

## Reviews.

"Mathematics and the Question of Cosmic Mind," with Other Essays. By C. J. Keyser. ("Scripta Mathematica", Yeshiva College, Amsterdam Avenue and 186th Street, New York, U.S.A.) 1935. Pp. 128. 75 cents.

This book is No. 2, in the Scripta Mathematica Library series of which No. 1 was reviewed in these columns previously. According to the author the book, at least the greater part of it, is written for those who should like to think, and not for the multitude who are satisfied with being merely told. The volume is composed of six essays,—all reprints,—two being popular expositions of the mathematical method and one a popular discussion of that most discussed subject—whether the external world is real. In the essay on "Mitigating the tragedy of our modern culture" the author puts in a powerful plea for more earnest attempts on the part of the specialists to popularise their work so as to reach "the intellectual laymen" and reviews the notable attempts of Reichenbach, Weyl, Lewis, Levy, Jeans and Eddington. It certainly gives us great pleasure to add to these the name of the eminent author of these essays. In the essay dealing with Law (he calls it legal science), we are shown how mathematising will benefit the subject immensely though there are obvious limitations of a formidable character. The last essay is merely an appreciative article on the life of the late Prof. W. B. Smith, a great mathematician and a versatile scholar.

The book is well got up notwithstanding the misprints which occur (e.g., on pages 56, 89, etc.) and is very readable, the language throughout being frankly journalistic. The purpose of the promoters of the movement is eminently served by the two books so far issued and we may confidently look forward to more illuminating works of a similar nature in future. As No. 1 in the series bears the name *Poetry of Mathematics and Other Essays*, it would not have in the least been inappropriate if this had been named *Meaning of Mathematics and Other Essays*.

B. M. N.

**Mechanical Properties of Matter.** By S. G. Starling. B.Sc., A.R.C.Sc., F.Inst.P. (Macmillan & Co., Ltd., London.) 1935. Pp. viii + 336. Price 6sh.

There are but a few text-books on Properties of Matter at present available in English

and a new book by the author of the much-used *Electricity and Magnetism* is a welcome addition. The book comes entirely up to our expectations and has the same conciseness and clarity that distinguish the other books of the author. Though primarily meant for Higher School Certificate and Intermediate students, such free use of simple Calculus has been made that with a very few additions here and there, e.g., in connection with Gravitation, the book will meet the utmost needs of the B.A. and B.Sc. Pass students of our Universities. In fact the chapters on "Flow of Liquids and Gases" and "Waves" contain more information than is usually required from such students and help to put them in touch with useful results in Hydrodynamics deduced in a simple way. The large number of graded exercises appended to the several chapters will serve to give the student a thorough grounding and the really numerous worked examples are models which can be entirely recommended.

Exception has to be taken, however, to one or two features in this otherwise excellent book. The half-hearted introduction of vector notation leads to some equations which are meaningless. The fault is mostly due to introducing division by a vector as if it were an ordinary scalar. Thus  $\frac{u_2' - u_1'}{u_1 - u_2} = c$

on p. 30,  $f \times s$  meaning  $fs$  on p. 34 and  $\frac{v^2}{r}$

on the same page will lead the student to an unwarranted liberty in operations with a vector. On p. 77  $\frac{v^2}{r}$  is called the radial

acceleration: this is misleading.  $\frac{v^2}{r}$  is the

acceleration along the normal which happens to coincide with the radius in the case of the circle. The equation  $\frac{dv}{dt} = r \frac{d\omega}{dt} + \frac{v^2}{r}$  on

p. 76 would mean that along the radius there are two accelerations  $r \frac{d\omega}{dt}$  and  $+\frac{v^2}{r}$  both of

which are false conclusions. The introduction of the vector notation is a progressive step, but the little addition that would make the notation consistent is not beyond the grasp of the students who use the book, and could easily be introduced. On p. 96 there is a misprint reading "holes are drilled the bar" and on p. 175 we once read "liquified". The

correction for the buoyancy of air in weighing should be  $m_1 = m_2 \left( 1 - \frac{\delta_2}{\delta_3} + \frac{\delta_3}{\delta_1} \right)$  while on

p. 165 it is written as if  $m_1 = m_2 \left( 1 - \frac{\delta_3}{\delta_1} \right)$ .

