tions, and elimination by Sylvester's dialytic method. In this connection we could wish that the author should have suggested to the student the application of elimination to the rationalization of algebraic equations, thus showing that the equation treated in the second part actually represents the most general algebraic equation possible. The second part contains forty pages. After explaining the graphical representation of imaginaries, it gives the demonstration that every equation has a root by the method of Gauss. Then follow symmetric functions, the proof that they can be expressed by means of the coefficients, and their application to the formation of resultants and discriminants. Here Sylvester's method reappears for the purpose of shedding a sidelight on the last mentioned subject. Twenty four pages suffice for the third part. They contain Descartes' rule of signs, Rolle's theorem, the method of freeing an equation from equal roots, Sturm's theorem, and Horner's method. One section gives a rule for finding the superior limit of the real roots, but, strange to say, neglects to mention the obvious modification for finding their inferior limit.

It will be seen that the contents of the work are amply sufficient for the undergraduate curriculum of any college or scientific school, although they are made to occupy only ninety pages. At the end of the book is found a note on rectangular arrays, but it is not easy to see how this note, appearing alone, can have any significance to the students in whose hands the book may be placed.

THOMAS S. FISKE.

NOTES.

THE officers of Section A at the Rochester Meeting of the American Association for the Advancement of Science were: Vice-President, J. R. Eastman of Washington; Secretary, Winslow Upton of Providence. The following papers were read: The neglected field of fundamental astronomy, by J. R. Eastman; On the conflict of observation with theory as to the earth's rotation, by S. C. Chandler; Meteorological observations made in April, 1890, 1891, 1892 in the totality path of the eclipse of April 16, 1893, by David P. Todd; Latitude of the Sayre Observatory, by C. L. Doolittle; The secular motion of a free magnetic needle, by L. A. Bauer; On the discriminators of the discriminant of an algebraic equation, by Mansfield Merriman; The spectroheliograph of the Kenwood Astro-Physical Observatory, Chicago, and results obtained in the study of the sun, by G. E. Hale; Least square fallacies, by T.