News and Views.

A CASE of considerable interest to owners of land, to entomologists, and to public health authorities, has recently been heard in the Sheriff Court of Paisley. The pursuers, the Committee of the Upper District of the County of Renfrew, craved the Court to find that there exists upon the lands of Muirend, in the Parish of Cathcart, a nuisance within the meaning of the Public Health (Scotland) Act, 1897, in that certain ditches are so overgrown with vegetation that the flow of water therein is impeded and they have become breeding-places for mosquitoes. Complaints were received from a considerable number of residents in the houses within about five hundred yards of the Muirend estate that they had suffered severely as the results of mosquito bites, medical treatment having been rendered necessary in a number of cases. The pursuers therefore held that the ditches are " in such a state as to be a nuisance, or injurious or dangerous to health," and they craved that the defender (the owner of the land) should be required to clean out the ditches and to do such other things as may be required for the removal of the nuisance complained of. The mosquito in question is *Anopheles bifurcatus*.

THE defender's reply to the petition is that the existence of mosquitoes does not constitute a nuisance in the sense of the Public Health Act, and also that the bed of the stream a short distance beyond his property has been raised, thus causing damming back of the water. The inquiry lasted four days, and expert witnesses were heard on various aspects of the problem—engineering, entomological, medical, and legal. Sheriff Hamilton has decided in favour of the District Committee. He finds that the ditches have become so encumbered with silt and vegetation as to be ineffective as watercourses; that the ditches and the adjacent overflowed ground have become a breeding-ground for large quantities of mosquitoes; that mosquitoes from the area in question have invaded the residential district and attacked the inhabitants, and by their bites caused pain and swelling, occasioning in some cases temporary incapacity; that the presence of mosquitoes caused reasonable apprehension and diminution of comfort in the community; and that there is a reasonable probability of a repetition of these conditions in the following years. The Sheriff ordains the defender to clear the ditches of the silt and vegetation with which they are encumbered, and thereafter to maintain them clear of silt and vegetable growth. The case is of special interest as being the first of its kind under the Public Health Acts in Great Britain.

THE opening by Lord Onslow of the new Reptile House at the Zoological Gardens in Regent's Park, London, on June 15, marks an important stage in the development of the exhibition of living animals. The extraordinary appeal which the overhead lighting of the Aquarium made to the eye of the public ensured that this method would be extended to other types of exhibits, and a first experiment in this direction was made at the Scottish Zoological Park, where, a little more than a year ago, there were opened to the public a tropical bird house and a reptile house with natural surroundings, in which daylight falls upon the inmates while the spectator is shielded from the direct rays. The new Reptile House at the London Zoo develops still further the ideas of concentrating attention upon the animals and of suggesting in the enclosures themselves the type of surroundings in which the various creatures naturally dwell. The technical experiments and artistic conceptions of the curator, Miss Joan Procter, have combined to give most successful results. In the larger enclosures the natural surroundings of the foreground are very effectively carried away into the distance by suitably designed backgrounds painted, for endurance, with motor-car enamels; vita-glass permits the access of the most beneficial of the sun's rays; and the compartments are fitted with elaborate electric installations for heating and lighting. Many of the creatures exhibited are themselves of the greatest interest: the seven-foot, yet immature, 'dragons' of Kermodo are shown alive for the first time in Europe; but the scheme of the Reptile House adds enormously to the attractiveness and to the instructional value of the exhibits. The new house bids fair to catch the public fancy as completely as the Aquarium has done.

THE Royal Society of Edinburgh, like many another learned society, is concerned at the increasing volume of material offered for publication, and at the inroads which the publication of work of first-rate quality is making upon its resources. Its *Transactions* and *Proceedings* are very largely financed by the contributions of its fellows, with modest assistance from a Government grant and occasional help from the Government fund allocated by the Royal Society of London. Already the fellows have contributed a special Reserve Fund of £1100, but it is evident that if further provision cannot be made, scientific contributions of undoubted merit must be rejected, solely on financial grounds. An attempt to meet the difficulty is being made by the creation of a Publications Fund, to which the Council has already allocated sums amounting to more than £2000, and for which, it is hoped, further gifts will be earmarked in due course by fellows and others interested in this vital branch of the Society's activities. Papers submitted to the Society are already stringently 'refereed,' but the increasing claims made upon all publishing societies suggest that if publishing is to keep pace with production radical changes must take place in the form in which results are presented, so that while the main lines of investigation and the finished conclusions appear in scientific journals, the masses of detail and data, which at present occupy so much space, may be eliminated and yet be made available for consultation by scientific workers by being stored in manuscript form in recognised and specified scientific libraries.

