

July 30

THE ATHENÆUM

one month after his departure he landed once more at Leith.

An *Elementary Geography of the British Colonies*, published by Messrs. Macmillan & Co. in their "Geographical Series," and written by Dr. Dawson, of Canada, and Mr. Alexander Sutherland, of Victoria, strikes us as being excellent. The scenery of New Zealand is, almost for the first time, adequately described, although we might cavil at the statement that the Canterbury Plains form the only piece of level ground of any important extent in New Zealand, inasmuch as there is a very considerable plain in the south centre of the North Island. The descriptions of Canada and of Australia, on the whole, are nearly perfect. The account of the Mediterranean possessions of Great Britain is less satisfactory, being a little perfunctory and official. It is assumed, for example, that Cyprus is a position of "vast importance in regard to the.....defence of the Empire"; and that British rule is of unmixed advantage to it. We fear that it is now universally admitted by competent military authorities that Cyprus in the event of war would be more likely to be burdensome than advantageous; and with regard to the contrasts drawn between British and Turkish rule in the island, nothing is said by the authors about the drain of the tribute to Turkey, which is still paid, and which causes the taxation to be extortionate and oppressive in the extreme.

THE ATHENÆUM

metallurgists of distinction, has led to the introduction of new types of furnace and improved methods of extraction. It is here that Mr. Eissler's volume has its special value. It is true the older processes are described, for without them the work would be sadly incomplete; but the author disposes of them with judicious brevity, referring for details to the older English treatises, whilst he concentrates his energy on modern processes and modern plant.

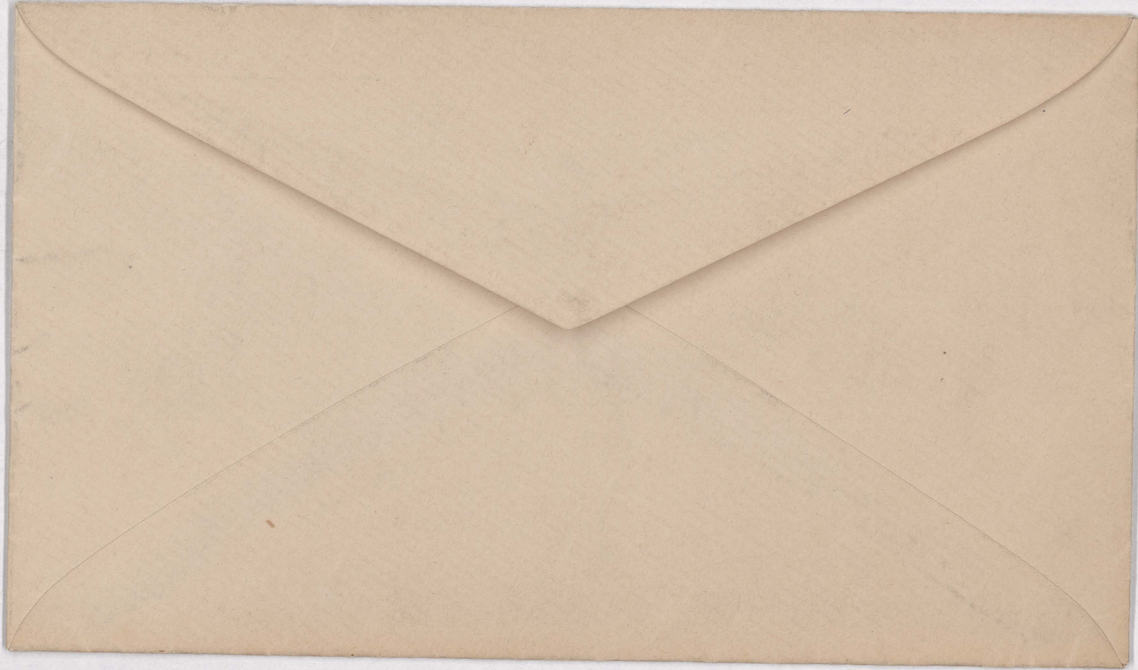
Elements of Metallurgy. By J. Arthur Phillips, F.R.S. Third Edition, revised and enlarged by H. Bauerman, F.G.S. (Griffin & Co.)—Little need be said in commendation of a work which has steadily grown in favour with scientific men and practical metallurgists until it has now reached its third edition. Since the death of Mr. Phillips, the original author, the labour of revising the work has fallen upon Mr. Bauerman, the well-known metallurgist, who succeeded the late Dr. Percy as lecturer at the Royal Artillery College, Woolwich. Whilst studiously avoiding anything like needless disturbance of the original text, Mr. Bauerman has found it necessary to make such extensive additions to the work that the bulk of the book in its present form is something like one-twelfth greater than that of its predecessor. The new matter relates mainly to the metallurgy of iron, copper, nickel, aluminium, and sodium. With these improvements, which bring the work fairly up to date, 'Phillips's Metallurgy' will

GEOLOGICAL SURVEY DEPARTMENT,

OTTAWA.

ON HER MAJESTY'S SERVICE.

Notices of Geography



the younger.

