

Lastly, the author's style is simple and lucid, mathematics is kept in hand, the book contains many references and is well served with name and subject indexes.

The great expectations raised by the Dr. Smithell's foreword are amply realised and Dr. Jenkin's book should be found in the library of any undertaking which heat-treats metals and alloys.

FRANK ADCOCK.

The Methods of Plane Projective Geometry based on the Use of General Homogeneous Co-ordinates. By E. A. Maxwell. (Cambridge University Press), 1946. Pp. 230. Price 12sh. 6d. net.

The number of available books on the analytical geometry of conic sections is so large that one would naturally ask for himself whether it is worth while going through one more treatise on the subject. But the present book is really a welcome addition. Whether one agrees or not with the arrangement and the method of treatment adopted by the author, the book is interesting reading. The treatment of the chapters "One-One Algebraic Correspondence" and "Cross-Ratio and Harmonic Ranges" is very satisfactory from the algebraic point of view, and one will feel sorry that the same exhaustive treatment is not kept up, and that important subjects such as the invariants of two conics are not touched. The author, it is true, plainly says that his book "is written as a study of *methods* and not as a catalogue of theorems" and hopes "that a student reading it will have nothing to unlearn as he proceeds to apply these methods to study the geometry of figures in three dimensions or in higher space". But the treatment of the subject is so refreshing that we cannot help wishing for some more of these methods, and a more exhaustive treatment of many chapters would not have reduced the

book to a catalogue of theorems. This is not a criticism against the book, but the reviewer feels that this is the best compliment that can be given for the book. In contrast with the above, the examples in the book are numerous and varied in character, and form a regular catalogue. Many of them are taken from various recent examinations, and hence provide welcome additions to the well-known stereotyped problems available in all books. The book can be strongly recommended to the student and to the teacher of the subject.

C. N. S.

Lymph. By Philip D. McMaster, Robert Chambers, Eliot A. Clark, Thomas F. Dougherty, Cecil K. Drinker, William E. Ehrich, Eugene M. Abraham White and B. W. Zweifach. (Published in the *Annals of the New York Academy of Sciences*, Vol. XLVI, Art. 8, pp. 679-882).

This volume contains an interesting series of original articles on the physiology of lymph. The first two articles contain an account of the circulation in the capillaries and related vessels and explain their actions in a more satisfactory manner than hitherto; the contractility of capillaries is brought into line with contractility elsewhere. Capillary permeability is then ably discussed by Landis; larger molecules can escape through the capillary walls more easily than smaller molecules if the equatorial diameter of the former is less than that of the latter. Then interesting experiments are described on lymph formation and their bearing on pathological problems elucidated. The functions of the lymphocytes and their relation to immunity is discussed. The researches of Drinker on extravascular protein are likely to have repercussions on the Starling hypothesis and provoke revision of our ideas on the osmotic functions plasma proteins.

INDERJIT SINGH.

GEOMAGNETIC STORMS

Geomagnetic activity during the quarter ending December 1946 was far less marked than during the preceding three quarters. Some details of the geomagnetic disturbances recorded at Alibag Magnetic Observatory are given in the following table in which t_0 , t represent time (I.S.T.) of commencement of the storm and its intense phase respectively and T the duration of the intense phase expressed in

hours. The ranges in the three different elements (D , H and V) of the earth's magnetic field as recorded at Alibag Magnetic Observatory during the disturbances have also been given, D in minutes of arc, H and V in γ where $1\gamma = 10^{-5}$ gauss. The maximum k -index (k_m , say) recorded during the disturbances have also been given.

| Date | t_0 | t | T | Range | | | k_m | Nature of commencement |
|----------------|----------------|--------------------|------|-------|----------|----------|-------|------------------------|
| | | | | D | H | V | | |
| 1946 | h. m. | h. m. | hrs. | min. | γ | γ | | |
| November 5-6 | 14 52 | 11 30 on Nov. 6 | 11½ | 3.1 | 138 | 27 | 5 | Sudden |
| November 20-22 | About 15 30 | 12 07 | 8 | 3.6 | 165 | 37 | 5 | Gradual |
| November 24 | 9 16 | 15 23 | 6 | 3.4 | 215 | 24 | 6 | Sudden |