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AN exhibition designed to show the practical applications of recent scientific research work in the woollen and worsted industries was opened by Lord Novar in the Royal Scottish Museum, Edinburgh, on June 16. Lord Novar pointed to the need of closer co-operation between manufacturer and sheep-master, so that the latter might be aware of the exact requirements as regards grade and quality demanded for manufacturing purposes, with the view of breeding towards well-defined standards in these respects. He also indicated the important part research, conducted on scientific lines, has taken and is likely to take in furthering the aims both of breeder and manufacturer. The exhibits, which have been arranged by the British Research Association for the Woollen and Worsted Industries, cover a wide range, from samples of wool illustrating the characteristic qualities of various breeds of sheep and of some of their crosses, to delicate apparatus designed for the examination of spindles in rapid motion, for the testing of moisture content, elasticity, resistance to strain, etc., an ultra-violet radiation lamp by which faults of contamination may be readily detected, and a series of finished products illustrating common defects of manufacture and the methods by which they may be eliminated. The exhibition shows the purely scientific as well as the practical side of the work of the Research Association, which is to be congratulated on the great progress it has made and on its initiative in bringing to the notice of the public and the specialist these particular developments of scientific research.

AN exhibit of outstanding historical importance has just been added to the national collection at the Science Museum, South Kensington, through the generosity of Sir Charles Parsons and the directors of the Parsons Marine Steam Turbine Co., Ltd., who have presented to the nation the machinery and a portion of the hull of the epoch-making steam yacht *Turbinia*. This vessel ranks in historic interest with Patrick Miller's boat of 1788, Bell's *Comet* of 1812, and Pettit Smith's *Archimedes* of 1840, and no more suitable place for her could be found than in the museum which already possesses Symington's engine for Miller's boat and the engine of the *Comet*. The Parsons Marine Steam Turbine Co., Ltd., was formed in 1894 to test the application of the steam turbine—which had been in use ashore for ten years—to the propulsion of vessels, and the *Turbinia* was their experimental craft. Of 44½ tons displacement, 100 ft. long, her machinery developed no less than 2000 H.P. and gave her a speed of 34½ knots, or four knots faster than any other vessel of her day. Her performances at Spithead during the Diamond Jubilee review astonished the whole Navy. Though the majority of steam vessels afloat are still fitted with reciprocating engines, steam turbines are used in practically all high-speed vessels, in the majority of liners, and without exception in battleships, cruisers, and destroyers. The *Turbinia*, indeed, led directly to the *Hoods* and *Mauritanias*, and as such marks an epoch in the development of marine engineering second to none in importance.

PROF. GEORGE A. GIBSON, who has just resigned from the chair of mathematics in the University of Glasgow, was born at Greenlaw, Berwickshire, in 1858. He received his mathematical education at Glasgow under Prof. Jack and Lord Kelvin, and at Berlin under Kronecker and Weierstrass. From 1883 until 1895 he acted as assistant and lecturer in mathematics in the University of Glasgow. During that period he originated and conducted numerous special courses of lectures for honours students on advanced mathematical subjects, both pure and applied. In 1895 he was appointed to the chair of mathematics in the Royal Technical College, Glasgow, and in 1909 was recalled to the University as professor of mathematics. In the eighteen years during which he has held the chair, he has been to his staff an example of devotion to duty and to his students a great teacher. As the source and centre of a school of mathematics in Glasgow, he has expanded the scope and raised the standard of mathematical study in the University, fostered original research, and stimulated and encouraged the publication of many treatises on higher mathematics. Prof. Gibson has himself made valuable contributions to the theory of Fourier series and to other mathematical subjects. He is an authority on the history of mathematics, and has written important memoirs on famous Scottish mathematicians. He is the author of several well-known text-books, his "Treatise on the Calculus" being a standard work used throughout the British Empire. Prof. Gibson has always taken a keen interest in secondary education, and has rendered valuable services to the teaching of elementary mathematics in Scotland. He has been a conspicuous figure in the history of the Edinburgh Mathematical Society, and in 1902 he was elected an honorary member in recognition of his services and of his eminence as a mathematician. From 1917 until 1920 he held the office of vice-president of the Royal Society of Edinburgh, and in 1905 the University of Edinburgh conferred on him the degree of LL.D.

