

Miscellaneous.

EDUCATION IN FRANCE.—Jules Simon, formerly Professor of the History of Philosophy at the Sorbonne, and member of the French Legislative Corps, has just published in Paris a valuable work on education in France, entitled *L'Ecole*.

The questions, what are the schools in France, what should they be, and what are the reforms that could immediately be realized, are treated with great ability. He enumerates the sums that figure in the budget on account of the public service, and compares them with that which is allotted for education. He is surprised that any one should consider the sum of 6,509,100 francs included in the estimates of ordinary expenses for 1864, as a very handsome allowance, particularly when compared with the amount granted by other States for primary instruction. He shows that in England—that is, for England and Ireland—with a population of about 27,000,000, the State gives 25,000,000 francs; Belgium gives, for her 45,00,000 souls, more than 3,000,000 francs; Geneva, with her 66,000 inhabitants, 97,000 francs; New York, for 3,851,563 inhabitants, \$4,395,386, near 22,000,000 francs; and Massachusetts, for 1,231,166 inhabitants, \$3,100,000, or 15,500,000 francs. If, then, France gave 20,000,000 francs, she would not be in the first or even second rank.

If the contributions of the departments and communes be added to the amount, the inferiority of France would be still more remarkable. The 25,000,000 of England are not, properly speaking, a budget, they are merely the subsidy given by the State to such schools as will receive it. If he enumerated all the foundations, all the parochial or private endowments, all the charitable associations for the maintenance of schools, the list would be formidable. M. Deschamps, in his speech in the Belgian Chamber of Deputies, showed the amount to be 40,000,000 francs, making with the subsidies 65,000,000 francs, exclusive of the taxes. General Moran gave for the different States of Europe the proportion of sums appropriated to public instruction, as compared with the military service. In that list, France comes long after Austria, Prussia, Bavaria and even the Grand Duchy of Baden! Is it not shameful, he asks, that the French war budget, compared with that of public instruction is in the proportion of 235 to 11?

A SCOTCH LORD.—Grant Thorburn relates the following anecdote of Rev. Dr. Webster, a celebrated preacher of the Church of Scotland. It occurred about the year 1774. Business took him to London, and one day, passing the House of Lords, his curiosity induced him to go in and see them. No one was admitted but noblemen's servants and members. The Dr. being ignorant of this rule, requested admittance. "What Lord do you belong to?" said the doorkeeper. "To the Lord Jehovah," replied Dr. Webster. "The Lord Jehovah?" exclaimed the doorkeeper. "I have been here seven years, but never heard of such a Lord. John," said he to his fellow-keeper on the front steps, "here's a fellow who says he belongs to the Lord Jehovah. Do you know such a Lord?" "Never heard of him," said John. "But," said Webster, willing to keep up the illusion, "There is such a Lord."—"Oh, well, pass him in," called out John, "I s'pose it's some poor Scotch Lord."

DON'T FORGET YOUR GIRLS.—When I lived among the Choctaw Indians, says a traveler, I held a consultation with one of their chiefs respecting the stages of their progress in the arts of civilized life, and among other things he informed me that at their start they made a great mistake—they only sent their boys to school. These boys came home intelligent men, but they married uneducated and uncivilized wives; and the uniform result was, the children were all like their mothers. The father soon lost all his interest both in wife and children. And now, said he, if we would educate but one class of our children, we should choose the girls, for when they become mothers, they educate their sons. This is the point, and it is true. No nation can become fully enlightened when mothers are not qualified to discharge the duties of home work of education. Parents! give your daughters, as well as your sons, the best education in your power.—[Ex.]

USELESS YOUNG LADIES.—A contemporary thus seriously speaks of that very large class of useless young ladies who glory in being above useful employment.

The number of idle, useless girls in

our cities seems to be steadily increasing. They lounge or sleep through their mornings, parade the streets during the afternoon, and assemble in frivolous companies of their own and other sex to pass away their evenings. What a store of unhappiness for themselves and others are in store for the coming time, when real duties and high responsibilities shall be thoughtlessly assumed. They are skilled in no domestic duties—nay, they despise them; they have no habit of industry nor taste for the useful. What will they be as wives and mothers? Alas for the husbands and children, alas for the unhappiness and domestic ruin follow!—[Ex.]

