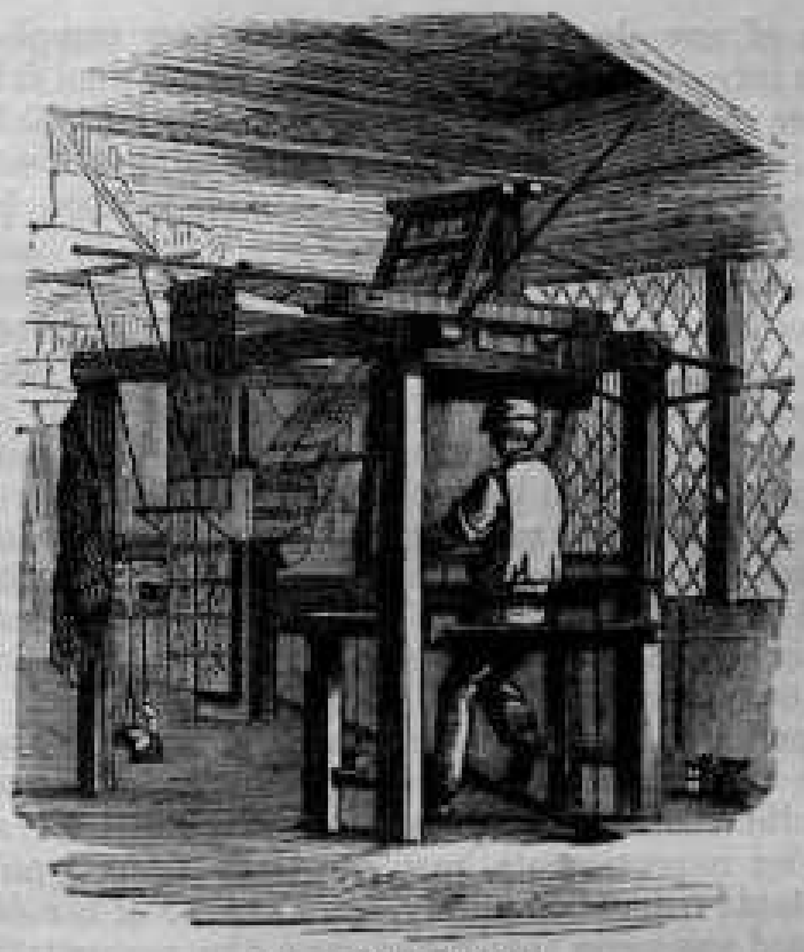
an advantage over the screw in proportion as the immersion is less. In long sea voyages, where the immersion is liable to considerable variation by reason of the lightening of the vessel owing to the consumption of the fuel, the screw will have the advantage over the paddle in the commencement of the voyage, and the paddle over the screw towards the end of it. In rough weather, where by the rolling and pitching of the vessel the paddle-wheels are liable at one time to be deeply plunged in the water and at another to be raised out of it, the screw will have an obvious advantage.

The Great Eastern, the very largest steamship that has yet been built, is constructed both with screws and paddles, and a combination of this kind is often attended with considerable advantage. Few sights are more interesting than that which is presented by a goodly "Armada" of modern vessels, sailers and steamers of all kinds, grouped picturesquely together, with a blue sky above them and blue water below. A sail down the river usually furnishes ample opportunity of observing both kinds, as well as the difference of both from the old sailing vessel—for ships of all builds, of all charts, and from all parts of the world can always be seen in the port of London. As we approach the metropolis the forest of masts greets us as from an undergrowth of hull, even while as yet we are:

OFF GREENWICH.



THE JACQUARD LOOM.

CHAPTER X.

JACQUARD, LEE, AND UTTMAN.

JOSEPH M. JACQUARD.

The name of Jacquard is familiar enough to all makers, sellers, and weavers of the beautiful figured fabrics produced by the machine he invented, yet little enough is known of either. You take up a biographical dictionary, and the chances are that there is either no mention at all of Joseph Maria Jacquard, or you are simply told that he was born at Lyons in 1752; that he invented a spinning machine in 1801 which he took to Paris; and that he died at Orleans, near his native place, in 1834. Little or nothing is said of the importance of his invention, by which

UB Braunschweig http://www.digibib.tu-bs.de/?perid=00031385&imgid=00000091.jpg