FOR some time past the problem of providing more adequate accommodation at Bedford College, London, for the greatly increased number of students, has been receiving attention. The present buildings were intended for 450 students only, while the College contains now 600. Six years ago, as a temporary measure, a new chemical laboratory was constructed out of old army huts. While never really adequate for their purpose, these relieved the more immediate pressure in one department but did not touch the growing needs elsewhere: they are now at the end of their life, and replacement before they are overtaken by complete dissolution has become urgent. It was decided to erect a new permanent building to meet the present needs, and the first step towards the materialisation of this project was taken on June 9 when Princess Mary, Viscountess Lascelles, visited Bedford College in the afternoon and laid the foundation-stone of the new wing. The existing science departments form the two wings of an open quadrangle, and it is proposed that the new extension shall

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occupy a position to the south-west to join on to these and so form the fourth side of an enclosed quadrangle of about 150 feet by 120 feet. The total cost of the scheme is estimated at not less than £110,000, towards which there is in hand approximately £53,000. Beyond this limit it is impossible for the College to raise further sums from its own resources, and an appeal is therefore being made to the public for aid. The new building is designed to provide a laboratory of inorganic and physical chemistry in place of the army huts, a lecture-hall to accommodate 600 persons, a department for geography, additional space for physics, zoology, history, French, etc., and also much-needed additional students' cloak-rooms. On the roof there will be a small astronomical observatory. After the ceremony of laying the foundation-stone, Sir Hildred Carlile, president of the Extension Fund, made a statement as to the documents to be placed under the stone. These latter included a current copy of the *Times*, the College Calendar, coins of the realm, and other contemporary objects. After the ceremony, Her Royal Highness visited some of the science departments, the library, and the residence wing.

LAST week Corpus Christi College, Cambridge, celebrated the two hundred and fiftieth anniversary of the birth of the Rev. Stephen Hales, who was born in 1671, died in 1761, and was buried in the south transcept of Westminster Abbey. In an appreciation of Hales in the *Times* of June 17, Dr. Monckton Copeman refers to Hales as one of the most remarkable of the many distinguished men that Corpus has produced. For fifty years Hales was perpetual curate of Teddington, and it was there he wrote his "Vegetable Statics" of 1727. His portrait is given in Schuster and Shipley's "Britain's Heritage of Science." A fellow of the Royal Society, a foreign member of the Paris Academy of Sciences, and one of the enthusiastic supporters of the Society of Arts, Hales' scientific work took a practical turn, and he was instrumental in improving the ventilation of ships and prisons, his work on which entitles him to be called a public health pioneer.

THE *Chemiker-Zeitung* of June 4 contains an interesting account of the thirty-second annual conference of the Bunsen Society for applied physical chemistry, which was held in Dresden on May 26-29, under the presidency of Dr. Mittasch of Ludwigshafen. In recent years it has been customary to make a special study of a particular branch of the subject, the theme chosen for this year being electro-chemical problems. Papers were read dealing with a variety of topics, *e.g.* electrical insulators, the corrosion of metals, the passivity of metals in alkaline media, the electrolytic separation of magnesium from complex fluorides, the influence of adsorbed ions on the sensitiveness to light of silver bromide, electrolytic processes in the alkali industry, etc. Prof. Billiter, of Vienna, in dealing at some length with the electrolysis of sodium chloride, pointed out that chlorine, instead of being a by-product of the manufacture of caustic alkali, has recently become more valuable than the latter, owing to its application, particularly in Italy, to the manufacture of cellulose.

IN a pamphlet issued by the English Electric Co. describing electric locomotives for every-day haulage work in factories, a strong case is made out for their wider adoption. At the present time when wages are high and fuel is dear, any saving effected in either has a marked influence on production costs. In many works steam locomotives are used. Before the locomotive goes into service, steam has to be raised, necessitating the attendance of a fireman. The bunkers have to be filled and water must be taken on board. During service, consumption of fuel continues even when the locomotive is not usefully employed. In the majority of cases this standby loss is considerable. After service the fires have to be drawn and the ashes cleared away. Repairs and renewals are frequent, and during this time the locomotive represents capital lying idle. On the other hand, the electric locomotive is immediately ready for use, there are no standby losses, and it needs little attention. It will also for short periods sustain a heavy overload, and thus the rated horse-power of the locomotive may be much less than when steam is used. In general two electric vehicles can supersede three steam locomotives. The electric power is obtained either from self-contained batteries or from an overhead line, the latter method being as a rule the more economical. As all modern works have some kind of electric supply available, there seems no reason why electric traction should not be more widely used.