These small blemishes are indicated with the sole idea of making the book as unexceptionable as possible, for we may be sure that such a good text will see numerous editions and will serve generations of students. We have no hesitation in recommending the book to the Pass students of our Universities. The low price is most inviting.

T. S. S.

**Elements of Strength of Materials.** By Messrs. S. Timoshenko and Gleason H. MacCullough. (Messrs. Macmillan & Co.) 1935. Pp. 350. Price 14s.

The authors have brought out an exceedingly useful book. There are a large number of text-books on the subject but the presentation of the subject by the authors is so good that one's interest to read the book is increased as he proceeds and at the same time, due to the inclusion of alternative methods of solving many of the problems the subject is made very clear. The authors have in addition included at the end, chapters on "Energy of Strain" and on the various modern strength theories which will give just an idea to the students about the practical realities of the strength of materials and working stresses. But in the chapter on riveted joints while discussing the failures of joints by various causes, they have recommended that the distance between the centre of the hole and the edge of the plate should be between  $1\frac{3}{4}$  to 2 times the diameter of the rivet, while the British practice recommends only  $1\frac{1}{2}$  times the diameter. Again, for double shear the resistance is assumed to be double that for single shear, while the usual practice is to assume only  $1\frac{3}{4}$  times that of single shear resistances, since it is not possible to ensure uniform distribution of loads. The authors could have, with benefit, included the formulæ for the design of rivets for given thickness of plates and design of cover plates in the case of butt joints, and also graphical determination of pitch by band method. Except for these shortcomings the book is a very good one and can be used as a text-book in the Colleges and Schools of Engineering.

The Publishers must also be congratulated on the neat printing and get-up of the book;

there are very few errors and the printing is such as not to strain the eyes.

E. K. R.

**Mercury Arc Rectifier Practice.** By Mr. F. C. Orchard, A.M.I.E.E. (Chapman & Hall, Ltd., London.) 1935. Pp. 224. Price 15 sh.

This book deals clearly and concisely with a subject of growing importance, and will be found equally useful by students as well as practising engineers. The author explains in simple terms, with the help of clear diagrams, the principles underlying the action of the rectifier, its evolution and construction. The writer also deals in a very practical and comprehensive manner with the installation, operation, maintenance and testing of rectifier sub-stations. The chapter on grid control indicating, as it does, some important applications and possible lines of future development, adds greatly to the value of the book. The diagrams are excellent. The concluding chapter gives the relative advantages and disadvantages of the rectifier as compared with rotating machinery for sub-station work. The appendix contains some useful tables and a bibliography is added.

C. A. K.

**Inorganic Colloid Chemistry, Vol. II. The Hydrous Oxides and Hydroxides.** By H. B. Weiser, Professor of Chemistry at the Rice Institute. (John Wiley & Sons.) 1935. Pp. 429. Price 23/6.

The book deals with the methods of preparation, the properties and the uses of oxides and hydroxides in the colloidal condition. Ten years ago the author published a book on the Hydrous Oxides. The present volume, however, is not a mere revision of the earlier work. As stated by the author in the preface, most of the chapters have been entirely rewritten embodying the latest developments in this rapidly expanding branch of physical chemistry. The numerous observations recorded in the book have been examined critically and special emphasis has been laid on those aspects of the study of colloidal oxides as have led to the development of colloid chemistry on the theoretical as well as the applied side.

The first chapter is introductory in nature and deals in general with the preparation and properties of hydrous oxides and gels. The oxides are studied in detail in the subsequent chapters. The treatment of the hydrous oxides of iron, aluminium, chromium and

silicon is particularly exhaustive. The last four chapters deal with the technical applications of the hydrous oxides in mordant dyeing, mineral tanning and water purification.

The book is to be welcomed as a valuable reference work by colloid chemists and will be equally useful to the teachers and students of chemistry as the information is presented in a clear manner—characteristic of all the publications by Professor Weiser.