Geography of the British Colonies (Macmillan and Co., London).—Dr. Dawson of Canada, and Mr. George Sutherland, of Melbourne, are to be congratulated on their joint production of a little volume, which presents in form interesting and attractive to the juvenile student, the main physical, political and industrial features of the great colonial empire of England. It is not a geography of the world, although when—

Observation with extended view

Surveys mankind from China to Peru—

a British colony *does* appear in every latitude and longitude. England has girdled the earth with empire, and it is well that young England should learn early what that empire means. We can cordially recommend the little work to teachers and students specially, and to the general reader also, for it is not burdened with long dry tables of geographical statistics; it is well illustrated, and moreover, so far as America and Australasia are concerned, the information it conveys has the guarantee of correctness which personal knowledge by the authors of their subject matter conveys.

Melbourne Argus

Geography of the Bri

fully maintains the re
volumes of this useful
which is to reader geog
greatly improved position
curriculum of our better eq
book is the outcome of the
George M. Dawson, LL. D., F. R. S.,
Sutherland, M. A., of Carleton Colle
bourne. It is far from being merely a top-
graphical guide or even a gazetteer. Its aim
rather is in moderate compass to interest
the learner in the history of geology, the natural
history, and the commercial relationships
of the successive British colonies as they
pass under review. Considerable trouble has
evidently been taken to have all the informa-

tion thoroughly up to date, and on not a few
points on which we have tested it by other
books of reference we find it eminently reliable.
It is copiously illustrated by pictures taken from
some of the most recent and authoritative books
of travel, and altogether it will be found a useful
book either for private or for school use.

The omnipresence was
Was God in that pot
et? Did he tread upon
d inside the kettle? Did
A Him? Again, if God wa
ne kettle was living! And
the laughing circle as a nev

Glasgow
Herald

THURSDAY, JUNE 2, 1

these facts may detract somewhat from Keene's reputation as an original humorist, but really his originality is too well established by his own actual work to be in any way lessened by facts of this kind. Of his working habits during this period we get a most interesting and entertaining glimpse in a communication from Mr Mills.

GEOGRAPHY OF THE BRITISH COLONIES, by Dr. George M. Dawson, Assistant Director Geological Survey of Canada, and Alex. Sutherland, M. A., Carleton College, Melbourne, with illustrations. Cloth, pp. 330, price three shillings. Publishers MacMillan & Co., London and New York. This is a neatly printed and convenient volume illustrated mostly from photographs supplied by Dr. Dawson and Mr. Sutherland. It contains no maps, but could be used with advantage as a

reader, as it gives quite a comprehensive survey of the British possessions, their general geological formation, river systems, productions, chief places, etc. The part of the work contributed by Dr. Dawson embraces British North America, the West Indies and the southern part of the South Atlantic Ocean.

cluding Departments of Civil Engineering,
neering, Electrical Engineering and Practical
facilities are now offered in this Faculty by
Dean of the Faculty H. T. Bovey, M. A., C. E.
CINE AND VETERINARY SCIENCE —
an McEachran, D. V. S.

1st). Principal, S. P. Robins, LL. D.

ers may be obtained on application to the undersigned.

AKENRIDGE, B.C.L., Act'g Secretary.

July
Canada Educator
Rev

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reader, as it gives quite a comprehensive survey of the British possessions, their general geological formation, river systems, productions, chief places, etc. The part of the work contributed by Dr. Dawson embraces British North America, the West Indies and the southern part of the South Atlantic Ocean.

From Messrs. Macmillan we have a *Geography of the British Colonies*, by Messrs. George M. Dawson and Alexander Sutherland. It is capitally written in narrative form, and treats in due proportion of physical features, history, climate, and anthropology, as well as of government and commerce. The fact that a page can be devoted to Montreal alone and thirteen pages to British Columbia will give some idea of its completeness. Amongst the commercial features to which more attention might have been directed we may mention the descriptions of the routes taken by steam and sailing vessels, with explanations of their special advantages for merchandise and

passengers respectively. It is true that the Canadian Pacific route to Yokohama has been compared with that *viâ* New York and San Francisco, but why could not our colonial routes, and especially those to Australia and New Zealand, have been similarly treated? The book is supplied with more than forty excellent illustrations and a few sketch maps. It must be noted that India and Ceylon are omitted from the text, as they have been described in a separate volume of Macmillan's Geographical Series.

Guardian Sept-14

We believe that Mr. Sweet is in the right here: it is impossible to equate the forms *seeing* and *see*, and to hold that both forms

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book. It is marred by exaggeration and misplaced enthusiasm, and is likely only to stiffen old prejudices. He asserts that public schoolmasters boycott the science of education; that they listen to the public, not to the "experts;" that they work empirically and ignore their colleagues' methods; that they are

18. *Geography of the British Colonies*, by G. M. DAWSON and A. SUTHERLAND. (London and New York : Macmillan and Co., 1892.) This little book is one of the best of recent additions to Macmillan's well-known geographical series. The illustrations are excellent, the typographical errors few in number, and the style lucid and interesting. The physical, climatic, and ethnographical conditions of the colonies receive their full share of attention, and the mind is nowhere compelled to dwell on long lists of cities and populations. It is, however, not so much a standard work for geographical reference as an interesting description, well calculated to stir up a feeling of patriotism in the hearts of all British readers. The fact that to a great extent both the authors are describing their own native countries may perhaps account for the general aspect of everything being so very *couleur de rose* ; nevertheless the less prepossessing features of the picture are nowhere passed over. One of the most interesting facts is that "Greater Britain" seems to include almost all the coal and iron producing districts of the world. No "Imperial federationist" should be without this handy little volume.