THE seismograms of the great Chinese earthquake of May 22, obtained at nine observatories in North America and at Honolulu, have recently been studied by Commander N. H. Heck (Science Service News Bulletin). He places its epicentre in lat. 35° N., long. 100° E. or some distance to the west of the position given in our previous note (NATURE, June 4, p. 826), and still farther to the west of that of the great earthquake of Dec. 16, 1920. It thus lies either in western China or eastern Tibet. It is worthy of notice that the faults in this district have a general east-and-west direction. No details of the earthquake have yet reached us, but it will be remembered that three months elapsed before the outside world knew of the earthquake of 1920, in which about a hundred thousand lives were lost.

THE International Union of Geodesy and Geophysics has published volume 3 of the Proceedings of the Section of Geodesy at the meeting of the Union held at Madrid in October 1924. This bulky volume consists of the reports on the geodetic work of various countries adhering to the Union. These reports, which are mainly in French and English, were presented to the meeting and are now bound together for convenience of reference. For the most part they cover work done between 1922, the date of the previous meeting at Rome, and 1924, but a few con-

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tributions include additional papers such as one by Mr. J. H. Cole, of the Survey of Egypt, on errors in spirit levelling, another on changes of levels caused by the Japanese earthquake of 1923. The volume embraces reports from the chief European States except Great Britain, Germany, and Austria, and also from Canada, the United States, Mexico, Japan, and Siam.

A SECTION of experimental biology in which tissue culture figures prominently has been planned for the tenth meeting of the International Zoological Congress which meets in September in Buda-Pesth. So far as we are aware, this is the first time that tissue culture has practically a whole section devoted to it at an international scientific gathering. Numerous papers and demonstrations figure on the programme. Prof. Ross Harrison, who may be regarded as the founder of tissue culture, will very appropriately open the proceedings on Sept. 5, and Drs. Carrel, Warren H. Lewis, Levi, Lumsden, and Maximow are among the workers who are contributing papers. There will be special discussions on the bearings of pathology on tissue culture (Sept. 7), and on vital staining (Sept. 8). Prof. Rhoda Erdmann, herself a distinguished worker in the sphere of tissue culture, is to be congratulated on her initiative in preparing a very interesting programme.

AT the meeting of the executive board of the U.S. National Research Council the following general officers were elected: *Chairman*, Gano Dunn, president of the J. G. White Engineering Corporation, New York City; first vice-chairman, Prof. T. H. Morgan, president of the National Academy of Sciences; second vice-chairman, Dr. John C. Merriam, president of the Carnegie Institution of Washington; third vice-chairman, Prof. R. A. Millikan, California Institute of Technology, Pasadena. The permanent secretary of the National Research Council, Dr. Vernon Kellogg, and the treasurer of the Research Council, Dr. George K. Burgess, director of the Bureau of Standards, continue in these offices. The following new members of the executive board were elected: Prof. James F. Norris, professor of organic chemistry, Massachusetts Institute of Technology, Cambridge, Mass.; Prof. F. R. Moulton, professor of mathematics, University of Chicago; and John R. Freeman, consulting engineer, Providence.

VOLUME 19 of the Collected Research of the National Physical Laboratory, Teddington, is a quarto of 444 pages and is devoted to the work published by the Physics Department of the Laboratory during the years 1920–25. A large proportion of the papers deal with the heat-insulating properties of materials which are used or may be used in the construction of refrigerator chambers, and with the heat which is transferred to or from bodies by the convection currents they set up in the air surrounding them. Hygrometers suitable for use in cold-storage chambers are thoroughly discussed and new instruments described. High vacuum mercury condensation pumps have been considerably improved by the staff of the Department, research in the direction of establishing the composition of the X-rays from various metals and of using the rays to analyse alloys and other substances has been continued, and some advance made towards the more efficient protection of the X-ray worker. The volume is full of most valuable information, and it shows clearly how much can be done for science and industry by ten or twelve active workers in a well-equipped laboratory.