B. S. RAO.

**Colloids in Agriculture.** By C. E. Marshall, M.Sc., Ph.D. (Edward Arnold & Co., London.) 1935. Pp. 184. Price 5s.

The publication of this book is a sign of the increasing extent in which the teachings and methods of physical chemistry and of colloidal science are being drawn upon in building up the scientific basis of the studies of soil. Dr. Marshall's work on soil problems specially that on the X-ray analysis of clay minerals is well known and the book fulfils every expectation as to a clear, critical, concise and accurate exposition of the subject-matter. The book has been written with an eye to the requirements of "country organisers, district lecturers and rural instructors—indeed, to all who are engaged in scientific agriculture and who are interested in the application of our latest knowledge to their field work and their teaching" as also of "agricultural students"; in other words, both for instructors and students. It serves this purpose most admirably. In the short compass of 184 pages, demy size, the subject-matter is treated under the heads, the nature of colloids, the formation of colloids, the properties of small particles in suspension, the properties of molecules at surfaces, ions at surfaces, soils and gels, the mineral colloids of soil, the organic colloids of soil, colloids in soil formation processes, colloids and soil texture, some colloidal materials present in living organisms, colloidal architecture in biological structures, milk and milk products as colloidal systems, smoke damage and plant protection. The book incorporates the latest information though naturally it is possible to indicate only the broader principles in so short a space. It has also the merit of using a lucid and descriptive style and avoiding such intricacies as are unsuitable for the class of readers the author has in view. It seems, however, that the student, in order to intelligently grasp the

subject, must have a good knowledge of the fundamentals and of more complicated allied phenomena which would supplement the skeletal framework given in the book. This need is met by the author by the addition of lists of reference books at the end of each chapter with short notes for guiding the student.

The appearance of this book following in close succession those of Professors Robinson and Comber and the latest edition of Sir John Russell's well-known book now places at the disposal of English-knowing students of soil science an excellent account of the present position of our knowledge and tendencies of the development of soil science.

The reviewer was particularly interested to notice that the book correctly reflects the present position of our knowledge regarding the following:

(a) Coagulation by electrolytes seldom takes place at the isoelectric point and quite often at a cataphoretic speed higher than that of the particles of the sol not mixed with an electrolyte. It may be mentioned that during the aggregation of the particles the cataphoretic speed most often rises and then sharply falls when the colloidal solution loses a visible homogeneous appearance. The text-books on colloids give a wrong picture in this respect.

(b) An electric double layer may be formed on the surface of a particle by the adsorption of ions as distinct from the dissociation of adsorbed or surface molecules already present. It may be stated that this idea of dissociation of surface molecules requires to be supplemented by an answer to the question as to why a part of the dissociated molecules remains attached to the surface and the other part is, relatively speaking, more able to diffuse into the liquid and give rise to the double layer. The use of the terms, mobile ions and primary adsorption, is also specially welcome to the writer. They give a better idea of the conditions obtaining in the double layer. Perhaps the mention of the electrical adsorption would have given a more definite picture of the double layer. The subjects of the adsorption of ions, and of base saturation capacity, and the degree of saturation in relation to texture, pH and the Hissink, T, S, and V values might have been treated somewhat more in detail.

No student of agriculture can afford to do without a copy of this book.

J. N. M.

**Annual Review of Biochemistry, Vol. IV.**  
 Edited by James Murray Luck. (Annual  
 Review of Biochemistry Ltd., Stanford  
 University P.O., California, 1935.) Pp. vii  
 + 639. Price \$ 5.00.

The policy adopted by the *Review* is neither to encompass the whole field of Biochemistry within a single volume nor to adhere rigidly year after year to a given list of topics, but to discuss a bunch of papers relating to a definite aspect of Biochemistry or to a certain point of view. The chemistry of proteins and amino acids reviewed by Professor Cohn is a fine example of how stray and apparently unrelated papers have been marshalled and integrated to yield a comprehensive and a stimulating review of the subject from a physiochemical standpoint.

The Editors have been fortunate in securing the services of several authorities in their respective fields and this circumstance while raising the prestige of the *Review*, renders it highly informative and inspiring. Such reviews are useful in acquainting the reader with the processes which lead to the creation of new knowledge and by way of example particular attention may be drawn to the reviews on Plant pigments by Kuhn, Alkaloids by Robinson, Growth substances in plants by Thimann, Vitamins by Harris and Chemical embryology by Needham. While the Editors of the *Review* have provided us such a substantial quantity of useful information which will stimulate and inspire further inquiry, it may be considered ungrateful if we remark that some of the reviews read more like an assemblage of chemical abstracts. In future, with enlistment of the co-operation of the reviewers it should be possible to achieve the difficult task of maintaining a uniformly high standard and quality for all the branches of the subject reviewed.