Imperial & Asiatic Quarterly Oct

on Indian questions. The discovery of so important a monument at comparatively so late a date should encourage a more systematic archæological survey than has hitherto been undertaken in India.

16. *A Comprehensive Persian-English Dictionary*, by F. STEINGASS, Ph.D. of the Munich University. (London: W. H. Allen and Co. £3 16s.) As the author states, his work is "Johnson and Richardson's Persian, Arabic, and English Dictionary," revised, enlarged, and entirely reconstructed, giving in addition to the Persian also the Arabic words and phrases found in Persian literature. It is considerably smaller than its original, yet maintains fully its claim of being a comprehensive aid to Persian literature. Like most comprehensive works, however, it has the defect of giving loose meanings under headings whence they ought to be struck out. *E.g.*, under *Dahana*, we have "*Dahana i Farhang*, Jasper, a precious stone of a thick greenish colour, Melochites" (*sic*). Now, jasper

Messrs Macmillan & Co., London, have published an *Elementary Geography of the British Colonies*, written by Mr George M. Dawson and Mr Alexander Sutherland. It follows the same lines as the other volumes of "Macmillan's Geographical Series," and is written with excellent clearness, conciseness, and good arrangement. It has a large number of original illustrations that add much to its value. The

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“ Colonial Office, June 1, 1892.

“ MY DEAR LORD MAYOR,—I have to-day received accounts from Mauritius giving details of the hurricane which devastated the island on the 29th of April. I hasten to send to your Lordship copies of three dispatches, which will put your Lordship in possession of the broad facts of the disaster, which, I am grieved to say, is, if anything, greater than the first news led me to believe, and demands all the help that the friends of the colony are able to afford it in this calamity. The colony has great cause to be thankful

Elementary Geography of the British Colonies. By G. M. DAWSON, LL.D.,
• F.R.S., and A. SUTHERLAND, M.A. London: Macmillan. 3s.

There is no scarcity of works on the Colonies, but this joint production of two authors "Far Separated by the Seas" is not of the common type. Dr. Dawson, of the Geological Survey of Canada, contributes that portion which embraces all the American Colonies, and Mr. Sutherland, of Melbourne, treats of the other British colonies. India is the subject of another volume of this valuable series. Though entitled "Elementary," this book is sufficiently comprehensive in its scope and character for the general reader, whilst the style of description generally would not commend the book as suitable for beginners. For those who are sufficiently advanced, however, there are few works on the Colonies which could be so advantageously studied. The actual conditions of the surface of the earth, the climate, and suitability to man are scientifically explained, and young students will find much to interest them besides the careful topographical description. Forty large typical engravings embellish the book, which is in all other respects also suitably got up. The text is very clearly printed.

final stage in the professional life of a science teacher, that of work as a teacher.

I will dogmatically lay down a few facts. It is the nature of science to keep us advancing. As Macaulay says, "Its law is progress. A point which yesterday was invisible is its goal to-day, and will be its starting post to-morrow." Hence it is vitally opposed to indolence. In many ways it is efficacious in forming character. The essential devotion to truth of calculation, investigation, and reasoning has a reflex action on truth of life. In this respect, however, I am not placing science as opposed to or as superior to some other subjects, but one cannot but notice that simpler, purer, better lives are nowhere found than among the votaries of science.

Newton, Brewster, the Brunels, the Rennies, Faraday, Whitworth, and all the rest may be named in evidence. Their faith as regards what is beyond their ken is not disturbed by their endeavour to see as far as possible. Look at the closing scene in the life of Smeaton, the builder of the Eddystone Lighthouse. A very bright moon shone down upon his sick-room. He fixed his eyes upon it, and said, "How often have I looked up to it with inquiry and wonder, and thought of the period when I shall have the vast and privileged view of a hereafter, and all will be comprehension and pleasure." But as I told you, I don't

Public Relations. June

NEW BOOKS AND NEW EDITIONS.

ELEMENTARY GEOGRAPHY OF THE BRITISH COLONIES. BY GEO M DAWSON, LL D, F R S, Assistant Director of the Geological Survey of Canada, and ALEXANDER SUTHERLAND, M A, Carleton College, Melbourne, With illustrations. London: Macmillan and Co.

