

IRON AND WOOD SHIPS

MATERIALS USED IN SHIPBUILDING AND THEIR VALUE.

The Points in Which Iron and Steel are Superior to Wood—Their Lightness and Durability and the Comparative Safety of All Kinds of Vessels.

The three materials used in the construction of ships in general are wood, iron and steel. Wood has been in use from time immemorial. Iron is only about fifty years old, and steel is easily within the memory of every man of moderate years. The importance of the three materials are inversely as stated steel being the most valuable, then iron and last wood. Noticeably is this so in the construction of swift steamships for wood is unsuited to the great engine power nowadays put into ships; it can not properly stand the strain.

Iron ships are superior to wooden ones in the following particulars: Lightness combined with strength, durability when properly treated, ease and cheapness of construction and repair and safety when properly constructed and subdivided. In wooden ships it has been found that about one-half of the total weight of the ship is required for the hull, whereas in iron ships only from 30 to 40 per cent. of the weight is thus taken up. For instance, in a wooden armored warship the weight of the hull being 50 per cent. of the displacement leaves 50 per cent. for the weights to be carried. In an iron armored warship the weight of the hull is only 40 per cent., leaving 60 per cent. for weights to be carried.

The tensile strength of iron is from 40,000 pounds to 60,000 pounds per square inch, and this strength can be secured throughout all the metal used, so that the material worked into the ship is uniform and homogeneous. These are qualities wanting in wood; the greatest care cannot eliminate such weak spots as are due to the presence of knots, cross-grain, hidden defects, etc. Generally good sound timber may be said to have a strength to resist pulling apart (tensile strength) of about 10,000 pounds.

When in shipbuilding it comes to fastening pieces together, as for instance, in making a ship's keel or her deck beams, the weakness caused by scarfing the pieces of wood together becomes an element of strength in riveting the iron. No matter how it may be necessary to treat the pieces of metal, whether by riveting or welding or by angle irons, the iron stands far above the wood in resistance to tensile strains. It is only when resisting strains of compression that there is a tendency of iron plates to buckle, and this is guarded against by making the plates thicker than is required for other strains or by re-enforcing them.

Durability is a quality of iron that is not yet thoroughly determined. In general, a wooden ship may be said to last about fifteen years. Some last longer but there will be much patching and renewing to be done. The rules of Lloyd's allow about fourteen years as the average durability of the best built timber vessels.

Iron is not subject to the internal sources of decay to which wood is liable. Worms and marine animals cannot injure it, nor will it rot from imperfect ventilation. Neither can the parts work loose from the motion and straining of the ship, allowing water to get in and cause decay. The danger to iron lies in the rusting or corrosion, especially in the under water parts—outside from the sea water and inside from the bilge water. The only prevention is careful watching, cleaning and painting, and even with all this supervision galvanic action is likely to do some damage. Therefore the life of an iron ship is limited, and in the present state of knowledge of the subject may be set down as approximately thirty years, for though a ship will last longer, extensive repairs will have to be made that will cost considerable money.

It is also easier to repair an iron ship, since the necessary shape can be turned out at once. The rapidity with which an iron ship can be built counts for much. In the present day the ease with which iron is obtained and worked constitutes another element of cheapness. For the final cost today must amount to nearly 25 per cent. less, especially when the time, preparation, saving of weight and life of the ship are considered.

As to the safety of a ship when properly constructed and subdivided, it is only necessary to say that when the internal space of an iron ship is subdivided into many compartments by longitudinal or transverse partitions rising to a sufficient height, or by horizontal platforms, or inner skin, and all such divisions are made water tight, then that ship is safer than any wooden ship would be against foundering, for the space required for these bulkheads cannot be found in a timber vessel.

The subject of steel may be briefly discussed by remembering that steel is simply a superior kind of iron, and by virtue of its greater strength is of lighter weight. The strength of steel is from 70,000 to 100,000 pounds per square inch. Steel is as strong lengthwise as it is broadwise; iron is one-fifth stronger lengthwise than it is broadwise. The elastic limit of steel is about 25 per cent. greater than that of iron. So steel may be trusted with working loads nearly 25 per cent. greater than the other material. Lloyd's estimate that by building ships of steel there is a saving in weight over iron of about 15 per cent., or, to put the same thing in another way, a steel ship of the same dimensions as an iron ship would have an increased cargo capacity (in weight) of some 15 or 20 per cent.

In the matter of cost, steel is more expensive at first, but the best proof of its ultimate cheapness is found in the indisputable fact that modern merchant ships are being built of steel. In 1839 there were 560 steel ships built, 99 iron and 27 composite and wood. There need be no further argument as to the superiority of steel from every point of view.—New York Times.

The Value of Medicine.

