

Literary and Scientific Intelligence.

Literary Order of Knighthood.—It is said the Queen is about to institute a new order of Knighthood, for persons eminent in literature, science and art, to be called the "Order of Minerva," and to consist of twenty-four knights.

Government Contribution to Science.—A letter has been addressed to the Council of the Royal Society of England, by Lord John Russell, offering to place at the disposal of the Society, for scientific purposes, this year, £1,000, and probably the same amount in successive years.

Pension to Mr. Petrie.—The Queen has conferred a pension of £100 per annum from the Civil List, upon Dr. George Petrie, one of the Honorary Secretaries of the Royal Irish Academy, who is well known for his antiquarian researches.

African Travellers.—Government has determined to afford effectual assistance to Mr. Richardson, the African Traveller, in prosecuting his travels and researches in the great desert of Sahara, Soudan and the regions of Bornou and the Lake Tshad. Mr. Richardson will be accompanied by Drs. Barth and Overweg, Prussian savans, who are charged by Government to draw up a scientific report.

The Exhibition of the Works of all Nations.—The Society of Arts has concluded contracts with Messrs. James and George Munday, the public works contractors, for carrying out Prince Albert's projected exhibition of arts and industry of all nations, to take place in 1851. The Messrs Munday undertake, without any security, to carry out the exhibition on their own responsibility, and to indemnify the Society of Arts for all expenses and liabilities; to erect the necessary buildings, at a cost of some £50,000, and to provide £20,000 for prizes.

M. Verbeyst, the most celebrated book-collector in Europe, or perhaps in the world, has just died at Brussels at an advanced age. He had founded a very curious establishment, consisting of a house of several stories, and as high as a church, and disposed so as to contain about 300,000 volumes, arranged according to their subjects.

New Application of Photography.—One of the greatest improvements which have yet been made in the practice of photography is, the substitution of plates of glass for sheets of paper. The simplicity of the process on glass is one advantage; but the perfection of primary pictures thus obtained and the great beauty of the positive photographs copied from them are what render the discovery of the greatest value. In 1840, Sir John Herschel published in the *Philosophical Transactions*, (vol. 131, pages 11-13) a description of some processes by which he obtained pictures with the camera on glass plates, and produced positive copies from them upon paper. They were of exceeding delicacy and beautiful definition,—judging from a specimen which we have seen representing the great telescope of Sir W. Herschel previous to its destruction.

Incombustible Man.—M. Boutigny, the author of the experiment of making ice in a red hot crucible, divides or cuts with his hand a jet of melted metal, or plunges his hand into a pot of incandescent metal. No precautions are necessary to preserve it from the disorganizing action of the incandescent matter; only have to fear, especially if the skin be humid, and pass the hand rapidly, but not too rapidly, through the metal in full fusion. There is no contact between the metals; the hand becomes isolated; the humidity which covers it passes into the spheroidal state, reflects are radiating caloric, and does not become heated enough to boil. M. Boutigny has often repeated the apparently dangerous experiment in lead, bronze, &c., and always with success.

Naphtha Gas.—The streets of Parsonstown on the Earl of Rosse's Estate, Ireland, are to be lighted with *Naphtha*, which gives a most brilliant light.

Time of Building the Britannia Bridge.—Should the first line of tube be completed by March, 1850, the work will then have been nearly four years in progress. Telford's Menai Suspension Bridge was eight years in building. The weight of its iron work, compared with that of the Britannia Bridge, being as 644 to 10,000 tons.

Spindle Statistics.—It appears, by statistics recently published, that there are 28,000,005 spindles at work in the world. Out of these, England, including the United Kingdom, commands a force of 17,500,000; America, with all her competition, 2,000,000; Russia about the same number; France, 3,000,000; and Belgium considerably less than any of the three.

Terrestrial Magnetism.—Some interesting investigations in terrestrial magnetism, made by Professor Norton, of Delaware College, have recently been communicated to the American Journal of Science.