This is a handsome vol of 330 pages, post octavo, with 44 wood cut illustrations, many of them full pages, and all of them well executed. The portion of the book which is contributed by Dr Dawson includes the British possessions in North America, the West Indies, and the Southern parts of the South Atlantic Ocean. Mr Sutherland's share of the book deals with the Northern part of the South Atlantic Ocean, Australasia and Oceania, Africa, the Mediterranean and Asia, exclusive of India and Ceylon, which are described in a separate volume of this series by Mr H F Blandford. We shall kill two birds with one stone by selecting as a specimen of the work before us the page or two relating to Mauritius, to which island a horrible catastrophe is now directing the attention and the charity of the British public. After treating of Aden, Perim, Socotra, and other places in the Persian Gulf, Mr Sunderland says—

"But of much greater importance than these just enumerated (the Bahrem Islands) are the islands which lie in the Indian Ocean to the east of Africa. MAURITIUS to the east of Madagascar is 38 miles long and 25 broad. Such is its fertility that 360,000 people live on it, making it one of the most densely populous districts on the earth's surface. But of those people, 258,000 are Hindoos who have been brought over by white men to work in the sugar plantations, which form the chief industry of the place. At the beginning of this century the island belonged to the French, and still the majority of the white people are of French extraction. But when England and France were at war in 1810 the English took all the French colonies, and this was not one of those which were given back.

It has a town called PORT LOUIS of singular size for so small an island, and presenting a curious assemblage of people gathered from widely separated countries. Here may be seen Hindoos in white robes and many-coiled turbans, swarthy Arabs in little red caps, Chinese with their black hair in long tails, Frenchmen talking their native tongue, and Englishmen in light summer clothing—all jostling each other on the busy streets. It is a place of much trade and contains 62,000 people. It possesses a large Roman Catholic cathedral, some Protestant churches, a bazaar, a hospital, a theatre and observatory and botanic gardens. It boasts also a college with a large staff of professors; and this small island has no fewer than 140 schools within it. The visitor who comes to Mauritius may at first wonder why the island is reputed to be so fertile. Rough and ill-made roads lead through country which seems mostly covered with boulders, but as he rises towards the interior he sees that the volcanic rocks of which the land has been formed have been worn down by the weather to make a productive kind of soil which has been washed down into the valleys, where it forms fertile fields. There used to be boulders in these valleys also, but the planters have gathered them up and made them into rough walls, which mark the plains off into squares, wherein the sugar cane is grown. Many thousand of dark skinned men work in these plantations; and between £150,000 and £200,000 are received for the raw sugar which is annually sent away from this little island. Some parts of the island, however, present only scenes of wild and desolate grandeur, especially among the ancient craters, of which there are two of considerable height. The chief is about 3,000 feet high. Visitors often climb to the summit of its peak, though there is some danger in the last part of the ascent."

Comparing this article with that in Blackie's Cyclopaedia, which is about the same length, we find in the latter some items of information not contained in the above. The island has two railways crossing it, in all 87 miles. Besides sugar, there is a large collection of rice, maize, cotton, coffee, manioc, and vegetables; and there is an exportation of rum, vanilla, aloe fibre, and cocoanut oil. Wheat and cattle are imported. The exports and imports are valued each at more than £2,000,000 annually; and the revenue is about £700,000. Mauritius was discovered by the Portuguese in 1505. The Dutch took possession of it in 1598 and named it after Prince Maurice. Beside Port Louis there is another town named Makebourg. Blackie gives the population as 368,163.

of the assembly had died, as against 15, which was the largest number in any of the past 18 years.

The Moderator said he supposed this peculiarly solemn and interesting report should be adopted.

The report was adopted.

THE SYNOD OF DUBLIN.

The Clerk submitted the report of the Synod of Dublin, which contained a request from the Rev John G Clarke, of Atby, that his congregation should be allowed to choose an assistant and successor in the ministry. The application was granted. The report also referred to an appeal from the Rev John M Hamilton against the Presbytery of Dublin, which was sustained, and the Presbytery instructed to delete the minutes appealed against. Against this decision Rev Samuel Prentiss appealed to the General Assembly.

The Rev Mr Prentiss said he would now retire from his protest. The Clerk said the matter would be passed off to be brought on again.

The Clerk drew attention to a report that a session in the district had deposed an elder from the clerkship of the congregation, and the Presbytery had deposed him from the eldership of the church. He moved that a report on the matter should be sent to the Presbytery of Dublin.

Rev Mr Hamilton asked who had the right to depose the elder.

The clerk said he was tried by the session and then by the Presbytery. When he was deposed for the clerkship of the Presbytery, there was no necessity to depose him for the clerkship of the Church as the first deposition was sufficient.

The Moderator decided that the matter should be deleted from the report of the Presbytery.

THE SYNOD OF ARMAGH AND MONAGHAN.

The Clerk next submitted the report of the Synod of Armagh and Monaghan, which recommended to the consideration of the General Assembly the application of the Revs W Jordan, Dr H M'Murty, and W M'Novine for leave to retire from the active duties of the ministry, and their congregations should be allowed to choose assistants and successors for them. The applications were granted.

A similar request recommended in the report for the Rev W H Horner was deferred to a later period as the application had not yet come before the Resignation Committee.

The report also contained a reference to an appeal by Rev R H Smyth to the General Assembly against the Presbytery of Ballybay.

It was stated that the money involved in the case was paid, and the matter was allowed to drop.

BALLYMENA AND COLERAINE SYNOD.

In the Ballymena and Coleraine Synod report applications from the Rev John K Leslie and Rev H B Wilson, Cookstown, to retire from active work and have successors appointed by the congregations were granted.

