

error on p. 75, which I beg leave to acknowledge. By neglecting differential refraction in the determination of the value of a revolution of a micrometer screw (in the second of the three methods proposed) an error of about one part in 3,600 is introduced. That is, if the value of a revolution is $18''$, the effect of neglected refraction is $0''.005$.

Again, by a slip of the pen, p. 43, the author is made to say that "*In all cases* the refraction must be applied first." There is one exception that, in altitudes measured from the sea horizon, the correction for dip should be applied previous to the correction for refraction.

My statement concerning the surveyor's transit, that the time, latitude and azimuth "can easily be determined to an accuracy within the least readings of the circle" is the literal truth, so far as the methods given by me are concerned. I have not attempted to get everything possible out of the surveyor's transit, and why should I? If great accuracy is required, instruments and methods specially adapted to the solution of the problem, and described in the earlier chapters of the book, will be employed. Why should an astronomer make a fad of a surveyor's transit when he has an observatory full of instruments which will do his work better? No further explanation is needed for the reviewer's remark that the surveyor's transit 'has been strangely neglected by astronomers.'

W. W. CAMPBELL.

The reviewer, after careful consideration of Professor Campbell's remarks printed above, finds no reason to modify any of the opinions expressed in the review.

G. C. C.

FOEHN WINDS.

TO THE EDITOR OF SCIENCE: In connection with Professor Wilson's communication on Foehn Winds in SCIENCE for August 18th, I beg to say that the word *foehn* was misspelled *foehm* in the proof sent me from the publication office of this JOURNAL. I made the necessary corrections in the proof, but for some reason the final *m* was left standing, instead of being replaced by the *n*. Being away from Cambridge at the time, I did not notice the mistake in the final printing of my note (in SCIENCE for July 21st) until a few days ago, and hence it happened that

Professor Wilson anticipated me in making the necessary correction.

R. DEC. WARD.

HARVARD UNIVERSITY, DEPARTMENT OF
GEOLOGY AND GEOGRAPHY.

SCIENTIFIC NOTES AND NEWS.

THE University of Mississippi has conferred the degree of LL.D. on Dr. Eugene A. Smith, of the University of Alabama.

THE following appointments under the Department of Agriculture are announced: Mr. W. A. Orton, of the University of Vermont, Assistant in the Division of Vegetable Physiology and Pathology, and Mr. Hermann von Schrenk, Special Agent in this division: Messrs. C. R. Ball, E. D. Merrell and P. B. Kennedy Assistants in the Division of Agrostology.

DR. W. PFEFFER and Dr. Zirkel, professors of botany and of mineralogy, respectively, at Leipzig, have been elected foreign members of the Accademia dei Lincei, of Rome.

THE Académie Internationale de Géographie Botanique has conferred its international scientific medal upon Professor John M. Coulter, of the University of Chicago.

PROFESSOR G. H. HOWISON, of the department of philosophy of the University of California, and Professor Irving S. Stringham, of the department of mathematics, will spend the coming academic year abroad.

PROFESSOR A. C. ARMSTRONG, JR., who holds the chair of philosophy in Wesleyan University, will be abroad during the coming year.

PROFESSOR J. MARK BALDWIN has been given a half year's leave of absence from Princeton University to see the *Dictionary of Philosophy and Psychology* through the press in England. He intends to sail on September 19th and wishes all the American contributions, proofs, etc., to be in his hands in the first week of September. His London address is care Messrs. Macmillan & Co. His courses at Princeton will be in the hands of Professor H. C. Warren.

THE funeral of Sir Edward Frankland took place at Reigate on August 22, the services being conducted by the eminent geologist Professor Bonney. Among those present were Lord Lister, Sir Frederick Bramwell, Sir Henry

Roscoe, Sir Michael Foster, Dr. Ludwig Mond and Dr. Thorpe.

A REUTER dispatch from Liverpool states that, in consequence of the important discovery by Dr. Ronald Ross of the malarial mosquito, and the need of another man of science to be sent out immediately to Sierra Leone, the Liverpool School of Tropical Diseases has just selected Dr. Fielding Ould for this purpose. Dr. Fielding Ould, who has been much engaged in private research in connection with the Liverpool School of Pathology, has been specially trained by Professor Boyce, of the Liverpool University, in the study of tropical diseases. Dr. Fielding Ould had arranged to leave Liverpool for Sierra Leone by the Elder-Dempster steamer *Biafra* on Saturday, September 2.