The theory is new. According to it every particle of matter at the surface of the earth, and to a certain depth below it, is endued with a magnetic force, acting, like the magnetic force of an electric current, transversely to the ideal line connecting the particle with the magnetic needle, the intensity of which is proportioned to the temperature of the particle. This theory proves to be adequate to the explanation of all the phenomena of the general action of the earth upon the magnetic needle; and serves also with the computation, with a very close approximation to the truth of the direction of the needle, and of the intensity of the force acting upon it over all parts of the earth. It has also achieved the signal triumph of furnishing the first rational physical explanation of the daily variations that occur in the earth's magnetic action, by tracing them to the daily variations that occur in the temperature and humidity of the earth's surface. These investigations reveal the existence of unsuspected and very interesting relations between the thermal and magnetic state of the earth's surface, and show that the daily changes which take place in the action of the earth upon the magnetic needle proceed "pari passu" with the meteorological changes that occur in its vicinity.

"It is certainly a novel and beautiful result, that, in the disturbed movements and changes of force of a delicately poised magnetic needle, we can read the story at the same time of each passing change of temperature of the warm dew that steals noiselessly down at night, and of the rain that falls to rise again in invisible vapor at the awakening touch of the rays of the sun. In making these discoveries, Prof. Morton throws a flood of light upon much that has always been enveloped in the darkness of mystery. He reveals a field in which men of science will enter with delight; but we trust it will not be forgotten who unbarred the entrance gate."

The Phantoscope.—A new philosophical instrument in the department of optics, has been invented by Professor Locke, of Cincinnati, called by him *The Phantoscope*. It depends on principles of optics, announced by him in Prof. Silliman's Journal of last winter, under the head of *Binocular Vision*. It is very simple, and has neither lenses, prisms, nor reflectors. It consists of a flat board base, about nine by seven inches, with two upright rods, one at each end, a horizontal strip connecting the upper ends of the uprights, and a screen of diaphragm, nearly as large as the base, interposed between the top strip and the tabular base, this screen being adjustable to any intermediate height. The top strip has a slit one-fourth of an inch wide, and about three inches long from left to right. The observer places his eyes over this slit, looking downward. The moveable screen has also a slit of the same length, but about an inch wide. This instrument may be expected to be fully explained in Silliman's Journal for January.

Valuable Presents to the Legislative Library of Canada.—Upwards of one thousand seven hundred volumes of Parliamentary Works have been presented by order of the Speaker of the House of Commons, to the Library of the Canadian Assembly; they include a complete set of the Commons Journals from 1547, in 110 volumes; also a series of the Sessional papers from 1800 to the latest date, containing the whole of the valuable statistical and general information which have been from time to time laid before the House, together with Reports of Committees, Commissions of Inquiry, &c., &c. Caleb Hopkins, Esq., also has presented to the Library of the House of Assembly a full set of the Journals and Appendices of the Upper Canada Lower House.

High Life.—The chamois and ibex are found on the Alps as high up as 9,000 feet; the goat of Cashmere browses at a height of 13,000 feet above the level of the sea, and the Pamir sheep live at an elevation loftier than the granite peak of Mont Blanc.

Age of the Principal Papers in London.—The *London Times* was established on the first of January, 1788, but bore the number 941, having previously appeared as the *Universal Register*. The *Public Ledger* dates from 1759, the *Morning Chronicle* from 1769, the *Morning Post* from 1772, the *Morning Herald* from 1784, and the *Morning Advertiser* from 1795.

Interesting Items from the Berlin Correspondence of the N. Y. Commercial Advertiser.—The *Carnival Society of Cologne*, famous in poetry and prose for the splendour of its annual celebration, has resolved to have none this year. Its president, M. Raveaux, is now a political exile. The society has resolved that uproarious joy is not in harmony with the present unhappy condition of Germany. The magnificent wardrobe has been ordered to be sold for the benefit of the political fugitives now in Switzerland.

The fine Library of Tieck, the poet, was sold at auction last month, for the payment of his debts. A large number of the most valuable works were purchased by admirers who, as a token of their admiration, have returned them to Tieck for his life time. At his decease, they are to be placed in the Royal Library.