each *side*), partly by making a singular and very practical construction, which modern ship-builders now use for the better steering of large, and with difficulty, managed iron-clads. This is the so-called balancing rudder. The whole surface of this balancing rudder, when it is turned, acts on the steering, and as the pressure of water on one side of the axis works against the other, the one side nearly balancing the other, the total pressure of water is reduced to one-third.

The old ships were like our iron-clads, provided with a beak, the so-called rostrum of the Romans, which being level with the water, was composed of a set of beams strongly connected with the fore-part of the ship and ending in a blunt point mounted by three metal prongs.

The drawing given is the model of a Penterre which was constructed by a German professor, and shows the ship with its sails and oars; one of the helms is likewise seen.

The inner construction deviated a little from ours. The length of the ship was divided by two open partitions into two compartments for the crew, and the oarsmen passed through these openings to take their seats. The anchoring arrangements were not much different from those of the present day. In former times stones were used as anchors, afterwards metal bars were applied, and the not always credible Diodorus,—a writer at the time of Cæsar,—narrates that the Phenicians had once replaced the bars of lead which served them as anchors, by silver, when their ships could not load any more of this precious metal. The next anchors were made of wood with a hook, and were similar to those found on Chinese junks at present, those old-shaped vessels which, in keeping with the general stability of the Celestial Empire, have not changed in structure for the last three thousand years.

At the time we speak of, great progress had been made in the rigging of vessels. The three-tier ship had three masts: the middle one, consisting of one piece only, was provided with three sails, and rigged in the same way as the present main-mast of a ship. The fore and mizzen masts were considerably shorter than the main-mast. They carried on a sloping yard-arm triangular so-called Latin sails, like those still in use on French luggers. Our bowsprit was not known by the ancients, and would have been an impediment in their tactics of grounding other vessels. Each three-tier ship carried two boats.

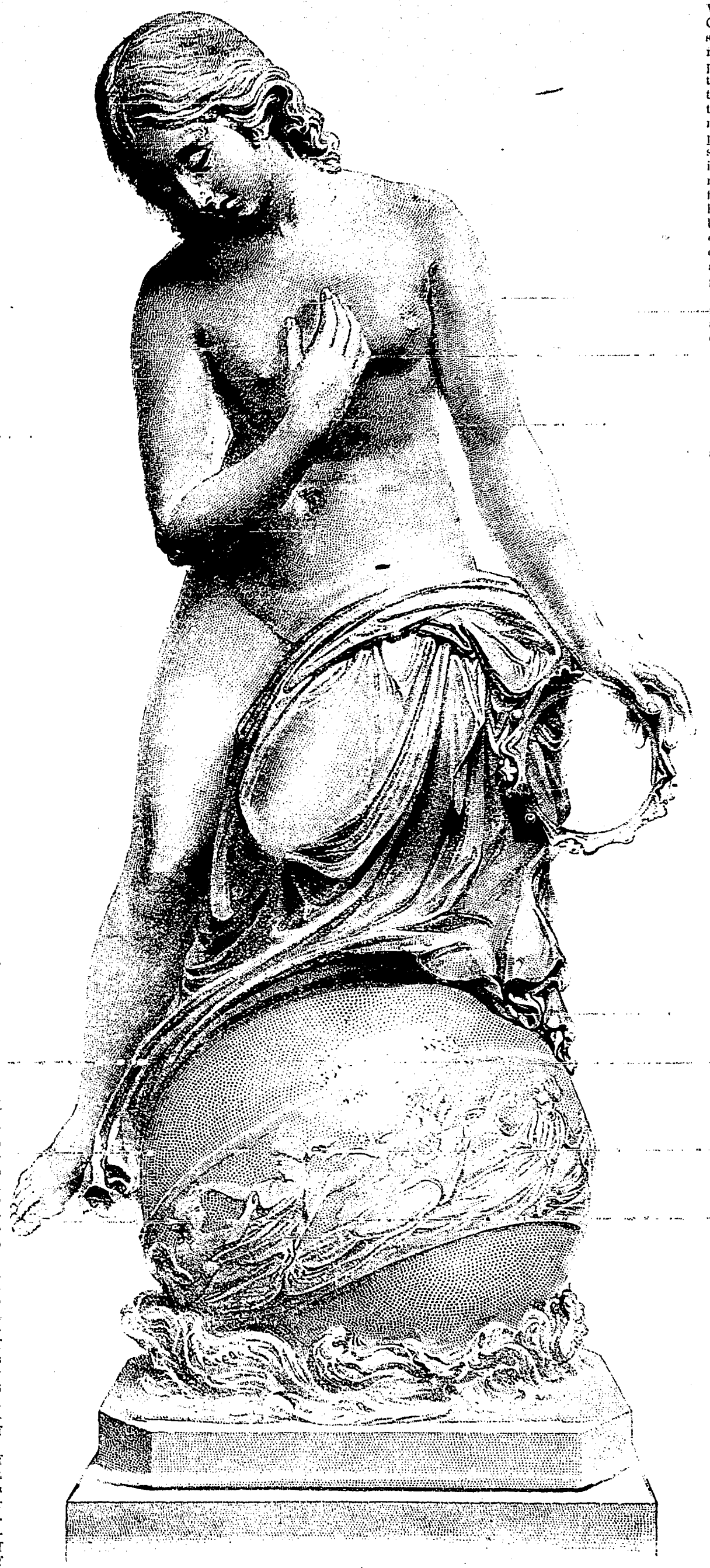
From the foregoing facts it is evident that the marine of the olden time was in a high state of perfection. The swiftness of these vessels was extraordinary. Regular mail connections were kept up between several ports on the Mediterranean, and it is proved that these ships, by means of oars and sails, made their passages with the speed of our common ocean steamers, *i. e.*, on the average eight nautical miles an hour.

