vessel, recently made, proved very conclusively to them that they had succeeded beyond their most sanguine expectations.

A NEW PAD TO PREVENT INTERFERING.—Mr. William Somervill, a veterinary surgeon of this city, has invented a pad to prevent interfering in the action of trotting horses. It seems well calculated to effect the object, and there is a good deal of ingenuity in the plan. The pad consists of a piece of india rubber, made concave inside, so as to fit the hoof, and kept in place by means of its elasticity, and a tongue held between the wall of the hoof and the shoe. No horse can cut his knee with this pad upon his hoof. The method adopted to fasten it is entirely successful. At the same time it is so inconsiderable an addition to the edge of the shoe and the horn of the hoof, that at a very little distance it cannot be perceived.

GOLDEN CLAY.—Gold is disseminated among the alluvial deposits of the earth to a far greater extent than most persons suppose. Mr. Eckfeldt, the principal assayer of the U. S. Mint, at Philadelphia, has discovered it in the soil beneath the paved streets of that city. Philadelphia clay contains one part of gold in every 1,224,000 parts of clay. There are three cents' worth of gold in every cubic foot of such clay. It will not pay for the working, but it is a curious fact, that in every million cubic feet of such clay there are \$30,000 worth of gold. No wonder the Philadelphia bricks are so famous when it is considered they are all made of gold.

THE commerce of Baltimore is reviving again, under firmly established Federal sway. The business of last week at the custom house showed \$359,052 exports, being nearly \$300,000 more than the previous week, but the imports were not so heavy. The exports were principally flour, wheat and tobacco to Europe.

SEVERAL beds of lignite have been discovered in Carson river in the Washoe district, California.