TOO much caution cannot be exercised in naked-eye observations of the sun and its total eclipse on Wednesday next, June 29. Several contributors to our supplement last week referred to the danger of looking at the sun through unsuitable glasses or screens before totality. If, however, it is desired to observe the passage of the moon over the sun's face, no better device could be used than the "Combined Dark-Adaptation Mask and Graduated 'Eclipsia' Screen," made at the suggestion of Dr. R. L. Waterfield and sold by Messrs. Theodore Hamblin, Ltd., 15 Wigmore Street, London, W.1 (price 5*s*.). By means of a film of varying density, it will be possible to look at the sun from time to time before totality, and during total eclipse to observe the corona without any screen at all. The device should be very useful to all who are arranging to watch the eclipse on Wednesday next.

THE annual conversazione of the Institution of Electrical Engineers will be held at the Natural History Museum, South Kensington, on Thursday, July 7, at 8.30-11.

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:—A lecturer in chemistry at the Leicester College of Technology—The Registrar, Colleges of Art and Technology, Leicester (July 1). An assistant in electrical engineering at the Crewe Technical Institute—The Director of Education, County Education Offices, City Road, Chester (July 2). An analytical assistant in the laboratory of the Public Analyst and Chemist to the Council of the Borough of Stepney—The Town Clerk, Municipal Offices, Raine Street, E.1 (July 4). An assistant examiner in the Standards Department of the Board of Trade—Principal Establishment Officer, Board of Trade, Great George Street, S.W.1 (July 6). A principal of the L.C.C. School of Building, Ferndale Road, Clapham—The Education Officer (T.1.a), The County Hall, S.E.1 (July 9). An assistant lecturer in philosophy at the University College of Swansea—The Registrar, University College, Singleton Park, Swansea (July 9). Research chemists at the Building Research Station, Garston, Herts; the Chemical Research Laboratory, Teddington; the Fuel Research Station, East Greenwich, and local stations of the Physical and Chemical Survey of the National Coal Resources—Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, S.W.1 (July 11). Research Physicist at the Building Research Station, Garston, Herts—Secretary, Department of Scientific and Industrial Research, 16 Old Queen Street, S.W.1 (July 11). An assistant govern-

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ment chemist under the Sudan Government—The Controller, Sudan Government London Office, Wellington House, Buckingham Gate, S.W.1 (July 14). A glass-blower for the Egyptian University, Cairo—The Director, Egyptian Educational Office, 39 Victoria Street, S.W.1 (July 14). A junior scientific officer for the Air Ministry Scientific Research Staff, primarily for research work in the aerodynamics department of the Royal Aircraft Establishment—The Chief Superintendent, R.A.E., South Farnborough, Hants (July 16, quoting A.180). A zoologist and a hydrologist for the *Discovery* Expedition—The Private Secretary (Appointments), Colonial Office, 38 Old Queen Street, S.W.1 (July 16). A research entomologist at the Long Ashton Fruit Research Station—Registrar, University, Bristol (July 16). An assistant lecturer in geology—Registrar, University, Manchester (July 16). A live-stock officer and an assistant agricultural officer for the department of agriculture, Kenya Colony—The Private Secretary (Appointments), Colonial Office, 38 Old Queen Street, S.W.1 (July 31). A lecturer in physics at University College, London—The Assistant Secretary, University College, Gower Street, W.C.1. An assistant teacher in the engineering department of the Woolwich Polytechnic—The Principal, Woolwich Polytechnic, S.E.18. Laboratory attendant for botanical department of University College, Leicester—Dr. E. N. Miles Thomas, 8 Inglewood Mansions, West End Lane, London, N.W.6.

Our Astronomical Column.

COMETS.—Comet Pons-Winnecke, 1927*c*, is now very near the earth; on the night of June 26-27 it will approach within about 3½ million miles, which is closer than any cometary approach within living memory. Since, according to Mr. B. M. Peek, the nucleus is well-defined, it is worth while to take carefully timed photographs with the view of determining the solar parallax. The comet should be faintly visible to the naked eye as a large ill-defined area of faint luminosity. Its apparent motion will be as rapid as that of the moon in apogee.