The fact that the enterprise after the introductory three-year period, has been established as a non-profit corporation, is a fine testimony to the excellence, usefulness and popularity of the *Review*. It is a volume which will be found indispensable to every research worker.

M. S.

This book is divided into two parts. The first part contains fifteen chapters on the technical methods of chemical control and their principles, special reference being made to the recommendations of the "Uniformity Committee". The second part is a collection of 42 tables useful in the routine as well as special factory control work.

The official definitions of the "Uniformity Committee" are given in the first chapter with the author's explanatory notes wherever necessary. A separate chapter on sampling and weighing has been written. The methods of drying for moisture determination are treated in detail. The chapter on polariscope contains a concise explanation of the principles of polarisation, and a description of the different instruments and accessories.

Lane and Eynon's method for reducing sugars has been recommended for all determinations except for high grades for which Low's method should be employed. The description of both the volumetric and gravimetric methods for reducing sugars is full but the argument for including, in the same chapter, methods of ash determination is not convincing.

For mill control purposes, Noel Deerr's formula for the weight of mixed juice any other unknown quantity in the fundamental equation, has been favoured. The author has given a detailed description of Deerr's algebraic theory and concludes the chapter with a numerical example and the standard milling formulæ.

The chapter on boiling house control is well written. It contains the s.j.m. and the Winter-Carp-Geelig's formulæ and the different expressions for the "recovery" and "yield". Calculation is amply illustrated by numerical examples.

In spite of the numerous errors in the text, which are of a minor character and are incidental to a first publication, the subject-matter of the book is very well arranged and the finish given to it is quite up-to-date. The illustrations are apt and the compilation of tables quite comprehensive. With the latest informations like the International Committee recommendations, pH control, method of colloid estimation, etc., the book satisfies a real need of every sugar factory laboratory.

G. G. RAO.

**Cane Sugar Factory Control.** By K. C. Banerji, F.S.T.A. (Indian Press, Ltd., Allahabad.) 1935. Pp. 436. Price, Foreign £ 1 ; Indian Rs. 13-8-0.

**The Bombay Grasses.** By E. Blatter, S.J., Ph.D., F.L.S. and C. McCann, F.L.S. (*Scientific Monograph* No. 5, of the Imperial Council of Agricultural Research.)

The late Father Blatter was one of the most untiring of workers and one of the most prolific writers in the field of systematic botany in Western India for many years. Mr. McCann had during a long period collaborated with Father Blatter and this work, which appears above their joint names, represents an enormous amount of very careful labour in the field, the herbarium and the library. The bibliography is a complete list of references to grasses. The authors have wisely followed Stapf in the definition and sequence of the various divisions of the grasses and in this respect and others the book is up-to-date. The ecological side has not been forgotten and economic and medicinal uses are also mentioned, where known. A very valuable part of the book is composed of the excellent drawings done by Mr. R. K. Bhide, up till recently the Economic Botanist in the Nizam Dominions and previously a member of the Bombay Agricultural Department. A dissection under the dissecting microscope and a reference to these plates will often enable a quick diagnosis to be made—a diagnosis which might otherwise take a long time, particularly if some of the older descriptions have to be used for the identification of grasses.

As many of the grasses mentioned in this work are distributed widely over India, it is certain that the book will be in great demand by those who are interested in grass throughout the whole of the Indian Empire. While the book is primarily botanical and systematic, it will be found useful to those into whose spheres grasses come from the practical point of view, the workers in the Agricultural Department, the Forest Department, the Revenue Department, the scientific sections of Indian Universities and Colleges and the growing number of lovers of nature who are prepared to undergo the small discipline necessary to be able to follow a botanical description. A regrettable defect in this work is the binding, which is likely to give way at an early date and throughout the book the printer's ink appears to have been occasionally smudged.

W. B.

**Birth Control To-Day.** By Dr. Marie Carmichael Stopes. (John Bale Sons & Daniel Son, Ltd., 83-91, Great Titchfield Street, London, W. 1) 1934. Second Edition. Pages 237.

Since the publication in 1919 of *Wise*

*Parenthood* Dr. Stopes has been contributing voluminously to the literature on contraception. In all her writings she has, to quote her own words, created a background of argument and sentiment behind the scientific exposition. The present book, which is addressed to those converts to Dr. Stopes's doctrines, who want a practical solution to their problems, is entirely devoid of sentiment and presents merely the essential facts about birth control in all its aspects.

