

and Dr. of Music, already granted or conferred, or hereafter to be granted or conferred by the University of Melbourne, in the Colony of Victoria, shall be recognized as Academic distinctions and rewards of merit, and be entitled to rank, precedence and consideration in the United Kingdom, and in the colonies and possessions of the Crown throughout the world, as fully as if the said degrees had been granted by any University of the United Kingdom."

## FOREIGN.

—**EDUCATION IN GERMANY.**—In a voluminous work upon Germany, published the last year at Gotha, the author congratulates himself and his countrymen that there is no other country in the world so advanced in every species of culture—no land where all classes, from the highest to the lowest, are so well educated—no land where so much pains is taken to elevate the people! On an average, there is only one in every hundred who can not read and write; in some States only one in ten hundred, and in some none. In the whole country there are four hundred gymnasiums, and twenty-four universities, and in the universities eighteen thousand students. In Prussia alone are three hundred and eighty-two institutions for orphan and neglected children; all of whom are taught to read, and write, and cipher. In 150 cities are public libraries, and in no other land has the book trade attained to so much importance!—there being 2,650 establishments; of which Leipsic has 150, Berlin 180, and the whole of Austria 190; and the number of works from German authors, which appear annually, is from 8,000 to 10,000. Yet, among the masses of the people, it is impossible to buy books, and as far as reading is concerned, they might almost as well never have been taught. There is only one in a hundred who can not read—yet not one in a hundred ever thinks of reading, or has an opportunity. The author had not been in every land, and had no idea of a truly intelligent reading people. The newspaper is a far more efficient educator than the spelling-book, and of this they know nothing.—*Massachusetts Teacher.*

—**COMMON SCHOOLS IN SOUTH AMERICA.**—It is worthy of note that the Government of Buenos Ayres recognizes the principle that the education of the masses is the only safeguard to a Republic, and have taken the instruction of youth from the priesthood and placed it under the charge of a Common Educational Department, organized after the Common School System of the United States. The school funds are placed in the hands of the Governor, to be distributed in certain proportions to the districts, the tax-payers being taxed from one-fourth to half as much as the donation. A monthly paper has also been started, devoted entirely to school interests.

## IX. Literary and Scientific Intelligence.

—**EUROPEAN LIBRARIES.**—In a recent account of the public libraries of Europe, it is stated that the nine public libraries of Paris alone contain upwards of a million and a half of printed volumes; nearly as many as all those of Great Britain put together, and but little short of twice as many as those of the United States. All the other States of Europe have many or few large or small libraries, according to the progress they have made in civilization. Thus, Prussia has 44 public libraries, containing an aggregate of about 2,480,000 volumes; Austria 49, with an aggregate of nearly 3,000,000; Bavaria 18, with an aggregate of 1,326,480; Russia 12, with an aggregate of 1,236,480, etc.

—**PARIS LITERARY ITEMS.**—In Paris, the second volume of Guizot's memoirs is announced. M. Biot's complete works are published in three volumes. A history of Cuba now in its seventh volume, has appeared. General Comonfort has published a pamphlet of thirty pages, defending his administration of Mexico. There is also a "Voyage dans les solitudes Americaines, Minnesota," by the Abbe Domenec. Gen. Niel has published by authority of his government, the journal of the engineering operations of the siege of Sebastopol, a large quarto of six hundred pages, with a folio atlas of 15 plates. The new historical dictionary of the French languages by the French Academy, is published at eight francs per number.

—**FRANCE.**—The national appropriations in France for 1859, are, for the war department 345,000,000 francs, and for primary education only 6,000,000. The city of New York alone allows nearly this sum for its public schools, and yet its population is only about 700,000, while France has a population of 36,000,000. The whole sum voted for education, was 20,000,000 francs, of which 14,000,000 are to be devoted to superior education in the colleges of letters, arts, and sciences.

