

there should be no reference in contemporary literature to so important an occasion.

A "Comparison of Aristotle and Plato" was published by Mazzoni in 1597 in which Galileo's principles of motion are accepted, but although the writer is in opposition to Aristotle, he does not allude to any researches of Galileo at Pisa. Again, when Coresio in his "Operetta intorno al Galleggiare de Corpi Solidi" (1612) entered into controversy against Mazzoni, he would certainly have referred to such experiments had they been made publicly at Pisa. Further, Renieri, Galileo's own successor in the chair of mathematics at Pisa, did indeed make experiments from the Tower in 1641 and wrote to Galileo about them, but there is no suggestion in their correspondence that similar experiments had ever been made there fifty years earlier, nor did Galileo allude to his having done anything of the same nature.

What is known of Galileo's work is derived from: (1) his manuscript "De Motu", written about 1590, consulted by Viviani in 1654, but not published before 1883; (2) his "Discorsi Matematiche intorno à due Nuove Scienze", published in 1638, in which two imaginary characters, Simplicio and Salviati, discuss in dialogue the laws of motion, evidently as contained in the "De Motu". In all this there is nothing about Pisa or about experiments during Galileo's sojourn there.

On the other hand, a number of men of science much earlier in the sixteenth century had already attacked the view then attributed to Aristotle, that bodies fall with a speed proportional to their weight. Among these were Giovanni Battista Benedetti, in his "Demonstratio proportionum motuum localium contra Aristotelem et omnes Philosophos", Venice, 1554, who was followed by Jean Taisnier "Opusculum", 1562; Cardan "de Proportionibus", 1570; Beato of Pisa, Ghini of Bologna and others, and especially by Stevinus of Bruges. Their previously printed works would have deprived any Leaning Tower experiment of 1590 of the originality that was claimed by Viviani sixty years after the supposed great day of Galileo.

In conclusion, Prof. Cooper rightly accuses Galileo of causing his 'Salviati' to affect to quote from Aristotle words that are not found in Aristotle's writings; and it is possible that in this has lain the cause of all the trouble.

So far the author's case appears strong. It is when he comes to deal with Aristotle's supposed views that his arguments incline to the irrelevant. He admits that Aristotle must, if pressed, have said that bodies would fall at different rates, so that his disquisition on the meaning of $\pi\acute{\iota}\pi\tau\epsilon\iota\nu$ and 'falling' is immaterial.

Aristotle would have naturally used the word $\delta\omicron\sigma\eta$ because he considered velocity as a quality inherent in the body itself, instead of something relative. What is really interesting is the long tradition of opposition to Aristotle that goes back far beyond Galileo, indeed even to the days of Philopon, as shown by his commentary on Aristotle's "Physica", written about A.D. 533.

Although we consider that Prof. Lane Cooper might have marshalled his material rather better, we are grateful to him for directing our attention to so important a field of historical study.

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Thorpe's Dictionary of Applied Chemistry. Supplement

By Prof. Jocelyn Field Thorpe and Dr. M. A. Whiteley. Vol. 2: N—Z. Pp. xx + 727. (London, New York and Toronto: Longmans, Green and Co., Ltd., 1935.) 60s. net.

THE second supplementary volume of Thorpe's "Dictionary of Applied Chemistry" departs from the original plan only in that it was not found possible to include an index, which will be published with a glossary in a third volume. Some of the articles are supplementary to those which appeared in the main series of volumes, for example, those on naphthalene by Prof. W. P. Wynne and Miss Turner, on proteins and their degradation products by Dr. W. V. Thorpe, on radioactivity and radium by Dr. A. S. Russell, on spectroscopy by Dr. R. A. Morton, on terpenes by Prof. J. L. Simonsen and on vitamins by Dr. L. J. Harris. On the industrial side, there is a very fully-documented article by Prof. J. R. Partington on the utilisation of atmospheric nitrogen, a long and well-illustrated article on petroleum by Dr. A. E. Dunstan, in addition to supplementary articles on sodium and potassium by Dr. R. N. Kerr, and on paint and varnish by Dr. R. S. Morrell.

New articles are those on the parachor by Prof. S. Sugden, on free radicals and on rhenium by Dr. T. G. Pearson, on the stereo-chemistry of cyclic compounds by Dr. W. H. Mills, on tautomerism by Dr. J. W. Baker, and on heavy water by Prof. H. V. A. Briscoe. On the industrial side, Dr. C. H. Lander contributes a new article on oil and petrol from coal. A curious limitation in the scope of the work is indicated by the fact that, whilst supplementary articles are provided on photography, photosynthesis and polarimetry (mainly in reference to new types of molecules exhibiting optical rotatory power), the general subject of photochemistry is not even indexed either in the original or in the supplementary volumes.

Since only the glossary and index are now outstanding, it may be said that the revision of the "Dictionary" has brought together a large amount of information that is not readily available in other publications, and that its value and usefulness are fully maintained by the new supplementary volumes.