We are not less astonished when we consider the number of the fleets at that time. We find it recorded that Athens possessed in the year 332 B. C. 413 war-ships, with a tonnage of 102,500 tons; amongst which were found 360 of three tiers, 50 of four, and 3 of five, the latter of which were just then introduced. Antique marine had not reached the perfection above spoken of until the time of Alexander the Great. Lysimachus of Thracia built an eight-tier ship, 500 feet long, with 1,600 oarsmen; Demetrius Poliorcetes a six-tier ship, the dimensions of which are not well known, but which was said to have possessed a wonderful mobility; and Ptolemy Philopater built a forty-tier ship, which, however, proved itself neither fit for sea nor for war purposes. Remarkable is the harmony in the dimensions of that ship with the English iron-clad frigate "Warrior." Both have the same length of 420 feet; the breadth of the "Warrior" is 58, that of the antique ship 57. Ptolemy IV. had a ship built of 560 feet long, 76 broad, and 100 high. The crew numbered 4,000 oarsmen, 400 sailors, and 2,850 marines. This was the "Great Eastern" of two thousand years ago.

We possess an accurate description of the "Syracusia," the largest transport ship-of-war of the ancient world. It was built by Hiero of Syracuse in the year 264 B. C., probably after a plan of Archimedes, who had carried out its launching, and was given under the name of Alexandria as a present to Ptolemy of Egypt. It was a sailing vessel, without oars, of 4,200 tons, and carried three full-rigged masts like our frigates of to-day; was manned by a crew of 1,000 men, and had a leaden-plated bottom.

At that time Carthaginian and Grecian ship-building had reached its highest point of perfection.

The Romans, in the meantime, had commenced to rank as a sea-faring power; up to that time they, as strictly military people, had looked with contempt on navigation; but at the first Punic war they were taught that the want of a navy was an insurmountable check to their domineering spirit, and that without it they were unable to subjugate either Carthage or Greece.



THE LOST PLEIAD.

