

GIANT STEAMSHIPS.

For some years it has seemed as if the limit of size in ocean steamships was to be fixed at about 5,000 tons. It was clear that the *Great Eastern* was a gigantic failure, a costly elephant on the hands of her owners. She could not be run as an ordinary passenger or freight steamer, and found only temporary employment in the work of laying submarine cables. Whether she can be utilized as a transport for cattle to European markets, as recently proposed, remains to be proved; but it is certain that such a ship would not be built for that purpose—or indeed for any other at the present time. She may therefore be left out of the account, except as a warning that there is a limit of size, at least so far as economy of construction and working is concerned.

Steamships of 5,000 tons have been running for some ten years or more, but their number has increased very slowly, and until within a year or two there has been no disposition to build larger vessels. Then came the *Gallia* of the Cunard line and the *Arizona* of the Guion line, the former being 5,200 and the latter 5,300 tons. The *Orient*, for an East Indian line, soon followed, with a measurement of 5,380 tons. The success of these great ships, especially in regard to speed, coupled with the ambition of companies to outdo their rivals, appears to have given a new impulse to this branch of naval architecture, and two ships are now building which are to be much bigger than the biggest of their predecessors. One of these is a Cunarder, and is to be of 7,500 tons and 10,000 horse-power, her dimensions being 500 feet in length, 50 feet in breadth 41 in depth. No sooner had the Cunard Company announced their intention to build a vessel second in point of size only to the *Great Eastern* than the Indian Company determined to have a steamship of even larger dimensions. The vessel is to be built at Barrow, and is to be of about 8,000 tons, but her exact dimensions have not been published as yet.

It may be interesting to compare these ships with the *Great Eastern*. The length of the latter on the water-line is 680 feet, extreme breadth 82 feet 6 inches, and depth 58 feet. Her tonnage, according to builder's measurement, is 22,627 tons; her register tonnage, including engine space, is 18,914 tons; and her register tonnage excluding engine space, is 13,343 tons. She has stowage for cargo to the extent of 6,000 tons, and the capacity in her coal bunkers is 10,000 tons. Her draft of water when light, is 15 feet, and loaded 20 feet. She has accommodation for 800 first-class, 2,000 second-class, and 1,200 third-class passengers, but if required for troops alone she could carry 10,000 men. It will thus be seen that the *Great Eastern* is in point of size considerably ahead of anything yet ventured by ship-owners, and though there is an evident desire to increase the size of the great ocean steamers her position as the largest afloat is not likely to be disputed.

A PATENT CHALK MARK.—Not long ago, says an exchange, a man applied at the Patent Office, in Washington, for a patent of an invention which was refused, as the Examiner said, "because the invention was merely a chalk mark," and a man must be crazy to suppose that a chalk mark could be patented. But the man went into court and last week got a decision in his favor, in the shape of a mandamus compelling the Commission of Patents to issue the patent. The Judge said that a chalk mark could be patented if its application was useful and original. In this case it was applied to a piece of pasteboard, cut in a strip and fastened together in a circular form, with beveled edges, so that it could be slipped over sugar buckets, jars of sweetmeats, etc., to which insects are attracted. The man claims that all insects are repelled by chalk; and this circle of pasteboard, well chalked and tightly fitted, will act as a perfect guard against them.

THE WOOL SUPPLY.

The United States *Economist* gives some facts which are of special pertinence at this time to wool growers, because they recite some of the reasons why the present high prices prevail. There is a scarcity of wool and a quick demand for fabrics; these are the general facts. The present scarcity of wool is attributable to many reasons. It says that "hundreds of thousands of sheep have died of plague in England, and the Russia-Turkish and English-Afghanistan war, in Turkey, in Syria, in Persia, and the Indian country has caused tens of millions of sheep to be killed. In fact wool growing in Turkey, in Russia, in Persia, and all India has been almost given up on account of the war, and the low prices current for the past five years." That paper proceeds to state other and cogent reasons—some of them growing out of European complications—showing why it will be difficult to secure any large supplies of wool abroad, and adds:

"At no period in the history of the wool trade have we witnessed so excitable a market as there lies in one panorama before us to-day, no matter where we turn our gaze. It makes no difference whether we canvas Great Britain, France, Spain, Germany, Austria, Russia, Turkey, Asia Minor, Persia, India, Sydney, Australia, the Barbary states, Cape of Good Hope, the vast plains of South America, Texas and Mexico; or whether we visit the mountain fastnesses of California, Oregon, Kentucky, Tennessee, Missouri, Colorado and Nevada, until we come back to the plains of Ohio, Michigan, Wisconsin, Indiana and Illinois—in fact, wherever we penetrate, whether on the mountains or plains of Pennsylvania, West Virginia, New York, New Jersey, Vermont, and all along the arid coast of New England down to Long Island, taking in the whole circle, the markets of Boston, New York and Philadelphia—all along this whole line no fine clothing wools can be bought ready for manufacturers' use below \$1 for the scoured pound, and a great deal will cost from \$1.10 to \$1.25, and even \$1.30. Combing and delaines and carpet wools are equally high, and from the present outlook no one can tell where prices will stop. New York and Boston dealers are buying southern California, heavy, burry, greasy wools in San Francisco, and paying what is equal to \$1.17 for the scoured pound."