REPORT OF BELFAST SYNOD.

The report of the Synod of Belfast presented requests from the following to retire from active work and have successors appointed—Rev Dr Wm Johnston, Townsend street, Belfast; Rev John M'Auleyt Millisle; Rev Geo Shaw, Fitzroy avenue; Rev Thomas MacAffee, Ardglass; Rev Thomas Trimble, Randalstown. The requests were granted.

APPEAL FROM BELFAST.

The meeting then proceeded with the discussion of a Belfast appeal case in which the Presbytery recommended the Belfast Synod to take over the Independent congregation in Agnes street, Belfast. The Synod decided to take over the church, and an appeal was offered by the Rev John Boyd Thompson and ten other members. The Synod confirmed the decision, and a further appeal was made to the General Assembly on the ground that it would be against the interests of the Church to carry out the order.

A memorial from the Independent congregation praying to be taken over was submitted.

Rev J B Thompson said he and those who were with them were not opposed to Church extension in Belfast. Belfast was growing from year to year, and as Presbyterian people were flocking to the city they had a large responsibility in supplying the church wants. The church which it was proposed to take over was but 65 yards from Agnes street Church. It was in the centre of ten congregations within ten minutes walk, and in these ten congregations there were some 1,200 vacant sittings. The building was unsuitable for the accommodation of working classes, and would not be worth the money necessary for repairs. There were pews in it, nothing but forms, the most costly article being a musical instrument. The church body were now building handsome structures, and they were asked by the congregation to take over this miserable church which could not support a minister. The former minister, who had been labouring faithfully and earnestly, could only raise £150 of stipend and £40 sustentation. On Mr M'Kee's

PART I.

The subject of school hygiene is one of so great importance that no apology is necessary for bringing it before the notice of this branch of the Educational Institute. This importance has been recognised by the Government both of this country and of Germany, and in the latter many valuable reports have been issued bearing on it.

In the time at my disposal, it will be impossible to deal with all the subjects which fall under this heading, but I shall touch on the more important of these, and do my best to make them interesting and instructive.

A great change has, within the last twenty years, taken place in the erection of schools, this being of course mainly due to the Education Act of 1872. Many of you will remember the badly lighted, ill-ventilated condition of the schools in which you yourselves were taught the rudiments of your education; and I have no doubt you often look on the palatial erections of the present, and exclaim to yourself—*cui bono?* If you, however, look more carefully into the matter, and compare the methods of teaching in vogue at the present day with those in your earlier days, you will conclude that it would be impossible to carry on what I venture to call the high pressure system of teaching in these

Educational News Aug 6

The co-compilers of the *British Colonial Geography* have been well chosen, and have done effective work. Dr Dawson, Assistant Director of the Geological Survey of Canada, deals with our possessions in North America, the West Indies, and the South part of the Southern Atlantic Ocean. In the six chapters contributed by him "the physical geography and general characteristics of British North America" are graphically yet scientifically taken up—including its history, etymology, social, industrial, and political conditions. Newfoundland and the Dominion of Canada:—(1) Acadian, and (2) St Lawrence provinces; The West Indian Colonies, Bahamas, Jamaica, Leeward and Windward Islands, Barbadoes and Trinidad, British Honduras, and Guiana, and the Atlantic Islands, receive concise, distinct, and yet adequate treatment. Mr Sutherland, of Carlton College, Melbourne, has described in a skilful and informing way Australia, Oceania, and the dependencies and protectorates in the northern part of the Southern Atlantic, the Mediterranean, Africa and Asia—with the exception of India and Ceylon. Both have illustrated their letterpress by photographs, and the publishers have enriched the works with many other pictorial attractions. To pupils in the higher classes this book should be a fund of knowledge and a fascinating study.

(Cr. 8vo, pp. 24, price 6d. Blackie & Son.)

There is little need to do more than name this extremely brief handbook, and to say that it contains four small maps. The information given is carefully arranged, and, as far as we have noticed, accurate.

A Short Essay on Perspective, in preparation for Out-door Sketching.

By B. DESQUESNES. (Maxwell, Blackpool.)

This is a little book of about forty pages, very useful for amateurs who find themselves in difficulties and cannot make their perspective look right.

The "Practical" Handbook of Drawing. By HARRY C. WILCOCKS.
(George Philip & Son.)

The author is evidently a practical teacher, and without doubt knows his work well, but we fear that he errs on the side of excessive hopefulness, if he thinks that, in the course of a hundred and fifty pages or so, he can in any very thorough fashion cover the whole ground of the Standards, from No. 1 to Nos. 7a, b, b', &c. But what would you have? The Departmental requirement is that drawing shall be taught in the "excellent" elementary schools; the teachers, we suppose, therefore, must teach it, whether they can or cannot draw, and Mr. Wilcocks has come to the rescue of the teacher. No fault can be found with the author; on the contrary, his action is kindly; he helps those who do not know their subject to teach it. After all, it is not as if it were a question of communicating a sound knowledge—it is only a question of getting children through the Government examinations. The instructions for shading are, as far as they go, very good, and the same may be said of the geometry, the scales, and the Kindergarten work. Some of the figures might easily have been better drawn, say Figures 188, 189, 191, 193, 194, to choose a few at hazard.

