

brane through some intervention of the nervous apparatus. What is called a cold, then, is, in reality, a fever; and though in the majority of instances it is of such a trivial nature as to necessitate few precautions being taken during its attack, yet in some cases it runs a most acute course, and may be followed by great prostration. Even when the promontory symptoms of a cold are developing themselves—when, for example, what a medical man calls a rigor, or, as it is popularly designated, a shivering is felt—when we would naturally suppose that the animal temperature is below par, it is at that very moment higher than the normal, thus showing the onset of fever.—*From Popular Science Monthly for April.*

OUTDOOR AIR AND EXERCISE.—But the surest of all natural prophylactics is active exercise in the open air. Air is a part of our daily food, and by far the most important part. A man can live on seven meals a week, and survive the warmest summer day with seven draughts of fresh water, but his supply of gaseous nourishment has to be renewed at least fourteen thousand times in the twenty-four hours. Every breath we draw is a draught of fresh oxygen, every emission of breath is an evacuation of gaseous excrements. The purity of our blood depends chiefly on the purity of the air we breathe, for in the laboratory of the lungs the atmospheric air is brought into contact at each respiration with the fluids of the venous and arterial systems, which absorb it and circulate it through the whole body; in other words, if a man breathes the vitiated atmosphere of a factory all day, and of a close bedroom all night, his life blood is tainted twenty-four thousand times in the course of the twenty-four hours with foul vapors, dust, and noxious exhalations. We need not wonder, then, that ill-ventilated dwellings aggravate the evils of so many diseases, nor that pure air should be almost a panacea.

Outdoor life is both a remedy and a preventive of all known disorders of the respiratory organs; consumption, in all but the last stages of the *deliquium*, can be conquered by transferring the battle ground from the sick-room to the wilderness of the next mountain range. Asthma, catarrh, and tubercular phthisis are unknown among the nomads of the intertropical deserts, as well as among the homeless hunters of our northwestern territories. Hunters and herders, who breathe the pure air of the South American pampas, subsist for years on a diet that would endanger the life of a city dweller in a single month. It has been repeatedly observed that individuals who attained to an extreme old age were generally poor peasants whose avocations required daily labor in the open air, though their habits differed in almost every other respect; also that the average duration of life in the various countries of the Old World depends not so much on climatic peculiarities or their respective degrees of culture as on the chief occupation of the inhabitants, the starved Hindoo outlives the well-fed Parsee merchant, the unkept Bulgarian enjoys an average longevity of forty-two years to the West Austrian citizen's thirty-five.—*From "Physical Education," by Dr. Felix L. Oswald, in Popular Science Monthly for April.*

HOW THE ANCIENTS MEASURED A DAY.—The first and most obvious division of time is a day—the time required for a revolution of the earth upon its axis—which could not have been a very difficult matter to ascertain with sufficient correctness. But to mark and fix the time of the sun's apparent revolution through the heavens among the stars was a matter of so great difficulty that it was not exactly ascertained even at the time of the reformation of the calendar in 1582; yet so uniform is the motion of the earth in its

orbit that the results of modern politeness render it next to absolutely certain that the time of orbital revolution has never been varied even the fraction of a second. In the infancy of astronomy, many ingenious expedients were adopted to ascertain this and other matters connected with the times and motions of the planets and other heavenly bodies, one of which may be mentioned even at the risk of tediousness. To ascertain the exact time of the revolution of the concave of the heavens, two vessels were placed over each other, the upper filled with water, the lower empty. At the moment of the appearing of a certain star the water was permitted to flow from the upper into the lower vessel, and the flow was continued until the same star appeared the next night, when the flow was stopped. The whole concave of the heavens had then made one revolution. The water which had flowed out during this time was then divided into twelve equal parts, and on the following evening they repeated the operation, filling successively six of these vessels, and noting carefully what stars rose above the horizon during the time required to fill each of them. Each group of stars which rose during the time of filling one small vessel was called a *station* or *house* of the sun. They then postponed operations upon the other half of the heavens for six months, when they repeated it, and thus divided the path of the sun through the whole heavens into twelve divisions, to most of which they gave the names of certain animals; hence the term *zodiac*, the propriety of which could have been seen only by the fertile fancies of the childhood of the race. The whole ancient method of dividing and naming the constellations is to us utterly absurd, and is really a hindrance to a knowledge of the stars.—*From the "History of Chronology," by Professor E. S. Burns, in Popular Science Monthly for April.*

Notes and News

ONTARIO.

The Oshawa High School was visited by Dr. J. A. McLellan, H. S. I., who spoke very highly of it. He expressed much satisfaction at the tone and discipline of the school, and complimented the pupils on the excellent examination they had passed in all the subjects he had examined in. This must be extremely gratifying to the Head Master, Mr. Tamblin, and his assistants, as it reflects much credit on their assiduity and ability.

We are continually hearing most favorable reports of the condition and efficiency of the Separate Schools in Lindsay, under the superintendence of Father Stafford. His learned, energetic and vigilant influence is exerted constantly in their behalf, and in consequence they are second to none in the Province.

We learn that Mr. J. Frith Jeffers, M. A., one of the most popular and successful Collegiate Institute Principals, has been appointed to an office on the Midland Railway, and we understand that the position is financially much better than the principalship he resigned at Peterboro'. It is evident that a Board of railway directors is better able to discern ability, and more inclined to pay for it, than some of the school boards we have lately heard of.

Mr. A. B. McCallum, M. A., Head Master of the Listowel High School, has been made the recipient of a congratulatory address by his pupils on the occasion of his having the M. A. degree conferred on him at the Queen's University, Kingston.

Mr. O'Connor, H. M. Owen Sound High School, at a recent meeting of the School Board, told the Trustees that about 100 scholars of that town and neighborhood desired to try for Intermediate and Entrance examinations.

We hear that changes are about to be made in the management of the Upper Canada College. Three of the masters have already resigned, and it is rumored that the Principal's salary will be greatly reduced.

A complete change is about to be made in the staff of Galt Collegiate Institute, for what reason we are not fully aware. The masters, Dr. Tassie, Mr. Murray, and Mr. Chase have the reputation of being among the most successful teachers in the Province. Mr. J. E. Bryant, M. A., late of Pickering College, has been appointed to succeed Dr. Tassie as Principal.