

Professor of Greek in Queen's College, Galway. The Belgian Government has offered a prize for the best work on the effects of sulphate of iron in the treatment of cases of inflammatory diseases of the lungs in cattle. The *Belfast Newsletter* mentions a very important discovery in the manufacture of linen, by which the time required to bleach and finish for sale the woven fabric will be reduced from three months to ten days or a fortnight, and the quality of the article will be improved. Prof. Faraday has lately discovered that zinc, by being melted and poured into water, assumes new properties; it becomes soft and malleable, losing none of its tenacity, but is capable of being spun into the finest wire, pressed into any required form, or rolled into any required thinness. The discovery will prove of importance to the arts. It is stated that the electric light has already been brought to a sufficient degree of practicability to be used for the permanent purposes of illumination, and that it is henceforth to be employed in the tunnels of the Manchester and Yorkshire railway. The severity of the recent proceedings of the Government of Saxony against the press, and the numerous confiscation of books in Leipzig, have caused a plan to be revived which was formerly entertained by many of the Leipzig booksellers, of transferring the seat of trade to another city. Berlin and Brunswick have been mentioned as places likely to be chosen. A banking institute, for encouraging the mutual instruction of its members in literary and professional studies, was originated at the London Tavern last month, by a meeting over which Mr. W. G. Prescott presided. A literary monthly has made its appearance at Tiflis, in the Georgian language. It will discuss Georgian literature, furnish translations from foreign tongues, and treat of the arts and agriculture. What oriental students will find most interesting in this magazine, will be its specimens of the popular literature. A new Armenian periodical has been also commenced in the Trans-Caucasian country. Charles Dickens (Boz) is at present keeping his terms at the Middle Temple, for the purpose of becoming a barrister. Mr. Douglas Jerrold has made a proposal that a copy of Shakespeare shall be presented to Kossuth, by penny subscriptions throughout England, in admiration of his marvellous mastery of "the tongue that Shakspeare spoke." The idea seems to meet with almost universal favour. In a note to the editors of the *Daily News*, Mr. Jerrold says:—"The shower of pennies subscribed by Englishmen, will not be without its significance; such copper will have its effects even against the iron of iron Russia and lead of leaden Austria." The suggestion of his Royal Highness Prince Albert, for the delivery, in connexion with the Society of Arts, of a series of lectures on the probable bearing of the Exhibition on science and the arts, has been most warmly taken up by the Council, and arrangements have already been made with Dr. Playfair, Dr. Royle, Dr. Lindley, Professor Solly, Professor Aasted, Mr. D. Wyatt, Mr. O. Jones, and Mr. H. Cole, to take part in the anticipated series of lectures. It is expected that the session, which will commence about the middle of next month, will open with the first of the proposed series. A large number of the articles exhibited continue to be purchased. The executive committee of the great exhibition have announced that they are forming a collection to consist of samples of all articles of trade, British and foreign. At present, the privilege of contributing is confined to the late exhibitors. Curiosities and articles of pure science are inadmissible, commercial value being the test which will be adopted. Depositors may in each case affix to their goods the selling price and any other information. Mr. Tucker, an Engineer attached to the arsenal at Malta, has arrived at Alexandria on a mission from the Government to survey the prostrate obelisk (Cleopatra's Needle) and report as to the practicability and cost of carrying it to England. He has had it entirely uncovered, and finds it to be in about the same defaced condition throughout. Mr. Serrel the Engineer who planned the celebrated suspension bridge over the Niagara, has made a survey, for the city Council, with a view of ascertaining a proper site for the proposed suspension bridge in front of Quebec. There are 6,461 miles of English railways constructed, at the cost of £205,160,000; the number of engines working on them is 2,430; the average distance run per day being 110,333 miles; the profits on the traffic paying from £11,000,000 to £11,500,000 into shareholders. The privilege of selling newspapers and books at the railway stations belonging to the South Western railway company has, it is stated, been leased to Messrs. Smith & Son, the news agent of the Strand, for £1,000 a year. The telegraphic cable between England and Calais cost £15,000. Telegraph Wires have been introduced into the Observatory at the Dock Yard Boston. It is understood that it is the intention to connect with the Observatory at the Cambridge University, near Boston, by means of the Telegraph between Halifax and Boston; to be used in this instance for Astronomical purposes and the advancement of science. The following has just been published:—"Notes on the Mineralogy, Government and Condition of the British West India Islands, etc. etc. etc., by Admiral the Earl of Dundonald, G.C.B.," late Naval Commander-in-Chief on the above station. British North America is treated upon at some length in the pages of this work. The aggregate population, according to the general census of 1844, of Turkey in Europe, Asia, and Africa, is stated at upwards of thirty-five millions, of which