WORK FOR CHILDREN.—One of the greatest defects in the education of children is in neglecting to accustom them to work. It is an evil peculiar to large towns and cities. A certain amount of work is necessary to the proper education of children; their future independence and comport depend on being accustomed to provide for the thousand constantly recurring wants that nature entails on them. Even if this necessity did not exist, moderate employment of some kind would preserve them from bad habits, promote health, enable them to bear the confinement of the school-room, and teach them, more than anything else, appropriate views respecting their future welfare. It is too often the case that children, after spending six hours of the day in school, are permitted to spend the rest of the day as they please. They do not consider that their success in after life depends upon the improvement of their youthful hours. They grow up in the world without a knowledge of its toils and cares. They cannot appreciate the favors bestowed on them by their parents, as they do not know the toils they cost. Their bodies and minds are enervated, and they are constantly exposed to whatever vicious associations are within their reach. The daughter probably becomes that pitiable object, a fashionable girl. The son, if he surmounts the consequences of his parents' neglect, does it probably after his plans and station for life are fixed, when a knowledge of some of its important objects comes too late. No man or woman is thoroughly educated if not required to labor. Whatever accomplishments they possess, whatever their mental training, in the voyage of life they require some practical knowledge and experience derived, from accustoming themselves to useful labor of some sort.

A MUSICAL CRITIC.—A fellow was invited to a party, one evening, where there was music, both vocal and instrumental. On the following morning he met one of the guests, who said: "Well, how did you enjoy yourself last night? Were not the quartets excellent?" "Well, really, I can't say," said he, "for I didn't taste them; but the pork chops were the finest I ever eat."

EMERY.—At a meeting of the Boston Society of Natural History, a few days ago, Dr. Charles T. Jackson made an announcement which created considerable excitement. It was to the effect that in the town of Chester, in Hampden county, a mine of emery has been discovered, of superior quality and inexhaustible quantity. Nearly two years ago beds of iron ore were found there, and preparations were made for working them. Dr. Jackson on examining the beds was surprised to find in them margarite, an inseparable concomitant of emery. Further investigation verified his opinion, and it is now an established fact, that a mine of emery, which, to a manufacturing people is worth more than gold, has been found in our State. The mineral is found to be identical in characteristics with the emery of Naxos, which is esteemed the best in the world.

THE ENGLISH LANGUAGE.—The words of the English language are a compound of several foreign languages. The English language may be looked upon as a complication, both in words and expressions, of various dialects. Their origin is from the Saxon language. Our laws were derived from the Norman, our military terms from the French, our scientific names from the Greek, and our stock of nouns from the Latin, through the medium of the French. Almost all verbs in the English language are taken from the German, and nearly every noun or adjective is taken from other dialects. The English language is composed of 15,733 words—of which 6,732 are from the Latin, 4,312 from the French, 1,665 from the Saxon, 1669, from the Greek, 691 from the Dutch, 211 from the Italian, 106 from the German, (not including

verbs, 90 from the Welsh, 75 from the Danish, 56 from the Spanish, 50 from the Icelandic, 31 from the Swedish, 31 from the Gothic, 18 from the Hebrew, 15 from the Teutonic, and the remainder from the Arabic, Syriac, Turkish, Portuguese, Irish, Scotch and other languages.

EXPERIMENTS IN CHEMISTRY.—Professor Doremus recently gave the two first of an interesting course of lectures in New York on Pneumatic Chemistry. We take from the *Scientific American* the following notice of the experiments:

Of the several themes, however, none were more attractive than Gases, "the ghosts or spirit-form of matter." The peculiar features or properties of these were undiscovered until the last century; they are now known to possess qualities in common with ponderable bodies. The learned lecturer in speaking of the intricacy of chemical science alluded to astronomy, and asked, if this latter were bewildering in its manifold changes and infinite distances, what shall be said of chemistry, whose transpositions, complications, combinations and separations are almost inconceivable? Many experiments were made to prove the assertion that gases had properties in common with solids. Thus a number of lighted cancles were placed in the bottom of a deep glass jar and suddenly extinguished by pouring gas over them from another jar above, showing that its contents descended upon the flame. The weight of common air was pumped out of the globe by an air pump on the stage the weighted end of the scale preponderated.