At the outset the author cautions against those who, wilfully disregarding the fundamental teachings of contraception, resort to unnatural methods, and as a consequence wreck their own lives and are a menace to society as a whole. The book begins with laying before the reader the case for birth control and the relevant physiological facts. A unique feature of the book is that side by side with the orthodox methods some very efficient and cheap makeshifts have been indicated. It is very gratifying to note that in this particular, if in no other, the author's claim for the usefulness of the book to the less favoured section of our society is thoroughly justified.

The rapid spread of birth control knowledge in modern times has brought in its trail certain baneful results. In the hands of the ignorant, the methods of birth control are at once dangerous and undesirable. The author is keenly alive to this, and has, in a special chapter, dealt in an admirable manner, with the so-called "dangerous" methods. This section above all others must form the subject for serious study. That it is impossible to divorce sentiment entirely from such a human consideration as contraception is evident from the subject-matter of the ninth chapter; here the author has answered certain questions arising in the minds of persons troubled by qualms of conscience. These we hope will be useful in setting at rest all doubts of honest thinking folk. The value of the book is considerably enhanced by the inclusion, at the end, of some useful information about the working of Birth Control clinics and directions for the obtaining of first-hand knowledge. A short note appears about the legislation governing the practice of Birth Control by individuals and at clinics.

Admittedly it is the right of every individual to be equipped with the knowledge to control his most vital function and the publication of this book by a recognised authority is very opportune at a time when

the Public Health Commissioner in India has put up a plea for the control of population in this country.

C. N. R. R.

**The Snakes of India.** By Lieut.-Colonel K. G. Gharpurey, I.M.S. (The Popular Book Depot, Lamington Road, Grant Road, Bombay.) 1935. Pp. x + 165. 76 Figures. Price Rs. 3.

Gharpurey's *Snakes of India* is a popular book giving general information and useful knowledge about the various common snakes found in our country and is written in a simple, lucid style, calculated to make the subject both attractive and comprehensible to the layman. Beginning with a short Introduction, preceded by a page of "Errata" and quotation from Arnold's *Indian Idylls*, it comprises as many as 36 chapters dealing with almost every aspect of Indian Ophiology. The last chapter is by R. K. Golikere and makes a "World Survey of Dangerous Snakes". There are 76 figures, most of which are photographs. It is really unfortunate that in many cases the author has had to depend on photographs made from distorted, preserved specimens and has not been able to secure characteristic pictures of *live* specimens. A preserved specimen loses the pose, attitude and bodily configuration characteristic of a living one, and a picture made from it cannot give a faithful idea to the reader.

Here and there, though rather rarely, one comes across in Gharpurey's book facts which appear to be imprecisely expressed; but a book of such wide scope cannot be absolutely without faults and we can conscientiously recommend it to those who are interested in the subject.

As examples, we might mention that the author says, "in the majority of snakes, the female lays eggs *in the sun*" (p. 5; italics ours), a statement which we cannot endorse. On p. 6 he says that "the safest way to hold a snake is by its tail at arm's length. Then it may wriggle but cannot bite or twist round the arm." One might mention that snakes are supple creatures and even though they are gripped by the tail and kept at arm's length from the body, they can raise up their front half of the body by making a sort of loop and bite at one's hand. What the snake-charmers do is not only gripping a snake as described by the writer, but also continually giving it a gentle shake to prevent its reaching up.

On p. 49, Gharpurey says, "Snake-charmers . . . are adroit in catching snakes. They are quick, and as soon as they see a snake, they grab it just behind the head, so that it cannot bite." The reviewer has accompanied snake-charmers once annually for the last nine years on snake-hunting in the jungles, but he has yet to see a snake-charmer who can grab a poisonous snake just behind the head, as soon as he sees it. If he did it, in all likelihood he would not live long to exhibit that snake to admiring spectators. Usually, the snake-charmer—and not all snake-charmers—can catch cobras fresh from the jungle—drags out a cobra from its hiding-place by the tail, keeps it at a yard's distance from his body, places a stick on its neck and by moving the stick carefully round, "pins" the head firmly to the ground. Then and only then it is that he ventures to grip its head in his hand. With a krait the process is doubly more difficult and it is only the most adroit snake-charmer who would try his hand at it.

