

between Liverpool and New York. All the vessels of the company's fleet are of great size, but this latest addition is more immense than any of the others. The *Egypt* is in length over all 440 feet, on the load line 435 feet, beam 44 feet, depth of hold 39 feet, gross measurement 5,150 tons. This enormous vessel, which has been built at the yard of the Liverpool ship-building Company, Limited, Sefton street, will be propelled by engines of nominally 600 horse-power, but capable of working up to 2,500 horse-power. They are on the compound principle of high and low pressure, and will be supplied with steam from six boilers, arranged in sets of three each. The boilers will be fired at each end, and will carry a pressure of 75 pounds per square inch. The engines have been made by the Victoria foundry, Liverpool, and they are expected, from the fine lines and great length of the vessel, to drive her at from twelve to thirteen knots an hour during her voyage of ordinary weather. The great length to which ships have reached since the general adoption of iron for building them, has made the straight stem a necessity on account of the difficulty of turning very long vessels in dock, and the *Egypt* is an instance of the new fashion. The *Egypt* will be fitted for 190 first-class and 1,400 steerage passengers, for whose comfort and safety during the Atlantic voyage every provision will be made.

The principal cabins will be fitted with every adjunct to ease and luxury. Having to encounter the severe Winter storms of the Atlantic, while loaded with heavy cargoes, the *Egypt* has been constructed with regard to strength and safety. She is a complete four decker. The upper deck is a flush spar fore and aft, with no obstructions but the cabin entrance and sky lights. This and the deck below are strongly plated with steel, and planked with pine. The two lower decks are plated with iron amidships, where the strain of the machinery comes, and are also decked over the same as the upper deck. The saloons, state-rooms, and officers' rooms will be heated with steam piping, which is found more effective, and is far less dangerous in a heavy seaway, than stoves.

The *Egypt* has five steam winches, and two steam capstans and windlasses of *Papier's* make, two funnels (fore and aft), and four masts. The forward masts, still called the four and main, will be square rigged, the two after ones, known as the mizzen and jigger, will have a pollacca rig. The lower yards and lower topsail yards—the National boats having adopted the American double-topsail yard principles, are made of steel plates, thus securing strength and lightness. All the lower masts are of iron plates. The vessel will have steering apparatus both amidship and aft, of the most modern approved descriptions. The keel was laid in March, 1870, and in six weeks probably she will be ready for her trial trip. She is considered in many respects the finest piece of naval architecture ever constructed in the Mersey. A sister vessel, but a very few feet shorter, to be called the *Span* is nearly completed sufficiently for floating at Messrs Laird's works at Birkenhead.

HOW VELVET CARPETS ARE MADE.

The material passes from the wash to the combing machines, which separate the long from the short fibers. The long are passed through rollers,

and assume a form called "sliver" which falls into a hollow cylinder set for its reception, while the short fibers vanish in a mysterious-looking box at one side of the room. These slivers are then passed through a drawing-frame, twenty or more of them united and drawn out so as to equalize the thread; eight or ten of these threads are again subjected to the drawing process and reduced to one. This operation is repeated as often as it is necessary to produce uniformity. These long fibers form the warp of the carpets, while the short are used for the "wool" or "filling." In the spinning-room both staples of the wool are placed on the "spinning jacks," which operate with great rapidity. When it leaves the "jacks" it is in the form of coarse yarn tightly rolled on large spools, then wound into skeins, when it is ready for the dye house. By the American system of "folding" part of the yarn skeins are subjected to a parti-colored dyeing. Parti-coloured yarns are used for warp.

Other bundles of yarn are submerged in rolling steaming floods of colored liquids of every hue. Sulphur is used to bleach the portion intended to represent white. From the dye-room the yarn is conveyed to the drying-room and thence to the winding-room. The threads are here wound on large cylinders for the printers, and each filling of the cylinder makes but a single thread in the warp of a pattern. These skeins, after being printed with one hundred or more shades of colors, and placed in boxes on a little railroad car, are shoved into a boiler, where from four to six pounds of pressure of steam is applied. When the colors are thoroughly fixed, the skeins are dried and pressed through setting machines, when the yarn is ready for the Bigelow loom. These have on the end of each of the little wires used to rise the pile of the Brussels carpet, a small knife, which, while it weaves, cuts the pile and makes it velvet. The fabric is next subjected to the process of "shaving," and after that to the rolling machine. The carpets are then rolled, marked with the number of the pattern of each roll, number of yards, etc., and are thus prepared for removal to the warehouse.—*N. Y. Economist*.

HOW THE LONDON TIMES WAS SENT TO PARIS.

The long columns of announcements in the *London Times*, intended for friends in Paris, have for some time been a frequent subject of remark, and people have wondered what chance there was of their ever reaching the eyes for which they were meant. The means adopted for this purpose are explained in the *Times* of Jan. 30th:

Those pages of the paper which contained communications to relatives in Paris were photographed with great care by the London Stereoscopic and Photographic Company on pieces of almost transparent paper, about an inch and a half in length by an inch in width. On these impressions there could be seen by the naked eye only two legible words, *The Times*, and six narrow brown bands, representing the six columns of printed matter forming a page of the newspaper. Under the microscope, however, the brown spaces became legible, and every line of the newspaper was found to have been distinctly copied, and with the greatest clearness. The photographs were sent to Bordeaux, for transmission thence by carrier pigeon to Paris. When