ferred to in the text cannot be found in the bibliography.

Aside from these minor criticisms, this book should be of great value to any pure or applied mathematician working with partial differential equations, and not only to those interested in numerical solutions. A person engaged in research in the field of partial differential equations will find it necessary to go beyond the theorems stated to the original literature. However, the material given in the book should be ample enough to prevent his overlooking major contributions to a problem he is interested in, and to facilitate the task of informing himself on progress made by other workers in the field.

FRITZ JOHN

The Farey series of order 1025, *displaying solutions of the diophantine equation* $bx-ay=1$. Designed and compiled by E. H. Neville. (Royal Society Mathematical Tables, vol. 1.) Cambridge University Press, 1950. 29+405 pp.+1 plate. $18.50.

The Farey series of order n is the table obtained if one arranges in order of magnitude the rational numbers having denominators not greater than n and lying between 0 and 1 inclusive; each rational number is understood to be written in its "lowest terms," the numbers 0 and 1 being given in the forms 0/1 and 1/1 respectively. The table under review is by far the largest of its kind ever published in full and probably will remain so for some time to come, since the Farey series of order 1025 consists of 319,765 fractions.

Even though the fractions a/b and $(b-a)/b$ are given together, the Farey series of order 1025 itself occupies 400 pages. Except for the last page, each page contains 400 pairs of fractions, arranged in lines of 20 each. Besides the main table there is an appendix containing the following smaller tables: (1) the Farey series of order 50 with decimal equivalents, (2) the Farey series of order 64, (3) the denominators of the Farey series of order 100. In addition there is a brief introduction in which the author discusses the background, construction, and use of the tables. (See also the author's article *The structure of Farey series*, Proc. London Math. Soc. (2) vol. 51 (1949) pp. 132–144 and the third chapter of Hardy and Wright's *Introduction to the theory of numbers*.)

The principal interest of such a table, aside from its obvious usefulness in finding rational approximations to irrational numbers, lies in the fact that if a/b and x/y are consecutive fractions in the Farey series of order n, then $bx-ay=1$. Thus the present table can be thought of as a table of solutions of the diophantine equation