A noted Paris physician tells the following story against himself: "At times," he said, "there comes to most people a doubting of all that has heretofore seemed the truest. Doctors, as well as priests, are subject to these periods of depression in which they question the efficacy of their own judgment. In such a mood, while I was superintendent of l'Hospital de —, I divided the treatment of the wards. In one I exercised the best medical skill that the aid of drugs could afford; in the other I only gave as medicine a little acrid water. This experiment I continued for a month with equally good nursing in both wards.

"Well, with what results?" said his listener.

"The cases in both wards averaged just the same," answered the doctor.

"And what would you infer from that?" said his companion.

"I hardly know," continued the physician. "I was only thankful that the experiment did not actually score against the profession more than it did; but on the principle of doing one's best, I have gone back to my medicines—if not with absolute confidence, at least with the consciousness that we can at least alleviate suffering, and, all things being favorable, may effect a cure.—New York Tribune.

Kept Money in the Parlor Stove.

One of our well known school teachers and her mother met with quite a loss recently, and a novel though costly one it was. They had saved some money during the summer, and had placed it for safe keeping in the parlor stove, this stove being unused, of course, during the summer. With the coming of the cold snap a fire was lighted, the money for the time being forgotten. When the purse was thought of, it had been entirely consumed. The ladies lost fifty dollars. They had used the stove before for a saving place, but everything had turned out well.—Lawrence Amer

Old People.

J. V. S. is the only Sarsaparilla that old or feeble people should take, as the mineral potash which is in every other Sarsaparilla that we know of, is under certain conditions known to be emaciating. J. V. S. on the contrary is purely vegetable, and stimulates digestion and creates new blood, the very thing for old, delicate or broken down people. It builds them up and prolongs their lives. A case in point:

Mrs. Beiden an estimable and elderly lady of 610 Mason St., S. F. was for months declining so rapidly as to seriously alarm her family. It got so bad that she was finally afflicted with fainting spells. She writes: "While in that dangerous condition I saw some of the testimonials concerning J. V. S. and sent for a bottle. That marked the turning point. I regained my lost flesh and strength and have not felt so well in years." That was two years ago and Mrs. Beiden is well and hearty to-day, and still taking J. V. S.

If you are old or feeble and want to be built up.

Joy's Vegetable Sarsaparilla

Most modern, most effective, largest bottles. Same price, \$1.00, six for \$5.00.

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Fifth Street Grade.

NOTICE IS HEREBY GIVEN THAT THE Common Council of Dalles City is about to proceed to establish by Ordinance the grade upon the following named street in said Dalles City, to-wit: On Fifth street from the west side of Union street to the east side of Washington at the grade of said street will be fixed with reference to the supposed stage of low water in the Columbia river, which is fixed at a point 32.51 feet below the top of the hydrant at the southwest corner of First and Washington streets, in said Dalles City, which point upon the Columbia river is designated as the initial point from which the elevations hereinafter stated are made. The squares made by the crossings of streets with said street, shall be of the following elevations above the datum plane, or low water level of the Columbia river, herebefore fixed. At the intersection of Fifth and Union streets, 78 feet. At the intersection of Fifth and Court streets, 73.5 feet. At the intersection of Fifth and Washington streets, 75 feet. The grades of the aforesaid street from square to square shall be uniform and equal by order of the Common Council.

FRANK MENEFER, Recorder of Dalles City, 3-74141

Dissolution Notice.

Notice is hereby given to whom it may concern that the undersigned partners doing business under the firm name of E. Jacobson & Co., at Dalles City, Oregon, have by mutual consent, this day dissolved the said partnership, J. W. Condon having sold his said partnership interest to Otis S. Savage, who will continue the business under the old firm name with E. Jacobson.

Dated Dalles City, March 12, 1892.

J. W. CONDON, E. JACOBSEN.

NOTICE.

To whom it may concern: Notice is hereby given that the undersigned, having this day sold his interest in the partnership doing business under the firm name of E. Jacobson & Co., will not be responsible for any indebtedness in the name of said firm from and after this date.

Dalles City, Oregon, March 12th, 1892.

J. W. CONDON.

DISSOLUTION NOTICE.

The partnership heretofore existing between J. A. Orchard and U. S. Becknell, is this day dissolved by mutual consent. J. A. Orchard will continue the business, pay all debts and collect all accounts.

Dated, March 11th, 1892.

J. A. ORCHARD, U. S. BECKNELL.

NOTICE TO CONTRACTORS.

Sealed proposals will be received at the office of R. F. Gibbons until Monday noon, April 4th, 1892, for the erection of the superstructure of the First Congregational church building, of The Dalles, Or., according to the plans and specifications to be seen at the office of Crandall & Burget. The building committee reserve the right to reject any or all bids.

