

the blackboard. Lastly, the pupil must have practical experience in the field. When he has been taught how to observe and record the natural features of his own immediate vicinity, he should be taken to another district, and be taught by contrast. Such is the practice of German schools, but in England we are told that the thing is impossible, that excursionist teaching would end in anarchy. Yet head masters find no difficulty in taking cricket and football teams to play distant schools. If they themselves knew or cared for geography, the difficulty would vanish. "Such," said Mr. Mackinder, "is, in briefest outline, my ideal of geography-teaching in schools; but the lecturer can only propose: it is the examiner who disposes."

SPEED OF RAILROAD TRAINS IN EUROPE.

THE German technical press is at present discussing the speed of express trains. In answer to petitions addressed to him by a number of persons interested, says the *Railroad and Engineering Journal*, the minister of public works declared recently that it would be very difficult to respond to demands of this kind, since the speed of express trains on the Prussian railroads was already greater than in any other European country. If it should be increased, the public would not patronize the railroads.

This assertion, it is shown from statistics recently collected, is not by any means correct. The following table shows the average speed of fast trains in different European countries, and shows that Germany does not by any means occupy the first rank.

Country.	Speed per hour in miles.—	
	Including stops.	Without stops.
Great Britain.....	41.7	44.6
France.....	32.8	36.2
Holland.....	32.5	35.0
Belgium.....	31.8	33.5
North Germany.....	31.8	34.3
South Germany.....	31.2	33.0
Austria-Hungary.....	30.0	32.0
Italy.....	29.5	31.8
Russia.....	29.0	31.7

The inferiority of Germany in this point of view finds a marked expression, if we compare the speed of the great Oriental Express, which runs between Paris and Constantinople, passing over the railroads of a number of European countries, including Germany. This train is the fastest long-distance express train run in Europe, and from the time-table the average speed in the different countries is as follows: in France, 40.5 miles per hour; in Germany the speed varies in different sections, being in Alsace-Lorraine, 32.5 miles; in Baden, 35.5 miles; in Würtemberg, 30 miles; in Bavaria, 33.7 miles. In Austria the average speed is 33.5 miles; in Hungary, 34 miles; and in Roumania, 32 miles. This comparison, it will be seen, is not altogether to the advantage of the German lines.

In this connection some comparison may be made of the passenger tariffs in different countries. From this it appears that the lowest charges, both for first and second class passages, are in Belgium, Holland coming next, then Germany, then France, then Austria-Hungary. England and Italy charge the same fare for first-class passages, but the English second-class is considerably lower than the Italian. The highest fares in Europe are in Russia. Third and fourth class fares are not included in this system, as those classes of passengers are not generally carried on the fast express trains.

AMONG THE PUBLISHERS.

BEGINNING with Jan. 1, 1890, Mrs. Fuentesy Capdeville, Madrid, Spain, will publish a new scientific illustrated weekly magazine entitled *La Naturaleza*.

—J. F. Whiteaves has published in the "Transactions of the Royal Society of Canada" (Vol. VII., Section IV., 1889) "Descriptions of Eight New Species of Fossils from the Cambro-Silurian Rocks of Manitoba," illustrated by six plates.

—D. Appleton & Co. have ready "Appletons' Handbook of Winter Resorts." They have in press a book by Frank Vincent, entitled "Around and About South America." Mr. Vincent circumnavigated South America, and visited the various places of in-

terest in the different countries, including many in Brazil. The volume will be fully illustrated. They have in press a valuable historical work in "James G. Birney and the Genesis of the Republican Party," by Gen. William Birney.

—In the Christmas number of *The Ladies' Home Journal*, Theodore R. Davis gives a glimpse inside the White House and of the State dinners under several administrations, and Edward W. Bok tells what are the literary tastes of two such men as Gladstone and Bismarck.

—John Howard Appleton, professor of chemistry, Providence, R.I., author of "Beginner's Handbook of Chemistry," "The Young Chemist," "Qualitative Analysis," "Quantitative Analysis," "Laboratory Yearbook," has issued his "Laboratory Yearbook for 1890." This publication is now in its eighth year.

—Charles Scribner's Sons have just published "Among the Cannibals," which is an account by Carl Lumholtz of his four years' travel in Australia, and of camp-life with the aborigines of Queensland, considered to be the lowest race of *homo sapiens* known to exist.

—Robert M. Lindsay, Philadelphia, Penn., announces to be published in December an etched portrait of Charles Darwin, after the painting by W. W. Ouless of the Royal Academy, London, and etched by G. Mercier of Paris, pupil and collaborateur of the eminent Rajon, recently deceased. The size of the plate is about twelve by fifteen inches.

—The January number of *Scribner's Magazine* will appear with additional space, and a new department at the end of the number, conducted under the title "The Point of View." An opportunity is here given to the best writers for a brief and familiar discussion of subjects of both passing and permanent interest. In the January number the subjects touched are "The Barye Exhibition," "Thackeray's Life," "Social Life in Print," and "The French as Artists." The success of the magazine has been such that the publishers feel justified in adding these new pages to a magazine already low in price.

—E. & F. N. Spon have just published "Inventor's Manual: How to Make a Patent Pay," by an experienced and successful inventor. Thousands of useful inventions are every year patented, but on which the inventor does not realize any thing, simply for want of information how best to proceed to introduce or dispose of his invention. Among the subjects treated in this work are how to invent; how to secure a good patent; value of a good invention; how to exhibit an invention; how to interest capital; how to estimate the value of a patent; value of design patents; value of foreign patents; value of small inventions; advice on selling patents; advice on the formation of stock companies; advice on the formation of limited liability companies; advice on disposing of old patents; advice as to patent attorneys; advice as to selling agents; forms for assignments, licenses, and contracts; State laws concerning patent rights.

—Messrs. Putnam have issued in the Story of the Nations Series a volume on "Early Britain," by Alfred J. Church. It begins with the earliest authentic records, and closes with the Norman Conquest. Being intended for popular reading, it of course has not the philosophical character that a work on such a subject might have, but from its own point of view it has considerable merit. The author has followed the best authorities, though always with independent judgment; and he has probably given as clear an account of the most stirring events in early English history as his space and materials permitted. The main fault of the work, as of the majority of historical books, is the excessive attention given to military affairs to the neglect of other matters of greater importance. Mr. Church evidently thinks the Roman occupation of Britain of more consequence than some writers do, for he devotes one-fourth of his book to it; and he is not disposed, like some, to think that all that is valuable in English life is due to the Teutonic settlers. On the whole, he has made a judicious and readable book. We are sorry to have to add that, like one other volume in this series which we had occasion to notice some time ago, it contains a number of grammatical blunders, such as singular nouns with plural verbs, abverbs used for adjectives, and so forth, which ought never to be seen in a respectable publication.