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LXIV. *Observations on Dr. THOMSON'S Critique on Mr. SEPPINGS'S new Method of Ship-building.* By ALEXANDER STUART, Esq.

To Mr. Tillock.

SIR,—I OBSERVE in Dr. Thomson's Annals for last month, among the analyses of books, an account of Mr. Seppings's method of constructing ships. As that gentleman has thought fit to erect himself into the situation of critic as well as analyst of the books described in his journal, it would be but rendering the public that justice to which they are entitled, if he would make himself acquainted with the sciences concerning which he has the assurance to speak,—if indeed he has either the capacity and acquirements of a philosopher, or the honesty of an editor. His account of Mr. Seppings's construction is such a mixture of ignorance and blundering as would disgrace a common boat-builder: but it is of a piece with the confusion of his conceptions on the Trigonometrical Survey, on mathematical subjects in general, and on geology, a science in which his total and ridiculous ignorance is only equalled by his ill-breeding and insolent dogmatism. In the review now under notice he talks of "substituting triangular or oblique beams for the parallel ribs which have hitherto constituted a ship's frame."

To pass over the total want of correspondence between the terms here made equivalent, *triangular* and *oblique*; who could comprehend from such a description, that Dr. Thomson's "triangular or oblique beam" was a connected frame-work added to the ordinary rectangular framing of a ship, and so connected with it as to form diagonal ties or supports, similar in their effects to those which constitute the very existence of common carpentry?—a branch of mechanics of which this self-erected judge has probably never heard, or he could not have so deplorably blundered in the account he has attempted to give of this improvement. But to proceed: He talks of "substituting the oblique for the parallel ribs, which adds *prodigiously* to the stiffness as well as the strength." Really, a ship built of oblique triangular beams seems very well fitted for the voyage of such a critic to the land of Gotham, since to his other acquirements he probably has not added that of witchcraft—the power of keeping himself afloat in a sieve. If Dr. Thomson's conceit and insolence would permit his ignorance to derive any benefit from our friendly advice, we would tell him that Mr. Seppings's very ingenious improvement consisted in substituting a series of diagonal trusses in lieu of those parallel to the framing called riders, and that the ship's ceiling was omitted as superfluous; while

while smoothness, compactness, and solidity were given to her walls, by filling the intervals of all the timbers with short wood—an expedient attended with many advantages, which I shall not dwell on, as he could not comprehend them. He goes on to say that the “decks are not loose as in the old system.” Now, really, when a Doctor, who is besides F.R.S. L. & E., has sailed to the Baltic in a ship, for the purpose of giving colour to a quarto volume which might as well have been written in Grub-street, we cannot help either suspecting his capacity for observation, or doubting his assertion respecting the voyage, as the Leith traders (of which I have built two or three) are not in the slovenly practice of carrying their decks about them “loose.”

But I have dwelt longer on his review than it merits, and shall conclude by advising him to pursue a Pythagorean system—Seven years of silence and seclusion to his chamber, with a diet of oatmeal, may perhaps increase his knowledge, and neutralize his superacetic disposition.

I am, &c.

Glasgow, Sept. 14, 1815.

A. STEWART.

LXV. *On a new Species of coloured Fringes produced by the Reflection of Light between two Plates of parallel Glass of equal Thickness.* By DAVID BREWSTER, LL.D. F.R.S. Edin. & F.A.S. E.*

DURING a series of experiments in which I was lately engaged, for the purpose of determining the law of the polarization of light, by successive reflections from plates of parallel glass, I observed that all the images of the luminous body which were formed by more than one reflection, were crossed by parallel fringes of coloured light, when the two plates had a small inclination to each other; and that these fringes suffered considerable changes, by varying the position of the plate with regard to the incident ray.

These coloured fringes seemed at first to have the same origin as those of thick plates, which were discovered by Newton, and afterwards examined by the Duke de Chaulnes, Mr. Brougham, and Mr. Jordan; and I considered the second plate of glass as performing the part of the quicksilver in Newton's glass mirror, or of the metallic speculum in the experiments of the Duke de Chaulnes and Mr. Brougham. A more attentive examination, however, convinced me that this was a mistake, and that the coloured fringes constituted a new class of phænomena, having

* From the Transactions of the Royal Society of Edinburgh for 1815.