

they came back told people that they had seen wool growing on trees, and the sun at noon, when their faces were to the west, on their right hand. At the time there were reasons for not believing the account; but with us who know more of the figure of the earth than people did then, and something about cotton, they confirm the truth of the story.

On the subject of *Physical Geography*, which is one of great interest, many things suggest themselves—such as the varying altitude of the snow-line in different latitudes—why it should be higher near the tropics than at the equator—and why the line of the same temperature should recede further from the equator in the old continent than in the new—the limits of the different vegetable productions, and why on high mountains, even within the tropics, those of all climates, from the equator to the pole, may be found, etc., showing the effect which elevation above the level of the sea has upon climate—illustrating the explanation by instances of the vegetation of mountainous districts in low latitudes, and of low levels in high latitudes, and how it is that the temperature of the air decreases as the height above the earth's surface increases—state facts in proof of this. If the lands in the equatorial seas were increased, an increased temperature of climate would arise—if those of the polar regions, the temperature of the climate would be diminished.

The following extract from an Educational Tour in Germany by Horace Mann, Esq., Secretary to the Board of Education, Mass., U.S., are given for the purpose of recommending linear drawing to school-teachers; a thing not much practised in our schools, but of the usefulness of which there can be no doubt.

Speaking of one of the first schools he entered, he says: "The teachers first drew a house on the black board, and here the value of the art of drawing—a power universally possessed by Prussian teachers—became manifest.

"The excellence of their writing must be referred, in a great degree, to the universal practice of learning to draw contemporaneously with learning to write. I believe a child will learn both to draw and to write sooner, and with more ease, than he will learn writing alone. I came to the conclusion that, with no other guide than a mere inspection of the copybooks, I could tell whether drawing were taught in the school or not—so uniformly superior was the hand-writing in those schools where drawing was taught in connection with it.

"I never saw a teacher in a German school make use of a ruler, or any other mechanical aid, in drawing the most nice or complicated figures. I recollect no instance in which he was obliged to efface a part of a line because it was too long, or to extend it because it was too short. If squares or triangles were to be formed, they came out squares or triangles without any overlapping or deficiency. Here was not only much time gained or saved, but the pupils had constantly before their eyes these examples of celerity and perfectness, as models for imitation. No one can doubt how much more correctly, as well as more rapidly, a child's mind will grow in view of such models of ease and accuracy, than if only slow, awkward, and clumsy movements, are the patterns constantly before it."

The following passage on the subject of teaching geography, as taught in the Prussian schools, is well worthy of the teacher's attention: "Here the skill of the teacher and pupils in drawing does admirable service. I will describe, as exactly as I am able, a lesson which I heard given to a class a little advanced beyond the element, remarking that, though I heard many lessons on the same plan, none of them were signalized by the rapidity and effect of the one I am about to describe.

"The teacher stood by the black board with the chalk in his hand. After casting his eye over the class, to see that all were ready, he struck at the middle of the board: with a rapidity of hand which my eye could hardly follow, he made a series of those short divergent lines, or shadings, employed by map engravers to represent a chain of mountains. He had scarcely turned an angle, or shot off a span, when the scholars began to cry out 'Carpathian Mountains, Hungary; Black Forest Mountains, Wurtemberg; Giants' Mountains (Riesen-gebirge), Silesia; Central Mountains (Mittel-gebirge), Bohemia,' etc.

"In less than a minute the ridge of that grand central elevation, which separates the waters that flow north-west into the German Ocean from those that flow north into the Baltic, and south-east into the Black Sea, was presented to view—executed almost as beautifully as an engraving. A dozen wrinkled strokes, made in the twinkling of an eye, represented the head waters of the great rivers which flow in different directions from that mountainous range; and the children, almost as eager and excited as though they had actually seen the torrents dashing down the moun-

tain-sides, cried out, 'Danube, Elbe, Vistula, Oder;' etc. The next moment I heard a succession of small strokes, or taps, so rapid as to be almost indistinguishable, and hardly had my eye time to discern a large number of dots made along the margins of the rivers, when the shout of 'Linz Vienna, Prague, Dresden, Berlin,' etc., struck my ear. With a few more flourishes, the rivers flowed onwards towards their several terminations, and, by another succession of dots, new cities sprang up on their banks. Within ten minutes from the commencement of the lesson there stood upon the black board a beautiful map of Germany, with its mountains, principal rivers, and cities, the coast of the German Ocean, of the Baltic, and the Black seas, and all so accurately proportioned, that I think only slight errors would have been found, had it been subjected to the test of a scale of miles. A part of this time was taken up in correcting a few mistakes of the pupils, for the teacher's mind seemed to be in his ear as well as in his hand; and, notwithstanding the astonishing celerity of his movements, he detected erroneous answers, and turned round to correct them. Compare the effect of such a lesson as this, both as to the amount of the knowledge communicated, and the vividness, and of course the permanence of the ideas obtained, with a lesson where the scholars look out a few names of places on a lifeless atlas, but never send their imaginations abroad over the earth: and where the teacher sits listlessly down before them to interrogate them from a book in which all the questions are pointed at full length, to supersede, on his part, all necessity of knowledge."—MANN'S *Educational Tour in Germany*.

The following from an article in the "Quarterly Review," on *Physical Geography*, affords an instructive hint.

"Of the thirty eight millions of square miles, forming in round numbers the total area of land, nearly twenty-eight millions lie to the north of the equator; and if we divide the globe longitudinally by the meridian of Tenerife, the land on the eastern side of this line will be seen greatly to exceed the western; another manner of division into two hemispheres, according to the maximum extent of land and water in each, affords the curious result of designating England as the centre of the former or terrene half—an antipodal point near New Zealand as the centre of the aqueous hemisphere. The exact position in England is not far from the Land's End; so that if an observer were there raised to such height as to discern at once one half of the globe, he would see the greatest possible extent of land; if similarly elevated in New Zealand, the greatest possible surface of water.

"An increase of land above the sea between the tropics raises the mean temperature, in higher latitudes depresses it; and every such vicissitude must be attended with some corresponding change in the nature and conditions of organic life."

The Power of Expression.

I am fully convinced, Mr. Editor, that teachers, as a class, give too little attention to the power of expression. Pupils attend school term after term, and still are unable to converse upon the most common branch they have been studying. Repeat to them the facts of any subject, and they will nod or shake the head, mumble "yes" or "no"—perhaps in the right place—perhaps not. Some time since, I visited a seminary (one of those institutions in which everything is supposed to be conducted upon the strictest principles of philosophy, principles which applied to the young and plastic minds, mold them into models of symmetry and elegance), entering a recitation room, I found a class reciting, or pretending to recite, in Natural Philosophy. The subject of the recitation was Hydraulics. During three-quarters of an hour, the time for the recitation, I heard one girl of the class utter very faintly "I don't know, sir," the rest of the girls in the class gave evidence of their clear understanding of the subject by a "nod or shake of the head." Most profound expression. The boys reciting with them, followed the same plan, save one, who had some knowledge of water-wheels, though he could not make it known without many blunders in the choice and combination of his language. I studied for the effect that such efforts would have upon the mind, and the picture formed was anything but promising or grateful to behold. There appeared no pencil of light indicating the early illumination of the minds of that class. They were forming habits of inattention and indifference which would ever after obscure their intellectual vision. I came to my own school-room, but to find my pupils wanting in the same power of expression. I attempted the conversational and lecture style, but became almost discouraged with their first efforts. Their