THE EDUCATIONAL REVIEW.

December, is a deep affliction to his parents, who have received the heartfelt sympathy of the young man's former classmates at the New York College of Dentistry.

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Mr. Arthur L. Calhoun, of the Boston Traveller, will please accept our thanks for the handsome and convenient calendar which he has sent us.

Mr. Geo. F. Fenwick, formerly of the Collegiate School, Fredericton, N. B., and now of Montana, is visiting New Brunswick.

Miss Charlotte G. Montgomery and Miss Annie Montgomery, cousins of the Chief Superintendent of Schools for Prince Edward Island, have been for some time at Hamadan, Persia, where they have been laboring under the direction of the American Board of Foreign Missions.

Geo. F. Smith, a pupil of Mr. Brittain's Superior School, Petitcodiac, N. B., who entered as a second year student at the McGill University, Montreal, lead his class in mathematics at the recent examination. This speaks well for his preliminary training.

QUESTION DEPARTMENT.

Questions on scientific subjects may be addressed to EDUCATIONAL REVIEW, Pictou, N. S., to whom also all natural history specimens may be submitted for identification; those on ancient classics and mathematics to EDUCATIONAL REVIEW, Charlottetown, P. E. Island, and all questions on general subjects—English, school management, methods, etc.—to EDUCATIONAL REVIEW, St. John, N. B. On technical questions the editors will seek the views of teachers of experience, in order that this page may be of the greatest possible advantage to our teachers.

Questions and Answers.

STUDENT gives the following answers to questions asked:

volume, to press out the surplus water without admitting any more air, then I have seen a tumbler nearly full of air, with no more than a quarter of an inch of water over the glass plate, keep it supported in position. The success of the experiment is surer if the tumbler be warmed by the hand while the water is draining away.

SUBSCRIBER. — "Whether is wood ashes a mineral or vegetable substance?"

It is mineral in the scientific sense of the term, although it is of vegetable origin.

J. S. M.—" Two plants found some time ago by a friend on Tracadie Sandhills."

No. 1 is the "Alpino Juniper" (Juniperus Communis, L., var. Alpino, L.) No. 2 is the "Ground Cedar," (Juniperus Sabina, L., var. procumbens, Pursh).

J. S.-" Is this Labrador tea?"

It is. Scientific name, Ledum latifolium.

H. V.—" Is the velocity of light 160,000 miles per second as stated in the last article 'Among the Constellations?"

160,000 was a misprint for 180,000. Errors in correcting proof often occur in spite of the greatest care. The context shows that the correct figures were used for the computation.

Sc. St., in answer to problem of F. H. E., says: "Let us take the case of the inverted tumbler partly filled with air and closed with paper. Supposing the pressure of the air inside the tumbler to be the same as that outside the tumbler, say 15 pounds to the square inch, and the weight of the water above the paper to be .1 pound on the square inch, and the weight of the paper to be .01 pound to the square inch. The upward pressure of the air on the paper would be 15 pounds on the square inch, the downward pressure 15.11 pounds. If the paper were inflexible like a plate of glass it would fall. But the paper bulges down in the centre slightly, the air within expands and therefore its pressure becomes less, say 14.8 pounds on the square inch. Add to that the weight of the water and paper and we have a downward pressure of 14.91 pounds, against an upward pressure of 15 pounds on the square inch. Therefore the paper is kept in position by an upward pressure of .09 pounds on the square inch.

1. In REVIEW No. 4, the question was asked, "Why did 4 pounds 6 ounces of ice in the morning weigh 4 pounds 8 ounces in the evening?" ANS.— The ice condensed 2 ounces of moisture from the air which was very warm and no doubt nearly saturated with moisture.

2. To F. H. E.'s problem in No. 7. ANS.—When a tumbler with a considerable amount of air is depressed mouth downward in water, before applying the glass plate to it, the pressure of the water compresses the air. When the tumbler is suddenly raised, with the glass plate against its mouth, this pressure is taken off, and the air slightly expanding presses out some water and thus presses off the plate. This tendency is exaggerated by the warmth of the hand also causing the air to expand beyond its original volume. But if the tumbler with the plate to its mouth be kept slightly inclined for a short time, so as to allow the enclosed air expanding to its maximum

When glass is used, it is in the first place heavier than paper, and therefore more difficult to support. In the second place it does not bulge down in the centre to allow of a sufficient expansion of air within the tumbler to reduce its pressure so much on each