Mr. B. Strömgren has revised the orbit, using observations up to June 10, and obtains:

$T = 1927$ June 21·064 U.T.
$\omega = 170° 22' 35·0''$
$\Omega = 98 \ 8 \ 34·3$ } 1927·0
$i = 18 \ 56 \ 25·9$
$\log e = 9·836076$
$\log a = 0·519227$
$\log q = 0·016698$

EPHEMERIS FOR 0^h U.T.

	R.A.	Decl.	log r.	log Δ.
June 23.	$19^h \ 16·6^m$	37° 41′ N	0·0169	8·699
25.	20 10·1	24 21	0·0173	8·623
27.	21 3·7	5 54 N	0·0181	8·591
29.	21 52·2	12 2 S	0·0192	8·633

On June 23 the comet is some 7° east of Vega; on June 24, 5° north-east of β Cygni; on June 26, in the diamond formed by the bright stars of Delphinus; on June 27, near α Equulei. It then runs rapidly southward and quickly passes out of our reach, but it will be followed in Australia and South Africa. Perturbations by the earth will have to be applied in further researches on its motion:

CONTINUATION OF THE EPHEMERIS OF COMET 1927*d* (STEARNS) FOR 0^h (*Pop. Ast.*, June-July).

	R.A.	N. Decl.	log r.	log Δ.
June 24.	$14^h \ 1^m \ 21^s$	22° 55′	0·577	0·530
July 2.	13 59 40	23 34	0·579	0·547
10.	13 59 10	24 0	0·581	0·563
18.	13 59 47	24 19	0·584	0·579

Magnitude 10 to 11.

CONTINUATION OF THE EPHEMERIS OF COMET 1927*e* (GRIGG-SKJELLERUP) FOR 0^h.

	R.A.	N. Decl.	log r.	log Δ.
June 25.	$16^h \ 33^m \ 30^s$	50° 40′		9·462
29.	16 53 40	46 30	0·0548	9·502
July 3.	17 10 30	42 21		9·541
7.	17 23 0	38 43	0·0679	9·579
11.	17 33 0	35 28		9·616

Magnitude about 11.

A FIREBALL ON JUNE 10.—Mr. W. F. Denning writes that "a fireball, estimated to be twice as bright as Venus, was observed from Boscombe in the strong twilight on June 10 at $9^h \ 3^m$ P.M. G.M.T. It passed from about 20° below the Polar Star towards the east through the stars in the lower part of Cygnus, its path slightly falling during the five seconds the object remained in view. It left a short trail, and was apparently directed from a radiant point in the western sky. The fireball must have been a very brilliant object as seen from the central and eastern counties of England, but no report of its appearance has been received from those parts.

"It is hoped that further descriptions of its flight amongst the stars will be communicated, for the fireball was one of the most interesting and conspicuous kind, though the prevailing twilight must have considerably moderated its brilliancy."

PHOTOGRAPHS OF MARS.—Lick Observatory Bulletin 387 contains a series of photographs of Mars taken in 1924 by R. J. Trumpler. Yellow and red screens were used on the 36-inch refractor, and the plates were bathed in pina verdol. The plates were used to determine the diameter and polar flattening; the diameter was got both from limb measures and from measures of markings on the disc at different times, the rate of rotation being well known.

The limb measures gave (for unit distance):

	Yellow Screen.	Red Screen.
Equatorial diameter	9″·41	9″·33
Polar diameter	9″·32	9″·24
Polar flattening	1/96	

The measures of disc markings gave:

	Yellow Screen.
Equatorial diameter	9″·178
Polar diameter	9″·075
Polar flattening	1/89

It is concluded that the flattening exceeds the value 1/190 deduced by H. Struve from the Satellites.

RARE ASTRONOMICAL BOOKS.—A sale catalogue of more than usual interest just issued by Henry Sotheran and Co. includes the library of the late Dr. Dreyer. There is an extensive collection of books by Sir Isaac Newton, and by others relating to his work. A specially interesting work is the copy of Euclid's elements used by Newton when he commenced the study of geometry as a sub-sizar at Trinity College. This contains numerous MS. notes of his, which are said to have been written at various periods of his life; they express many of the propositions in algebraic notation. This work is valued at £500. Copies of the first edition of the "Principia" (first and second issues) are valued at £35 and £42 respectively. The second edition is only £2 : 5*s*.

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