On p. 4, the author says that "the bifid tongue probably conveys the sense of smell to the two nostrils". While this may be the usual idea, we should like to point out that one authority at least (Ditmars, 1922) believes that "*snakes hear with their tongues*" and that "the delicate, nerve-supplied tips of this wonderfully specialised organ are highly sensitive to vibrations from even slight sounds."

B. G. M.

**Manual of Human Physiology.** By Sir Leonard Hill, M.B., LL.D., F.R.S., Hon.A.R.I.A. (Edward Arnold & Co., London.) 1935. Fourth Edition, 484 pages with 136 diagrams. Price 6s. 6d.

The fourth edition of this excellent and popular manual of Human Physiology follows closely the pattern of the preceding one but is modified in accordance with recent discoveries. An important feature of the book is the inclusion of a much-needed chapter on Reproduction; it also contains suggestions for experiments with very simple and inexpensive apparatus. It is as complete and clear an account of Human Physiology as could be written for the use of "students training to qualify as teachers; for nurses undergoing hospital training and for the higher classes of schools and polytechnics". The treatment of the subject on the whole is such that it will be of great help to any

one interested in the teaching of elementary Physiology. There is an adequate index.

A. S. R.

**Further Experiments upon the Water-Gas Process.** By J. G. King, B.H. Williams, and R. V. Thomas. (Department of Scientific and Industrial Research. Fuel Research. Technical Paper No. 43, 1935.)

This publication is a sequel to the earlier studies in which methods were described to study the carbon and thermal balances in producer-gas process.

The investigations described in this paper are arranged in four parts. The first part is devoted to a study of the causes of clinker formation in the generator and the devices employed to minimise the accumulation of clinker, especially such as would adhere firmly to the walls of the generator and cause serious inconvenience. Observations of the distribution of temperature at various regions of the fuel-bed, as well as of the velocity of flow of gas at the sides and central regions of the generator provided data which suggested (a) that while charging the generator, a device should be employed to keep the larger lumps of coke in the centre and let the coke breeze pack the sides, and (b) that the grate should be so arranged that air flows into the fuel-bed at the centre of the grate. These two devices helped to keep the zones of high temperature in the fuel-bed in the centre, and to keep the walls relatively cool and also to prevent the coke-ash from overheating and lead to formation of large and hard masses of clinker. Such a generator was operated successfully for a considerable period with four different specimens of coke whose ash fusion temperatures (in a reducing atmosphere) ranged from 1200 to 1500° C.

The second part presents the results of investigations on the effect of the rate of

blowing on the efficiency of the process. With the aid of general considerations from the thermal point of view of the reactions between air and carbon, and also of the conditions prevailing in the gas-generator, an equation has been developed to connect the efficiency of the process with the rate of blowing. Experimental studies with different rates of blowing were carried out with a view to ascertain the variation in composition of the blow-gas and also of the thermal losses incurred. The results obtained were in conformity with the theoretical considerations, *viz.*, the rate of blowing should be as high as practicable in order to reduce to a minimum the percentage of carbon monoxide and also to reduce thermal losses. It is at the same time necessary to regulate the period of blowing so as not to exceed the optimum temperature in the fuel-bed.

The effect of the size of coke on the efficiency of the process was studied systematically with reference to *effective surface, reactivity, time of contact*, composition of the gases obtained and thermal output. It was found that variations of the size of coke in the range 0.1" to 3.0" had no marked effect on the efficiency of the process.

The next point studied was the efficiency of the process when using different types of coke, *viz.*, vertical retort, horizontal retort and low-temperature coke. No significant variations were found, the process efficiencies being 72.4, 75.4 and 72.9 per cent. respectively.

The various sources of error which would tend to vitiate the results are examined in detail and presented in an appendix. These errors are small and are due to (a) hydrogen from sources other than the water-gas reaction, (b) nitrogen in the coke, (c) sulphur in the coke, (d) moisture in the air, and (e) dilution effects.

K. R. K.

### Forthcoming Events.

4 Jan. 1936—The Second Indian Road Congress at Bangalore.

2—8 Jan. 1936—Indian Science Congress—23rd Annual Meeting, at the Daly College, and King Edward Hall, Indore.

2—4 Jan. 1936—

All India Obstetric and Gynecological Congress, 1936 (will be held at Madras).