WE have already had occasion to state that the National Physical Laboratory, which will probably do for England what the Reichsanstalt does for Germany, was established through the efforts of the British Association for the Advancement of Science and is placed under the direction of the Royal Society. A further use of scientific societies is made by permitting six of the twelve elected members of the Council to be nominated by the great technical societies—the Institutions of Civil, Mechanical, Electrical and Naval Engineers, the Iron and Steel Institute and the Society of Chemical Industry. It is extremely important that our scientific societies should take action that will lead to the establishment of a national physical and chemical laboratory at Washington. A government which accomplishes so much for science as the United States should not neglect a field which Germany has shown to be so important to its industrial interests and on which Great Britain has now entered.

THE British Medical Association will meet next year at Ipswich under the presidency of W. A. Elliston.

A COMMISSION has been appointed to enquire into the inland fisheries of Ireland. The scientific members are Dr. D. J. Cunningham, professor of anatomy in Trinity College, Dublin, and Dr. W. C. Macintosh, professor of natural history in the University of St. Andrews.

PROFESSOR W. E. RITTER, of the University of California, has returned from a biological expedition to Alaska, where he has been making collections for the University.

THE Bavarian government has granted \$1,500 to Dr. Karl Giesenhagen, for a tour through the unexplored interior of Malacca.

THE Austrian explorer, Dr. H. Leder, who visited the ruins of Kara-Korum in 1892, is again in Central Asia, and writes that he has good prospects of reaching Lhasa, with the aid of the ruler of Urga. He intends to join one of the large caravans that go from Urga to the residence of the Dalai Lama.

SIR EDMUND ANTROBUS, owner of Stonehenge, the famous monument on Salisbury Plain, England, has offered to sell it, together with 1,300 acres of adjacent land, to the British government, for £125,000.

IN the prosecution of the general magnetic survey of the United States and countries under its jurisdiction by the Coast and Geodetic Survey, it will be necessary at times, and especially during the summer months, to employ temporarily and for short periods a number of men of the requisite scientific training. Persons are desired who have had experience in a university in physics or allied sciences; or persons who have taken post-graduate degrees in physics or allied sciences; or students who have had not less than two years' work in physics or allied sciences, including laboratory practice. There will be no educational examination for these positions; but applicants will be graded upon their training and experience, and will be required to file their applications with the Civil Service Commission prior to October 1, 1899, in order to have their names entered upon the register which will be prepared immediately after that date. The salaries for these positions will range from \$30 to \$75 a month, according to the character of the work and the qualifications of the applicant; and in exceptional cases, where the person employed has had repeated experience in magnetic work, the salary may reach \$100 per month.

THE Civil Service Commission also wishes to fill the position of electrical engineer in the Treasury Department at a salary of \$1,400 per

annum. The examination will be held on September 17th, 18th and 19th.

LORD KELVIN writes to *Nature* from Aix-les-Bains under the date of August 7 as follows: "Last night, during a thunderstorm of rare severity in which brilliant flashes—single, double, triple or quadruple—followed one another at intervals often of not more than a few seconds of time, I was surprised to see, with great vividness, on a suddenly illuminated sky, two nearly vertical lines of darkness, each of the ordinary jagged appearance of a bright flash of lightning. I remembered to have seen two real flashes of just the same shapes and relative positions, and I concluded that the black flashes were due to their residual influence on the retina. I turned my eyes quickly from the dark sky outside to an illuminated wall inside the house, and I again saw the same double dark 'flash,' which verified my conclusion in an interesting manner. The fatigued part of the eye failed to perceive the brightness of the sky in the one case and of the wall in the other."

IN the course of an interview with Signor Marconi, a press representative obtained some information with reference to the arrangements for the wireless telegraphy demonstrations at the forthcoming meeting at Dover of the British Association. The headquarters of the British Association will be at the Town-hall, and it is here that the French and English scientific visitors are to have the opportunity of witnessing some wireless telegraphy experiments. Signor Marconi had just returned from the naval manoeuvres, and planned to leave for America at the beginning of September. He would, however, superintend all the necessary arrangements for his demonstrations at the British Association. During the meeting these demonstrations will be left in charge of Professor Fleming, of University College, London. Messages of congratulation will probably be exchanged between Dover and different parts of Europe. Signor Marconi said that the trials between Dover Town-hall and the lighthouse at St. Margaret's had been a complete success, the tests applied yielding the most satisfactory results. Asked as to whether an attempt would

be made to send messages direct between Dover Town-hall and Boulogne, Signor Marconi said this would depend upon circumstances. The installation at Wimereux, near Boulogne, is the property of the French government. It was possible to send direct communications, but certain alterations on the French side of the Channel would be necessary. As the French Association for the Advancement of Science would be holding its annual conference at Boulogne at the same time as the British Association at Dover, and as both societies would be cooperating together and exchanging courtesies, he thought there should be no difficulty in obtaining the necessary consent of the French government. Otherwise messages will be sent across the Channel between Dover and Boulogne *via* the South Foreland. Signor Marconi referred to the demonstrations with wireless telegraphy made during the recent naval manoeuvres. The results of these demonstrations, he stated, had established the fact that, even with the present installation at the South Foreland lighthouse, messages could be exchanged with a fleet as far down the Channel as Cherbourg, a distance of about 100 miles, and even farther.