Dated March 14th, 1892.

R. F. GIBBONS, B. S. HUNTINGTON, Building Committee.

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THE CHURCHES.

S. T. PETER'S CHURCH—Rev. Father BROS-SI-GRETT Pastor. Low Mass every Sunday at 7 A. M. High Mass at 10:30 A. M. Vespers at 7 P. M.

ADVENT CHRISTIAN CHURCH—Preaching in the Y. M. C. A. rooms every Sunday at 11 A. M. and 7 P. M. Sunday school immediately after morning service. J. A. Orchard, pastor.

S. T. PAUL'S CHURCH—Union Street, opposite S. Fifth. Rev. E. H. D. Sutcliffe, Rector. Services every Sunday at 11 A. M. and 7:30 P. M. Sunday School 9:45 A. M. Evening Prayer on Friday at 7:30.

FIRST BAPTIST CHURCH—Rev. O. D. TAY-LOB, Pastor. Morning services every Sabbath at the academy at 11 A. M. Sabbath School immediately after morning services. Prayer meeting Friday evening at Pastor's residence. Union services in the court house at 7 P. M.

CONGREGATIONAL CHURCH—Rev. W. C. CURRIE, Pastor. Services every Sunday at 11 A. M. and 7 P. M. Sunday School after morning service. Strangers cordially invited. Seats free.

M. E. CHURCH—Rev. A. C. SPENCER, pastor. Services every Sunday morning. Sunday School at 12:20 o'clock P. M. A cordial invitation is extended by both pastor and people to all.

SOCIETIES.

ASSEMBLY NO. 4827, K. OF L.—Meets in K. of P. Hall the second and fourth Wednesday of each month at 7:30 P. M.

WASCO LODGE, NO. 15, A. F. & A. M.—Meets first and third Monday of each month at 7 P. M.

DALLES ROYAL ARCH CHAPTER NO. 6.—Meets in Masonic Hall the third Wednesday of each month at 7 P. M.

MODERN WOODMEN OF THE WORLD.—Mt. Hood Camp No. 59. Meets Tuesday evening of each week in the K. of P. Hall, at 7:30 P. M.

COLUMBIA LODGE, NO. 5, I. O. O. F.—Meets every Friday evening at 7:30 o'clock, in K. of P. Hall, corner Second and Court streets. Sojourning brothers are cordially invited. H. A. BILLS, N. G.

FRIENDSHIP LODGE, NO. 9, K. of P.—Meets every Monday evening at 7:30 o'clock, in Schanno's building, corner of Court and Second streets. Sojourning members are cordially invited. W. S. CREAM, D. W. VAUSE, K. of R. and S. C. C.

WOMEN'S CHRISTIAN TEMPERANCE UNION will meet every Friday afternoon at 3 o'clock at the reading room. All are invited.

TEMPLE LODGE NO. 3, A. O. U. W.—Meets at K. of P. Hall, Corner Second and Court Streets, Thursday evenings at 7:30.

JAS. NEWMITH POST, No. 32, G. A. R.—Meets every Saturday at 7:30 P. M. in the K. of P. Hall.

OF L. E.—Meets every Sunday afternoon in the K. of P. Hall.

GESANG VEREIN—Meets every Sunday evening in the K. of P. Hall.

OF L. F. DIVISION, No. 167—Meets in the K. of P. Hall the first and third Wednesday of each month, at 7:30 P. M.

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All Job Work promptly attended and estimates given on all wood work.

A Severe Law.

The English people look more closely to the genuineness of these staples than we do. In fact, they have a law under which they make seizures and destroy adulterated products that are not what they are represented to be. Under this statute thousands of pounds of tea have been burned because of their wholesale adulteration.

Tea, by the way, is one of the most notoriously adulterated articles of commerce. Not alone are the bright, shiny green teas artificially colored, but thousands of pounds of substitutes for tea leaves are used to swell the bulk of cheap teas; ash, sloe, and willow leaves being those most commonly used. Again, sweepings from tea warehouses are colored and sold as tea. Even exhausted tea leaves gathered from the tea-houses are kept, dried, and made over and find their way into the cheap teas.

The English government attempts to stamp this out by confiscation; but no tea is too poor for us, and the result is, that probably the poorest teas used by any nation are those consumed in America.

Beech's Tea is presented with the guaranty that it is uncolored and unadulterated; in fact, the sun-dried tea leaf pure and simple. Its purity insures superior strength, about one third less of it being required for an infusion than of the artificial teas, and its fragrance and exquisite flavor is at once apparent. It will be a revelation to you. In order that its purity and quality may be guaranteed, it is sold only in pound packages bearing this trade-mark:



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