there are fifteen and a half millions in Europe, sixteen millions in Asia and nearly four millions in Africa. In Constantinople there are forty-one public libraries, chiefly attached to mosques and religious institutions. There is a church actually existing near Bergen, which can contain nearly 1,000 persons. It is circular within, octagonal without. The relievo outside, and the statues within, the roof, the ceiling, the Corinthian capitals, are all of papier mache, rendered waterproof by saturation in vitriol, lime, water, whey, and the white of egg. The Governors of thirty-one States fixed upon November 27th, for the uniform observance of the annual Thanksgiving, being the result of a correspondence with the Governor of Ohio. There are sixty-five cities and towns in the United States, the population of which, by the census of 1850, is 10,000 or upwards. There are at least fifty clipper-ships now employed in the Californian and East Indian trade, some of them of the large size of 1600 and 1800 tons. A new and bright comet was discovered on the 22d of last month at the observatory of Baron Senftenburg, in Bavaria, by Mr. Brorsen. It may be seen in the northern part of the constellation Bootes. A letter from Berlin of the 28th ult. states that Dr. Brown has just discovered, at the Observatory of Berlin, a new comet, in the constellation Caus Venatorius. This comet is very luminous, and has two tails. As it will soon be in conjunction with the sun, it may be seen in the evening in the north-west, and in the morning in the north-east, at a distance of from seven to eight degrees from the last star of the tail of Ursa Major. Mr. W. Lassell of Starfield, Liverpool, has discovered two new satellites of the planet Uranus. They are interior to the innermost of the two bright satellites first discovered by Sir William Herschell, and generally known as the second and fourth. It would appear they are also interior to Sir William's first satellite, to which he assigned a period of revolution of about 5 days and 21 hours. He first saw these on the 24th of last month.

Lectures at the Toronto Mechanics' Institute.—Two Lectures, of which the following is an abstract, have been delivered in the Institute this season thus far. Others of equal interest and importance are announced. The first Lecture of the season was on "Terrestrial Magnetism." It was delivered by the director of Her Majesty's Magnetical Observatory in this city, Capt. LEFROY, R.A., F.R.S. Very little, the Lecturer remarked, appears to have been known of the earth's magnetism, even in its effects upon the Mariner's Compass, before the time of William Norman, a clock-maker of London, who, in the 16th century, discovered "the dip," or that force which causes a magnetic bar of iron, when freely and equally suspended, to assume an inclined position to the earth's surface, north or south of the magnetic equator. It has been found that the dip is subject to continual variations. In London, in 1773, the dip was $72^{\circ} 19'$ and 1830, only $69^{\circ} 38'$. At Toronto the dip is now about 75° , and is slowly suffering a small variation. The phenomenon of the dip was strikingly shown by causing a dipping needle to move along a magnetic bar of iron. At the centre of the bar it assumed a horizontal position, corresponding to the real position of the needle at the magnetic equator of the earth. As it was moved towards the northern or southern end of the bar, it dipped towards them, in proportion to its proximity with them. When over the poles, it stood vertically. Capt. Lefroy exhibited, by means of diagrams, the situations of those parts of the earth, where there is no dip, which correspond nearly with the equator. Lines of equal variation, and of no variation, were also exhibited, traced over a map of the earth's surface. The mode of measuring the variation of magnetic force was illustrated by causing a dipping needle to vibrate, and then counting the number of vibrations that occurred before it assumed a position of rest. The number of these vibrations varies at different parts of the earth's surface, and thus indicates the variations of magnetic force. This mode of measuring the variations in magnetic force, on different parts of the earth's surface, was undertaken by Humboldt, in his first expedition to South America. Humboldt's name was alluded to by Capt. Lefroy, in language expressive of deep admiration and feeling. If, said the eloquent lecturer, we seek for an example of that ardour with which some men investigate the mysterious and wonderful works of nature, we may content late a young man, more than half a century ago, laying the shadowy foundation of a science, which he has since pursued with such astonishing zeal, acuteness and success, as to have infused his own warm and investigating spirit of observation into the scientific bodies of every civilized country; and not being contented with exciting a spirit of enquiry, he has succeeded in inducing the Governments of England, Russia, and the States of Germany, to join in one harmonious scheme for advancing our knowledge of the phenomena and cause of Terrestrial Magnetism. Thirty different stations have been established over the surface of the earth, to watch the changes and measure the intensity of this force—a force existing in the earth to such an extent, that if it were concentrated on one point, it would exercise an influence equal to that of eight thousand four hundred and sixty-four trillions of magnets, similar to the one he held in his hand. This vast force appears to be concentrated, as it were, in four different poles, two of which are situated in the northern hemisphere, two in the southern. These poles do not coincide with the