THE London *Times* states that several members of the expedition organized by Mr. Claude Beddington for scientific and geographical research in West Africa have returned to England. The route followed by the explorers lay through the *Hinterland* of the Gold Coast, the neutral zone (the delimitation of which is now the subject of diplomatic negotiation), and the *Hinterland* of the German colony, Togoland. Many districts hitherto unvisited by Europeans were traversed, and several new and interesting entomological specimens have been the result of the explorer's enterprise. The big game encountered included elephant, buffalo, hippopotamus and many rare species of antelope. Mr. Beddington was much struck with the enterprise shown by the German government in Togoland, where well-constructed roads and substantial government buildings, the result of large Imperial grants, form a striking contrast to the condition of things in the British territory. Among other industries encouraged by the German authorities is the planting of

kola trees, which should be a source of future wealth to the colony, as the kola nut seems to be almost an essential stimulant to every Hausa, and it is at present imported at great expense from Ashanti, where it is indigenous. The members of the expedition suffered from the usual malarial fever, but fortunately not to such an extent as to incapacitate them from much useful scientific work.

A RECENT issue of the *British Medical Journal* gives an abstract of the report of the Principal Chemist of the Government Laboratory for the year ending March 31, 1899, which has been issued as a Parliamentary paper. The number of samples of butter examined was 1,083, and only two were reported adulterated, as against 25 last year and 46 the year before. Experiments made at Wye and in the laboratory are held to have proved beyond doubt that the characteristic constituent of cotton-seed oil passes into the milk of cows fed upon cotton cake. Certain samples of butter examined during the year gave reactions for cotton-seed oil, but the amount indicated was held to be not more than might be due to feeding on cotton cake. The Danish and Scandinavian butters examined were entirely free from boric preservatives, but those from France, Holland, Australia and New Zealand contained such preservatives. The use of coloring matters derived from coal tar seems to be most prevalent in the United States, but is also met with in samples from Holland. The majority of the margarines contained cotton-seed oil, boric preservative and aniline coloring matters. Samples of cream imported from Holland, Denmark, Norway and Sweden were examined at the instance of the Local Government Board, and all found to be genuine. The laboratory also made a number of analyses in connection with the Home Office inquiries into the use of lead in pottery manufacture, and phosphorus in the manufacture of lucifer matches. Among the samples of food substances from various canteens examined for the War Department many proved to be of low quality. A number of medicinal preparations were examined for the Army Medical Department, and in several instances were found to be markedly inferior to the standards of the *British Pharmacopœia*.

UNIVERSITY AND EDUCATIONAL NEWS.

THE late Madame Halfon has bequeathed £1,600 to University College, London, for the foundation of two prizes.

A DINNER will be held at the end of November in aid of the fund to provide new laboratories for King's College, London. The Hon. A. J. Balfour will preside.

THE chair of botany at Yale University held by the late Daniel C. Eaton is hereafter to be known as the Eaton professorship of botany. The chair was endowed for Professor Eaton, but we believe not largely, and it is to be hoped that the corporation will appropriate the funds necessary to secure the services of a representative botanist.

PROFESSOR W. M. WHEELER, assistant professor of embryology in the University of Chicago, has been elected professor of zoology in the University of Texas. His address after September 15th will be Austin, Texas.

PROFESSOR J. L. KELLOGG, of Olivet College, Michigan, has been elected assistant professor of biology at Williams College, Williamstown, Mass.

ARTHUR ST. C. DUSTAN, associate professor of physics, University of Kansas, has been elected professor of physics and electrical engineering in the Alabama Polytechnic Institute, Auburn, Ala., in the place of Professor A. F. McKissick, who has resigned.

WALTER W. DAVIS, of the Psychological Laboratory of Yale University, has been appointed professor of physical culture and Director of the Gymnasium at Grinnell College, Iowa.

DR. RICHARD STOERNER, docent in chemistry in the University at Rostock, has been promoted to an assistant professorship.

THE following have qualified as docents in German universities: Dr. Behn, in physics in the University of Berlin; Dr. Neumann, in applied mathematics, and Dr. Grassmann, in mathematics in the University at Halle; Dr. V. Schmeidler, in physics, and Dr. Figdor, in plant anatomy and physiology, in the University of Vienna.