ary, 1918, page 253) when I write "F_1 increases from $\pi/2$ to logarithmic infinity."

I am glad, however, that the "logarithmic" injection left him so dazed that he did not notice the glaring error found a few pages farther on in the monograph on Elliptic Integrals. I take this opportunity of correcting it. On page 33, line 12 below, is found "in the formulas $\operatorname{sn} iu = i \operatorname{tn}(u, k')$, etc., write $u + iK$ for u." This obviously should be "write $u + K'$ for u" with the resulting fundamental formula

$$\operatorname{cn}(iu + iK', k) = -\frac{1}{k}\frac{\operatorname{dn}(u, k')}{\operatorname{sn}(u, k')}.$$

This is found correctly given in my larger book, page 464, and follows at once from formulas (XIX) and (XVII) of pages 248 and 247 of that work. The formula is also correctly derived in two different ways in my lecture notes, from which I thought the monograph was taken. This leads me to suggest that an author be allowed one bad mistake for every 100 pages, the same to be classified under the heading "inexplicables, lapses, aberrations, etc."

May I also add that in my lectures the pronoun "we" without intentionally implying anything personal is perhaps too frequently used? At any rate one of the editors of the monograph in question thought this to be the case. To oblige him the other editor and I suppressed some of the "we's" and it appears that we did not make other corresponding changes in at least two places. Thus two infelicitous "grammatical connections" remain. I am obliged to Professor Carmichael for not characterizing them more harshly.

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SHORTER NOTICES.

Differential Calculus. By H. B. PHILLIPS. New York, Wiley, 1916. 162 pp.

Integral Calculus. By H. B. PHILLIPS. New York, Wiley, 1917. 194 pp.

To expound a few central methods and apply them to a large variety of examples to the end that the student may learn principles and gain power is the plan which the writer announces in the preface to this text. A perusal of the book leads to the conclusion that there is justification for this claim. The explanations are brief and simple and the problems offer variety and appear to be well graded. The question of answers is met by furnishing them at the end of each book, for the problems in the chapters, and adding to each a set of over two hundred exercises without answers. Although the differential and integral calculus form two separate books (which are bound separately or together), the arrangement of chapters is such that it would be easy for a teacher who desired to do so to bring in the simpler work in integration before the last chapters on differentiation. The order of subjects in the differential calculus is to be noted. Chapter II is on the derivative and the differential. Some may object that the introduction of the latter before the student has had time to assimilate the idea of the former will cause confusion. There is, however, room for difference of opinion in this matter. After the differentiation of algebraic functions and a brief discussion of rates, there is a chapter on maxima and minima, with simple concrete problems. It is not until after the chapter on differentiation of transcendental functions that there is a consideration of tangents and normals, angles between curves, points of inflection, curvature, etc. The differential calculus is completed by chapters on velocity, series, and partial differentiation. In the book on integral calculus in Chapter II (on formulas and methods of integration) there is a noteworthy omission of those "ingenious devices" that are so dear to some writers of texts and that are so apt to inspire a beginner with the feeling that success in integration is a matter of luck rather than of knowledge of principles. After a short and simple explanation of definite integrals, there are chapters on simple areas and volumes, other geometrical applications, mechanical and physical applications, approximate methods, double and triple integrations, and, finally, a longer chapter on differential equations. The book is concluded by a brief table of integrals and a table of natural logarithms.

E. B. COWLEY.