How to Shade from Models. By W. E. SPARKES. (Cassell.)

A year and a half ago we forecasted of this book that it would be a great help in teaching systematically how to shade. We now know that this has been the case, having seen the book in daily use ever

Elementary Geography of the British Colonies. By GEORGE M. DAWSON, LL.D., F.R.S., and A. SUTHERLAND, M.A. (Globe 8vo, pp. xiii., 330, price 3s. Macmillan.)

This book is well illustrated with pictures, and is written in a clear and interesting style. The facts selected are almost always of the right kind and quantity, and as a general rule we are shown that they have some value. Amongst the facts which are of a permanent nature, we have only noticed one inaccuracy. Our examination of the book in this respect, however, has not been exhaustive. But the statistics which vary from year to year are not, in many instances, brought up to date. The inaccuracy just referred to consists in giving the area of Jamaica as 4193 square miles, whereas it ought to be 4200 square miles. We are told (p. 169) that "the population was estimated in 1889 at 634,000." The last census was in 1890 and gave 640,279. Why should the estimate instead of the actual return be given? So, again, we are told that the population of Barbados is "about 180,000." Why should not the census return of 1891 be given? If we remember aright, it was something like 182,322. And, once more, the population of Trinidad is stated as 196,000. The last census was in 1890 and gave 198,320. Tobago is not a dependency of Trinidad (p. 177). The two islands were united as one colony in 1888. Tobago is not supposed (p. 177) to be the island in which Defoe placed "Robinson Crusoe." As Henry Kingsley pointed out many years ago, it is as certain as anything can be that Trinidad was the island—as any one who knows his "Robinson Crusoe" will see at once by consulting a map. Probably Defoe took part of his description from the voyage of Mr. (afterwards Sir) Robert Dudley, as set forth in Hakluyt. These are all very small matters, no doubt; but geography is made up of small matters, and lack of care in them largely detracts from the value of a book. In the case before us they certainly require revision; while, when statistics which vary are given, they should always have a date affixed to them. When these things are set right the book we have been dealing with will certainly be found valuable and interesting, both by teachers and pupils.

Journal of Education Nov

Elementary Geography of the British Colonies. By George M. Dawson, LL.D., F.R.S., and Alexander Sutherland, M.A. With Illustrations. (London: Macmillan and Co., 1892.)

THIS volume forms one of the well-known geographical series edited by Sir Archibald Geikie. The part of it for which Dr. Dawson is responsible is that which deals with the British possessions in North America, the West Indies, and the southern part of the South Atlantic Ocean. Mr. Sutherland describes the British colonies, dependencies, and protectorates in the northern part of the South Atlantic, Mediterranean Sea, Africa, Asia (exclusive of India and Ceylon, which are described in a separate volume of the series, by Mr. H. F. Blanford), Australasia, and Oceania. Both writers have enlightened ideas as to the needs of those for whom such books are prepared. They have carefully avoided the bringing together of masses of uninteresting detail, their chief object being to convey a good general idea of the physical features and resources of the British colonies, and of the various ways in which these have affected the distribution of the population and the growth of industry and commerce. The facts are presented simply and clearly, and every page contains statements which an intelligent teacher would have no difficulty in using as texts for pleasant and profitable instruction. Most of the illustrations are from photographs, but there are also several very effective engravings from original drawings by Mr. Pritchett.

Nature June 2

water, the whole is devoted to the physical properties of liquids and solids represented by water and air. Then we come to oxygen, hydrogen, sulphur and its oxides, chlorine, carbon and the oxides of carbon, ethylene, nitrogen, nitric acid, ammonia, magnesium, zinc, sodium, copper, and iron, all of which are included in the fifty pages following. Then comes a chapter on general principles, a third on molecules and atoms, followed by chapters on symbols and nomenclature, molecular structure, and thermal relations.

This is not the first book which has appeared with similar objects. In this country there have been Prof. Ramsay's little book on "Chemical Theory," Muir and Carnegie's "Practical Chemistry," Shenstone's "Practical Introduction to Chemistry," and probably others, which seem to aim at dealing with chemistry in the same kind of way, which is intended to be a way of pleasantness and a short cut to rather exalted territory. The road, however, is bordered by precipices unseen by the young traveller.

The advocates of this kind of system, which consists in passing from one or two rough experiments, or observations, direct to great generalizations, anticipate great things from its general adoption. All the rising generation who come under its influence are to possess greatly developed powers of observation and reasoning. Some of

Elementary Geography of the British Colonies.

By GEORGE M. DAWSON, LL.D., F.R.S., Assistant Director, Geological Survey of Canada, and ALEXANDER SUTHERLAND, M.A., Carlton College, Melbourne. With Illustrations. 3s. (Macmillan and Co.)

It augurs well for the teaching of Geography by scientific and attractive methods that two competent scholars should have edited a Handbook which satisfies all the requirements of elementary geographical knowledge. Time was when our Geographies were mere lists of names and figures which wearied teacher and taught alike. The present work cuts down the number of facts and statistics, and so skilfully interweaves them with descriptions and appeals to the thinking faculties, that there is some chance of the memory retaining them.