After the model of a Carthaginian vessel (stranded on their coast), they with their known energy constructed, before the first Punic war was over, and within two months, a fleet of 120 vessels, with which, in the year 264 B. C., they completely defeated the Carthaginians at Myla. The Romans owed this victory to the introduction of new tactics, by which they endeavoured to make up for their want of knowledge in the management of war-vessels; these consisted in manœuvring at sea precisely the same as on land. As the war tactics consisted in running the enemy down, it was necessary that the greatest possible speed should be attained. We therefore find that, while on the Grecian three-tier ships 194 oarsmen and sailors were employed, there were only 10 marines. The Romans reversed these proportions, and though in the meantime they had to accept the given proportions, they took advantage at close encounters to fight in their own style. They strongly manned their ships with marines, made preparations for grappling the enemy's ships when they came near enough, boarding them and gaining the battle by their military superiority in a hand to hand fight. These new tactics, as soon as they had succeeded, required a change in the building of ships, and while heretofore everything depended on swiftness, and an easy mode of moving, which permitted at the same time the giving of ships graceful and slender forms, now it was found necessary to erect on board the ships towers, castles, grappling bridges, and other clumsy constructions, which demanded a larger space, more strength, and, in consequence of which, fuller and heavier forms of ships. The loss, however, was made up by fitting out their ships with all kinds of luxury and elegance; this was principally owing to the general effeminacy of the nations bordering on the Mediterranean, which prevailed at the beginning of our era. The most refined enjoyments and comforts of country life were transplanted on board these vessels, and, trusting to reports, our modern and most beautiful steamships can hardly vie with those antique vessels, as regards luxury and magnificent furniture.

Charming flower-gardens, cascades, fountains, boudoirs and dining-halls, furnished with gold and ivory, belonged to the equipment of such a ship, and when the voluptuous Cleopatra in the year 30 B. C. visited Antonius in Cilicia, her vessel had oars mounted with silver, the stern gilded, the silken sails dyed purple, music accompanied the strokes of the oars, and beautiful girls and boys clad as graces and cupids surrounded, fanning a cooling breeze around the sumptuous couch, beneath a golden canopy, on which Cleopatra reposed.

Until the second century after Christ, the navigation of the ancients remained stationary; but when the Romans had subjected the whole Mediterranean, a further opportunity for greater sea-fights being wanting, and the warlike spirit of the nation being sunk in oriental luxury, the marine on the Mediterranean became decayed. At the time of the crusades navigation was roused again from its slumber, passed on the Mediterranean through a short lustrous period, and then ceded the first rank to the northern nations of Europe, which now accomplish the most in naval affairs; while at the time of Cæsar they possessed but small boats plaited of willow and covered with skins.

THE LOST PLEIAD.

FROM THE STATUE BY J. G. LOUGH.

It is somewhat refreshing to realize a new idea in a work of sculptured Art. The fabled gods and goddesses of the ancients have been worked out till one is well-nigh weary of them, though "a thing of beauty" is said to be a "joy for ever," and so some sculptors have turned aside from Venus, and Diana, and Flora, Mercury and Cupid, in search of some novelty more in relationship with ourselves and those among whom we live; hence the origin of 'The Reading Girl,' 'The Broken Pitcher,' and others of a similar character. But thanks to the verses of a lady, Letitia E. Landon, who once shone as a bright star in the constellation of modern poets, Mr. Lough has found a subject in her, 'The Lost Pleiad,' which comes not within either of the two classes indicated, but is simply a poetical imagination, and very elegantly has he embodied it in human form. The attitude of the figure is suggestive of sorrow: the starry crown, taken from the brow, is held lightly in her hand, as if she were about to cast it earthwards; and she rests on a sphere encircled by the Hours to indicate her fall from the heavenly estate: the composition, both as a whole and in all its details, is most attractive.

The idea of what we call a "shooting star"—or, as astronomers would, we presume, denominate it, a meteor—being the final extinction of one of those glorious orbs which "in their courses run and shine," is a theme well calculated to waken the strings of the poet's lyre with music, which finds an echo in the heart of the sculptor.

Mr. Lough's statue is in marble, and has never been publicly exhibited; it was bought in his studio before completed. It is to be regretted that the sculptor of such a work very rarely makes his appearance in the Academy or elsewhere.—*Art Jour.*

A new literary journal, partly theatrical, partly humorous, has been started in London, under the title of the *Gaiety Gazette*. Mr. Sala is said to be the leading man in it, and among the regular contributors are Boucicault and Hollingshead.