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Weale's Rudy. Series, Vol. 111. Bland (W) Prin's of Const'n in Arches, &c., 12mo	0	1	6	Weale.

Reviews.

Chemistry, Theoretical, Practical, and Analytical, as applied and relating to the Arts and Manufactures, by Dr. SHERIDAN MUSPRATT, F.R.S.E. William Mackenzie, London: Roy. 8vo., 2 v. l.

The name of Dr. Muspratt has so long been before the public as one of the distinguished practical chemists of modern times, that any work to which his name is attached, will be received with favour and confidence by the public. These splendid volumes are got up in a style far superior to that in which scientific works are usually published. Not only are all the more intricate processes of Practical and Applied Chemistry illustrated by excellent wood engravings, but we have admirable likenesses on steel of the most eminent chemists of Europe and America. Life like portraits of Playfair, Faraday, Chaptal, Fownes, Gregory, Priestly, Wohler, Bunsen, Chevreul, Leibig, Morfit, Hoffman and a host of others.

All the new processes as applied to chemistry are given at considerable length and with very complete diagrams. The typographical execution of the work is admirable, and although the price is high yet there are few who are largely engaged in the manufacturing operations in which chemical principles are involved, who will not be tempted to find a place in their library for this handsome addition to works of reference in the applied Sciences.

Appleton's Dictionary of Machines, Mechanics, Engine-work and Engineering, illustrated with Four Hundred engravings in wood, in two volumes, Roy. 8vo.: New York, Appleton & Co.

To those who are in possession of the last edition of Ure's Dictionary of Arts, Manufactures, and Mines, edited by Robert Hunt, Appleton's Dictionary will appear to contain almost a reprint of many articles in that excellent work, but with numerous essays on different subjects, not treated of by the learned editor of Ure's standard work. The handsome volumes under review contain very many illus-

trations and descriptions of machinery which will render them especially attractive to a certain class of readers, but in the article on gas, and those departments of industry involving chemical processes the reader will find all the details in Muspratt's Chemistry, or in Ure's Dictionary. But it would not be doing justice to Appleton's dictionary if we were not to notice many very excellent descriptions of American progress in mechanism and engineering. It is especially in the department of Mechanical Science that these volumes are valuable, and in the descriptions given of the details of great workshops either of a private or public character in the United States, the practical man will find much information, which in these days of progress may be considered as indispensable.

Selected Articles.

THE NEW IRON-PLATED WAR STEAMERS FOR THE BRITISH NAVY.*

The first of them, the *Achilles*, which has recently been begun in Chatham Dockyard, so nearly resembles the *Warrior* and *Black Prince* that a very few words will suffice for her. The chief difference between her and those vessels lies, I believe, in the fact that her beam is slightly broader, and her floor somewhat flatter, than her predecessors; whereby her tonnage is increased from 6,039 to 6,089 tons, and her displacement from 8,625 to 9,030 tons. All her other dimensions, and all her essential features of construction, are exactly like those of the *Warrior*—from which it may be inferred that the method of plating the central part only of the ship, which was introduced by your distinguished Vice-President, Mr. Scott Russell, is still viewed with favour by the Admiralty designers. Mr. Scott Russell did not patent his invention, I believe; perhaps he will kindly tell us whether he has found his rejection of the Patent Law to pay him well in this instance.

In the class of ships which come next, however, the Admiralty have consented to forego the plan of plating amidships only, and purpose plating the ship from end to end with thick iron. But in order to do this it has been necessary to resort to

* Abbreviated from a paper by E.J. Reed, Esq., member and Secretary of the Institute of Naval Architects.