If attention may be called to one or two points which are capable of improvement, it may be pointed out that the halves of the work done by the two authors stand in some need of co-ordination. In the Geography of British North America the Physical Geography occupies far more prominent a position than it does in the Australasian part; and, considering that railways are of vital importance to Canada, where canals are frozen for months together, it would seem that a general account of the main lines of the Inter-Colonial, Grand Trunk, and Canadian Pacific Railways should have been given. Under the head of Commerce there might have been expected a clearer description of the Laurentian and Atlantic ports, especially those which trade with Europe, and also a notice of those which are frozen in winter, and those which are open all the year round.

The Australasian part gives more prominence to commercial facts, but omits some details which should have been included. Under this head may be noted the want of a slight account of the native races of many of our eastern and southern Colonies. Untold mischief has in the past resulted from the branding of all natives as "niggers" by ignorant officials; and it seems desirable that all boys should know something of the characteristics of the many races under our sway. A short and vivid account of the Malay, Polynesian, and native Australian types would have added to the value of this part of the work; and, finally, a concise index would have enhanced its utility to teachers.

These, however, are small defects in a work of real excellence; and a word of commendation must be added for the illustrations, which are all that can be desired. They make the book what all school-books should aim at being— attractive.

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was formed, an examination of the estimate held of him by the poets and other thinkers of his own and the succeeding age, and a critical comparison of his characteristics with those of Wordsworth and Leopardi. The volume is altogether one of the most valuable in the series, and its reprint in this cheaper, though no wise inferior, form should be heartily welcomed by all students of our Literature.

Tennyson — The Princess. With Introduction and Notes by PERCY M. WALLACE, M.A., Late Professor of English Literature, Mohamedan Anglo-Oriental College, Aligarh. 3s. 6d. (Macmillan & Co.)

It would seem that, among living or recent poets, Tennyson only has commended himself to the Editors of Messrs. Macmillan's admirable series of "English Classics," as adapted to their purpose and to the requirements of their readers, the most important section of whom are natives of India. It must be allowed that there are some good reasons for this unique distinction. His language, on the one hand, is full of that subtle artifice which at every moment calls in the commentator, or at least renders his uninvited appearance not altogether impertinent, while the captive thought which his cunning touch releases is commonly not "harsh and crabbed," but of engaging beauty and pellucid simplicity. His expression is a perpetual study of fine English as it is *not* spoken, and his teaching, while it never plunges into unfathomable depths, or wrestles with the fundamental questions of life, or opens up new vistas of speculative advance, is eminently sane, wholesome, and uplifting.

The Princess is the most elaborate single poem of Tennyson's yet included in the series, and the work could scarcely have been better done than Mr. Wallace has done it. With the exception of Mr. Dawson, to whose *Study* Mr. Wallace bears admiring testimony, no commentator has prepared the way—no *Variorum* notes have supplied a magazine of manifold resource in cases of emergency. The work is essentially the Editor's own, and seems to us equally admirable in the strictly philological and in the higher or "aesthetic" field of explanation. The Introduction too is very complete and very well written, though we think that it endorses with too unqualified eulogy the design and conception of a poem which, with all its wealth of poetry, cannot be said to shew either great constructive imagination or a very penetrative appreciation of the problems with which it deals.

Deutsche Lyrik. Selected and arranged, with Notes

Geology of Indiana.

Fifth Annual Report of the Geological Survey of Indiana, made during the year 1873, by E. T. Cox, State Geologist, assisted by Prof. JOHN COLLETT, Prof. W. W. BORDEN, and Dr. G. M. LÉVETTE. 8vo, 494 pages, with maps, views, and sections. Indianapolis, 1874.

In continuation of former Reports (noticed in the 'Annals,' July 1873) Mr. E. T. Cox and his assistants present the results of their further surveys in Indiana. Rich in Coal and Iron, this region demands the attention of metallurgists, as the chief portion of the Report satisfactorily shows. Indeed in the interest of the American iron-workers, Reports, by Mr. Hartmann, on the Exhibition of coal and iron at the Universal Exposition at Vienna, on the Iron and Steel Industries of Rhenish Prussia and Westphalia, with a map, and on the manufacture of Spiegeleisen (pp. 5-101), precede the Geological Report of Indiana. This latter continues to give careful details of local geology, notices of all minerals and stones of commercial value, and of the manufactures and agricultural resources. The Antiquities, some of the most remarkable in the world, are not neglected, for frequent mention is made of the Mound-builders and of their shell-heaps, tools, and extensive works. At a bend of the Wabash River, in Posey County, an isolated bank, 35 feet high, overhangs the river, which has eaten it half away within the memory of man, exposing the abundant bones, pottery, and other relics of the Archaic inhabitants. The pottery is described as peculiar, good for food-cooking, thin, and resisting fire to a wonderful extent; some of it will be illustrated next year. A remarkable group of stone fortifications and mounds on the Ohio, in Clarke County, is also delineated and described. The Caves in Lawrence County, with their blind fauna, also receive attention. The Tripoli found in pockets in the cherty limestone, forming the roof of the coal, in Dubois County, is described as siliceous particles of organic origin, probably due to Foraminifera and Sponges (p. 424). Near the base of the Coal-measures in Warren County, Mr. Collett discovered a slab of sandy mud-stone bearing casts of cracks and footprints; of these latter Mr. E. T. Cox gives a lithograph, of the natural size, with the name *Colletosaurus indianensis*. He notices that the bones of the *Amphibamus grandiceps*, Cope, were found in a similar geological horizon in Illinois.