The explanation for this condition of things is found in the fact that the mills cannot keep up with the orders for woollen fabrics. In all lines, the market exhibits great strength. The truth is, the entire country was never so bare of stocks of wools as it was a year ago, and with the revival of business, by which tens of thousands of idle men and women obtained employment, came a demand for woollen goods such as was never before known in the history of that trade in America.

HINTS ON THE USE OF PLASTER OF PARIS.

The plaster may be made to "set" very quickly by mixing it in warm water to which a little sulphate of potash has been added. Plaster of Paris casts, soaked in melted paraffine, may be readily cut or turned in a lathe. They may be rendered very hard and tough by soaking them in warm glue size until thoroughly saturated, and allowing them to dry. Plaster of Paris fine mold for casting fusible metals; the same mixture is useful for encasing articles to be soldered or brazed. Casts of plaster of Paris may be made to imitate fine bronzes by giving them two or three coats of shellac varnish, and varnish becomes sticky. Rat holes may be effectually stopped with broken glass and plaster of Paris. A good method of mixing using rather more water than is required; when the plaster settles, pour off the surplus water and stir carefully. Air bubbles are avoided in this way.

FIRE-PROOF COTTON FABRICS.

In a paper on some conditions of inflammability, read before a sanitary convention in Michigan, Dr. Kedzie, of the State Board of Health, said that cotton clothing could be prevented from taking fire by the use of borax in starching—a teaspoonful to each pint of starch, after the water has been added. The borax can have no injurious effect upon the cloth or upon the wearer, and is so cheap that all can afford to use it.

Dr. Kedzie showed by experiments that muslins and tarletans, the most inflammable goods, when treated with borax starch, could not be made to burn with a blaze. If all cotton dresses and underclothing, and especially the clothing of children, were treated in this way, a great number of lives and much suffering would be saved every year.

Dr. Kedzie said he expected that one of these days some shrewd fellow would use this receipt, mix starch and borax, and sell it as "asbestos starch," or with some other catching name, at 500% or 600% profit, and get rich out of it. The people could just as well do their own mixing and save the profit.

THE USES OF LEMONS.—Lemons are easily raised in the southern part of the State, and if they possess half the virtues ascribed to them, no one should fail to plant a few trees wherever they will grow. An exchange says: "Lemon juice is the best antiscorbutic remedy known. It not only cures the disease but it prevents it. Sailors make a daily use of it for this purpose. A physician suggests rubbing of the gums daily with lemon juice to keep them in health. The hands and nails are also kept clean, white, soft and supple by the daily use of lemon instead of soap. It also prevents chilblains. Lemon is used in intermittent fevers mixed with strong, hot black tea or coffee, without sugar. Neuralgia may be cured by rubbing the part affected with a lemon. It is valuable also to cure warts, and to destroy dandruff on the head, by rubbing the roots of the hair with it. In fact, its uses are manifold, and the more we employ it externally the better we shall find ourselves. Natural remedies are the best, and nature is our best doctor, if we would only listen to it. Decidedly rub your hands, head and gums with it, and drink lemonade in preference to all other liquors." Lemon juice is also said to be an antidote for snake poison by pressing the juice into the bite and by eating the lemons. Many testify to the beneficial effects of lemons in pulmonary diseases, and consumptives have been cured by eating them freely every day. They will give immediate relief to the most troublesome corns and cure them if their use is persevered in. Hot lemonade is the pleasantest remedy known for colds, and lemon pie for hunger.

FILIAL LOVE.—There is not on earth a more lovely sight than the unwearied care and attention of children to their parents. Where filial love is found in the heart, we will answer for all the other virtues. No young man or woman will turn out badly, we sincerely believe, who has parents respected and beloved; a child, affectionate and dutiful, will never bring the gray hairs of its parents to the grave. The wretch who breaks forth from the wholesome restraint, and disregards the laws of his country, must have first disobeyed his parents, showing neither love nor respect for them. It is seldom the case that a dutiful son is found in the ranks of vice, among the wretched and degraded.

SYMPATHETIC three-year-old: "Ma, do you feel awful bad?" Mother (who is lying on a sofa): "Yes, dear, I am terribly worried." S. C.: "Well, ma, if I was to give you the chisel out of my tool chest, don't you think it might cheer you up a little?"

A CORRESPONDENT sends us the following soul-barrowing conundrum: "Why do pigs thrive better on sour milk than they do on sweet?" And the answer is, Because they get more of it.