

one-sided development of our senses, we unconsciously ascribe greater significance to the change involved in raising a mass of water 424 meters high, or throwing it with an initial velocity of 91 meters per second, than we do to the change involved in heating the mass of water enough to raise its temperature by  $1^{\circ}$  centigrade, although these effects have been proved to be objectively equivalent.

The compact language and modes of thought of vector analysis make possible a very condensed treatment of a very extended field of phenomena. The topics that are covered with considerable fulness of detail are the following: motion of rigid bodies in the air, dynamic reaction, rigid media, acoustics (embracing pure acoustics and vibroscopy), motion of deformable media, ideal fluids, elastic and viscous media, and the doctrine of force, including forces in space, and forces on surfaces.

For those who have not accustomed themselves to the form of thought of vector analysis, the book will offer some difficulties, despite the author's attempt to simplify matters, but the elegance of the new mode of scientific thought will repay the effort needed to overcome the difficulties, which are not great. The book is quite as interesting and informing in its interpretations of the various results of the operations of vector analysis, as for its value as a higher presentation of the theory of motion.

The author has made a worthy and a more than fairly successful attempt to do a laudable scientific service. He seeks to bring into organic union the most powerful mathematical language and form of thought yet devised, and a broad field of scientific ideas demanding precisely this sort of language for its adequate expression. The undertaking is too well carried out to merit anything but commendation. To complain of a few typographical errors would only augment the volume of hysteria for criticism already too rampant in certain quarters among us.

G. W. MYERS.

*Text-Book on the Strength of Materials.* By S. E. SLOCUM, B.E., Ph.D., Professor of Applied Mathematics in the University of Cincinnati, and E. L. HANCOCK, M. S., Assistant Professor of Applied Mechanics in Purdue University. Ginn and Co., 1906. xii + 314 pp.

THIS is one of the series of mathematical texts that are being issued under the editorial supervision of Professor Percy