

on logic, they would see what he meant. Frankly, the speaker believed, that to give a high classical education in the bulk of our schools was impossible, and yet it was desirable to have it. He would desire—but he was not going into the Upper Canada College question—to have a dozen schools in different parts of the country doing the same substantial work as that institution, but with some improvements. They should be a class of institutions essentially different from ordinary High Schools. Mr. Hodgins explained, in reference to some remarks from gentlemen in the room, that under the proposed Bill, they would be able to retain the old system of apportionment by average attendance, and also adopt the new system of granting money according to the merits of the school itself. These institutions if properly conducted would perhaps reach a higher point of excellence than Upper Canada College, and it was a fact which could be proved that a larger number of institutions in the country could be made to reach the position required for the standard Collegiate Institutes than they supposed. The 5th clause was next referred to, when, in answer to a question, the Rev. Mr. Young said, that one or two Inspectors of Grammar Schools could not efficiently do the work of examining pupils for admission to the schools as the Act required. The Secretary asked why the question of admitting pupils was not left to the Grammar School masters. Mr. Hodgins said, that there had sometimes been a pressure to get pupils into the Grammar Schools, and the odium of refusing them had fallen upon the masters. This explanation was deemed satisfactory.

At this point, Mr. Kirkland moved and Mr. Woods seconded the following resolution; "that the thanks of this Association be given to Mr. Hodgins and the Rev. Mr. Young for their attendance and explanations." Carried. Mr. Hodgins made a suitable reply.

MINISTER OF PUBLIC INSTRUCTION.

In answer to a question on this subject, the Rev. Mr. Young said that the proposed change was, in his opinion, one that would be very injurious to the educational interest of the country. It was perfectly plain that such a Minister could only devote a small portion of his time to his duties, as perhaps he was a lawyer or a member of the Government; and, at the present day, when there were so many important educational questions arising, it seemed monstrous that the educational interests of the country should be in the hands of a person who could only devote a small portion of his time to them. The office should be filled by a man who would make the duties connected with it the whole business of his life. It had been said the present Chief Superintendent should be appointed President of the Council of Education, and he could then give his advice to the Ministers of Public Instruction. The speaker thought, however, that he would have the whole power in his hands, as the Minister would rely upon him, and notwithstanding that the President would have the power, he would not be responsible for the use he made of it. Some modifications might, in the speaker's opinion, be wisely introduced into the Constitution of the Council of Public Instruction. He was strongly of opinion that the teachers themselves should in some way or other, have a more direct influence in that body than they had yet possessed, either in some of them being members of the Council, or in some other way, for nobody could be so well qualified for it as teachers who were connected with education every day. The Rev. Mr. McClure asked if it was the Rev. Mr. Young's opinion, that the number of pupils sent to the Universities from these High Schools, would be increased if the Act went into operation. The Rev. Mr. Young answered that he did not think so, nor did it make much difference. The thing was to have the country well educated.

NOTICES OF MOTION.

Mr. Buchan gave notice that at the next meeting of the Association he would move that the annual fee be changed. Mr. De Roche gave notice that at the next meeting he would move that assistant masters having qualifications of head masters be eligible to become members of the Association.

ELECTION OF OFFICERS.

The following gentlemen were elected officers of the Association for the ensuing year:—President Wm. Tassie, M.A., Galt; Vice-President, Samuel Woods, M.A., Kingston; Secretary, J. Howard Hunter, M.A., Dundas; Treasurer, H. M. De Roche, B.A., Napanee; Councillors, Thomas Kirkland, Esq., Whitby; Rev. B. Bayley, B.A., London; J. Thorburn, M.A. Ottawa.

Votes of thanks were then passed to the late President, Secretary, and Treasurer, to the Press, the Railway Companies, and to Dr. McCaul for the invitation he had sent to the Association, after which they adjourned to meet again at the call of the Secretary during the Christmas holidays.

II. Biographical Sketch.

THE REV. DR. CALDICOTT.