—**THEORY OF THE AURORA BOREALIS.**—At the recent meeting of the British Association for the Advancement of Science, Admiral Ross read a paper on this subject. He said: "It having occurred to me that, if my theory were true, namely, 'that the phenomena of the Aurora Borealis was occasioned by the action of the sun, when below the pole, on the surrounding masses of colored ice, by its rays being reflected from the points of incidence to clouds above the pole, which were before invisible, the phenomena might be artificially produced; to accomplish this, I placed a powerful lamp to represent the sun having a lens, at the local distance of which I placed a rectified terrestrial globe, on which bruised glass, of the various colors we have seen in Baffin's Bay, was placed to represent the colored icebergs we had seen in that locality, while the space between Greenland and Spitzburgen was left blank, to represent the sea. To represent the clouds above the pole, which were to receive the refracted rays, I applied a hot iron to a sponge; and, by giving the globe a regular diurnal motion, I produced the phenomena vulgarly called 'The Merry Dancers,' and every other appearance, exactly as seen in the natural sky, while it disappeared as the globe turned, as being the part representing the sea to the points of incidence. In corroboration of my theory, I have to remark that during my last voyage to the Arctic Regions (1850-51) we never among the numerous icebergs saw any that were colored, but all were a yellowish white; during the following winter, the aurora was exactly the same color, the the phenomena produced in my experiment was the same, as was, also, the Aurora Australis, in the Antarctic regions, where no colored icebergs were ever seen. I regret that it is out of my power to exhibit the experiments I have described, owing to the peculiar manner in which the room must be darkened, even if I had the necessary apparatus with me; but it is an experiment so simple that it can be easily accomplished by any person interested in the beautiful phenomena of the Aurora Borealis."

—**A MIRAGE.**—At about six o'clock on Wednesday evening (April) a magnificent sight attracted attention in Oswego. The peculiar state of the atmosphere caused a refraction which presented the Canada Shore, which seemed but a few miles distant. The trees and beach were distinctly visible, and the phenomenon was one of unusual beauty in every particular.

—**HOW RAIN IS FORMED.**—To understand the philosophy of this phenomenon, essential to the very existence of plants and animals, a few facts, derived from observation and a long train of experiments, must be remembered. Were the atmosphere every where, at all times, at a uniform temperature, we should never have rain, hail, or snow. The water absorbed by it in evaporation from the sea and the earth's surface would descend in an imperceptible vapor, or cease to be rated. The absorbing power of the atmosphere, and consequently its capability to retain humidity, is proportionably greater in warm than in cold air. The air near the surface of the earth is warmer than it is in the region of the clouds. The higher we ascend from the earth, the colder we find the atmosphere. Hence the perpetual snow on very high mountains in the hottest climates. Now, when, from continued evaporation, the air is highly saturated with vapor—though it be invisible—if its temperature is suddenly reduced by cold currents descending from above, or rushing from a higher to a lower latitude, its capacity to retain moisture is diminished, clouds are formed, and the result is rain. Air condenses as it cools, and, like a sponge filled with water and compressed, pours out the water which its diminished capacity can not hold. How singular, yet how simple, is such an arrangement for watering the earth!—*Scientific American.*

—**THE AIR IN TOWN AND COUNTRY.**—R. Angus Smith, an English gentleman, who has for several years devoted attention to the condition of the air of towns, communicates to the London Athenæum the result of some of his experiments for ascertaining the amount of organic matter contained in the air of various localities. The process by which this is accomplished consists in finding how much of a solution of permanganate of soda will be decomposed by a given amount of air. The process occupies about half an hour. Mr. Smith states that he finds as much difference between the back streets of a town and the air of a hilly district in the North of Lancashire as from 1 to 22. In other words, there was found the air of a close court 22 times more matter capable of decomposing the solution than there was found in a free hilly district.

—**HOW TO CUT GLASS WITH A PIECE OF IRON.**—Draw with a pencil on paper any pattern to which you would have the glass conform; place the pattern under the glass, holding both together in the left hand, (for the glass must not rest on any plain surface,) then take a common spike or some similar piece of iron, heat the point of it to redness, and apply it to the edge of the glass; draw the iron slowly forward, and the edge of the