Geology of British North America.

British North-American Boundary Commission. Report on the Geology and Resources of the Region in the Vicinity of the Fortyninth Parallel, from the Lake of the Woods to the Rocky Mountains; with Lists of Plants and Animals collected, and Notes on the Fossils. By G. M. Dawson, Assoc. R.S.M., F.G.S., Geologist and Botanist to the Commission. 8vo, 379 pages; with plates and woodcuts. Montreal, London, and New York. 1875.

Mr. Dawson, during the two seasons of arduous work on this Survey, devoted his attention chiefly to the geological structure of the country; but, with the aid of his colleagues, he got together a collection of Insects (described by Mr. S. H. Scudder, in Appendix D), of Unionidæ (described by Dr. P. P. Carpenter, in Appendix E), and Grasses, Mosses, &c. (described by Prof. Macoun and Mr. G. Barnston, in Appendix F). Dr. Elliot Coues, accompanying the United States contingent of the Boundary Survey as Naturalist, has zoological reports in preparation.

The geological observations extend over 800 miles across the central region of the Continent, and only in some parts hitherto geologically examined, and for 300 miles in longitude not even geographically known previously. Thus Mr. Dawson has worked out some important links between what was known of the geology and fossils north of his line (from the labours of Richardson, Bigsby, Esbister, Hind, Hector, Owen, Keating, Meek, Heer, Selwyn, and Bell), and what was known of the geology of the U.S. Territories on the headwaters of the Missouri, Yellowstone, Kansas, &c. (from the Surveys for the Pacific Railways, the U.S. Surveyors, and other sources).

Laurentian, Huronian, Lower and Upper Silurian, and Devonian rocks are noticed in succession going from the Lake of the Woods, through Manitoba; and the possible existence of Carboniferous rocks, under the prairies, but probably without good coal-seams, is adverted to. Permian and Triassic strata are wanting. The Cretaceous beds succeed, but rest on different bed-rocks in different localities. They are not yet known in detail here; but further south, in Upper Missouri, Meek and Hayden make them 26000 feet thick. The Tertiary Lignitic beds succeed, as on the north and the south. These are famous for their stores of fossil fuel, for their abundant vertebrate remains, and for their interesting, but as yet not sufficiently disentangled, geological history. These, with the Cretaceous beds below them, reach to the borders of the Rocky Mountains; but a thick mantle of sands and clays, referable to the Glacial Period and to former great lakes, covers almost the entire surface of the enormous plains of which they are the substrata.

The capabilities of the country with regard to settlement are carefully considered, and the maintenance and planting of forests especially insisted on as indispensable.

Dr. J. W. Dawson, F.R.S., supplies Appendix A (with a Plate), on the fossil plants from the Lignitic shales, and points out their "Miocene" characters, as compared with other fossil floræ of North America and Europe; but, seeing that Reptiles of Mesozoic types are associated with them, that *Baculites* and *Inocerami* occur also in the Lignitic series, and that a similar fossil flora occurs with "Cretaceous" marine animal remains in both Dakota and Vancouver, he declines to assign these transitional beds to a definite systematic period, unless it be Lower Eocene, when the "Cretaceous" fauna would thus seem to have persisted in the sea, whilst the land was becoming covered with a new flora. He enumerates:—*Filices*, 2; *Equisetaceæ*, 2; *Coniferae*, 3; *Monocotyledones*, 4; *Dicotyledones*, 15. Several fossil woods examined by the microscope are also described and illustrated.

The fossil plants above mentioned came—some from "Porcupine Creek," agreeing with the "Fort-Union group" of Nebraska; and others from "Great Valley," more nearly corresponding with the "Green-River group." The shales of the first of these groups, at Milk River, yielded fragmentary remains of several Dinosaurs, Tortoises, and Gar-fishes, determined by Prof. Cope, in Appendix B, as *Cionodon stenopsis*, *Hadrosaurus?*, *Trionyx vagans?*, *Trionyx* sp. (?), *Plastomenus costatus*, *Pl. coalescens*, *Compsemys ogmivus*, *C. ? victus*, *Clastes*, sp.

The Report has a good Index. It is well printed, and is illustrated throughout with numerous careful sections, mostly copied by "photo-engraving" from pen-and-ink sketches by the author.

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'Elementary Geography of the British Colonies,' by George M. Dawson and Alexander Sutherland, in Macmillan's Geographical Series, can be recommended to any one who feels the need of a handbook of this kind. It is well enough written, and may be of service in teaching. The paper and print are good, the illustrations are cheap; there are no maps. It is a mistake to say (p. 189) that the language of the Maltese is a "kind of corrupt Italian." It is rather Arabic corrupted by Italian.