Thomas Ford Caldicott was born at Long Buckley, Southamptonshire, England, in March, 1804. He was the son of the deacon of a Baptist church, and early in life he came out to Canada, and soon obtained a position as tutor for the children of an officer in one of the regiments stationed in this country. He came to Toronto when he was about twenty-one years of age, and had at one time a stationery business at the stand now occupied by W. C. Chewitt & Co., on King street. He afterwards taught school in Colbourne street, and some of our most prominent citizens were educated by him, among the rest V. C. Mowatt. He was in the habit of preaching occasionally when only nineteen years of age. He was ordained as a Baptist minister in Lockport, in the State of New York. After preaching there some years, he was called to fill a Boston pulpit, and was there a pastor for 19 years in three different churches. He next went to Williamsburg, Long Island, as a minister, and from that was called to Toronto, where he has presided in Bond street church since the fall of 1860.—*Leader*.

OBSERVATIONS ON THE SUN.

In these days nothing escapes the eager and persistent glance of science. During the solar eclipse of 1860, peculiar rose-coloured protuberances were seen darting like flames to a great elevation above the sun's surface. These appearances caused astronomers to look forward with the greatest interest to the eclipse of 1868. It was known that this eclipse would be total for a period of seven minutes—a duration that would not occur again for centuries. That this unusual opportunity might not be lost, parties of observation were stationed at several points on the line of totality, reaching from Arabia to Malacca. The photographic and spectroscopic instruments employed by these expeditions were of the utmost delicacy, and in spite of troubles from drifting clouds very important results were obtained.

The protuberances were readily seen, in some cases of remarkable height, estimated at from twelve thousand to ninety thousand miles, but rapidly changing in shape and extent as the sun moved on from station to station. M. Janssen describes one of these appearances as resembling the flame of a vast forge urged by a powerful blast through the openings in a combustible mass. Another he likens to a group of snowy mountain-peaks, resting on the limb of the moon and illuminated by a setting sun.

On applying the spectroscope to these protuberances, their nature was at once made manifest. Various bright lines, separated by intervals of darkness, met the eye of the observer. No result could be clearer. They were plainly masses of luminous vapor, volumes of flaming gas leaping strongly upward from the surface of the sun.

The number of these lines varied very much in the different instruments, Lieutenant Herschel seeing but three, while Janssen saw five, and M. Rayer no less than nine, of which only one was unknown, the others agreeing with prominent solar lines. The presence of hydrogen and magnesium was plainly indicated, with unknown elements, among which carbon may possibly have been present.

Thirty years ago it was known that the light of the edge differed from that of the body of the sun, and it was then conjectured that a peculiar solar envelope might exist. The discovery of solar protuberances lent force to this conjecture, and two years ago Mr. Lockyer conceived the idea of directing his glass to the edge of the sun, and in this manner isolating the light of these strange masses. It was only in October last, after the date of the eclipse observations, that he succeeded in realizing his idea, and producing in his instrument two distinct spectra—one the ordinary solar spectrum—the other a spectrum of colored lines, as above described.

Meanwhile, during his observations of the eclipse, M. Janssen conceived the same idea, and on trying the sun with his spectroscope the very next morning, plainly beheld the bright lines of the protuberances in the edge of the solar disk.

This important discovery will obviate the necessity of awaiting the fleeting event of an eclipse for a continuance of these observations, and will, moreover, afford the useful test of an ordinary solar spectrum placed in direct comparison with the new bright lines. It has already served to disprove to presence of sodium, which was indicated in the eclipse observations. Lockyer, by his new process, has already arrived at the following interesting conclusions: He finds reason to believe that the sun is surrounded by a gaseous envelope of great regularity, alike in equatorial and polar regions, and nearly five thousand miles high. The protuberances seem to be temporary ebullitions of gas, as they rapidly vary not only in size and position, but also in composition, some yielding lines which are not found in others. May not the sun-spots, those dark depressions in the solar envelope, have some connection with this new-found phenomenon?—*Lippincott's Magazine*.