Among the most striking experiments exhibited at the second lecture was the decomposition of water by sodium. A tall inverted bell glass filled with water was standing in a pneumatic trough on the platform, and the lecturer took some small pieces of sodium from a phial in which the metal was covered with naphtha to shield it from contact with the air, and wrapping them in bits of paper to prevent his fingers from being burned, he pushed them under the bell glass. The sodium being lighter than water rose to the surface in the glass, and as oxygen has a stronger affinity for sodium than it has for hydrogen, the water combining with the metal sodium to form caustic soda, and the hydrogen being set free as a gas.

Water was also decomposed by potassium. In this case the metal was thrown upon the surface of the water where it swam about in the most lively manner, decomposing the water, combining with its oxygen to form caustic potash, and setting the hydrogen free. The hydrogen as it was set free took fire, combining with the oxygen of the air, again to form water. The experiment being on a very large scale, the action was attended by violent explosions and very beautiful corruscations.

The extreme lightness of hydrogen was shown in holding an inverted jar filled with the gas under a burning gas jet, and suddenly turning the jar over so as to bring the open mouth upward. The gas from the jar immediately floated upwards in the air, and as it came in contact with the jet it burned with a loud report.

The novelty of Professor Doremus' experiments consists in the unparalleled scale on which they are conducted. In decomposing water with potassium, he had a tank 5 by 10 feet in size, and blocks of ice weighing 100 pounds.

SINGULAR AND DESTRUCTIVE KIND OF NEW NAVAL CRAFT.

The New York *Tribune* furnishes the following interesting particulars of a new fleet of picket-boats now in naval service:

As it has been the fortune of one of the picket-boats to develop the new invention of Chief Engineer Wm. W. Wood, and to demonstrate the destructive and certain working of the new torpedo, we give some new and interesting facts in relation to the history of the fleet of steam picket boats attached to our navy. This little but formidable flotilla consists of six vessels, known by no name, but being numbered in the order in which they were built. Admiral Gregory was ordered by the Navy Department to construct some of these vessels to relieve the crews who were subjected to many hardships and much exposure while on the important duty of picket in the James river, Charleston, Mobile and other harbors. The work was assigned to Capt. C. S. Boggs, who has brought them out, and the ones last completed are superior to the ones first sent out. The boats are not unlike a frigate's launch, built of wood and

copper bottomed. Each one has one of Root's patent engines, a little but powerful and compact affair. The boilers were built by Clute Brothers, Schenectady. The speed of No. 1 was 7½ miles per hour, but when the improvement in the model and greater perfection of their engines, have increased their speed until No. 6 can steam her 9½ miles an hour with ease. Each of these vessels carries a howitzer on the bow and a crew of seven men. They carry seven days' coal and provisions, and all of them have the Wood torpedo attached to them. They are very useful vessels, and the performance of No. 1 alone in blowing up the Albemarle paid for the whole fleet ten times over. A large number of them will be constructed at once. One of the most interesting features of these vessels are their engines, which are known as the double-piston reciprocating (Root) engine. It differs materially from all other reciprocating engines, and is entirely different from the rotary in its principle of action, as all of its movements, except the slide valve, are reciprocating. Its internal construction, however, is much more simple than most rotary engines, while from the nature of their movements, its parts are less liable to wear or get out of order. The cylinder or piston chamber consists of an oblong or parallel-sided box, 15 by 30 inches, and 20 inches in height, the piston area being 120 inches. The box contains two pistons of like form, working within and at right angles with the other, and both transmitting motion to a single crank attached directly to the inner piston, in such a manner that when either piston is passing the dead point, the other is exerting its maximum force. One valve serves for induction and eduction to both pistons, and has an epicyclic motion, alternating the steam and exhaust ports. This machine is, in fact, a double engine, without the intervention of any rod, link, or mechanical agency of any kind, and is one of the most ingenious and simple applications of steam ever seen; the motion is regular and free; it can be reversed instantly. The Navy Department is about to adopt it for special use, by recommendation of a Board of Naval Engineers. A speed of nearly ten miles per hour is attained in the picket boats, with from 150 to 180 revolutions per minute. One of the great features of the engine is, that it takes up in weight and room, less than fifty per cent. of any marine engine in use. The larger picket boats to be constructed are to be fitted with this engine.

THE DEATH OF JULES GERARD.

The following authentic details relative to the melancholy end of Jules Gerard were read at the last meeting of the French Geographical Society:

The ex-lion killer went to the western coast of Africa, provided with instructions from the Royal Geographical Society of London, and with the support of several members of the English nobility, for the purpose of exploring the interior of that country. He first intended to visit the Kong Mountains in North Guinea, which, up to that time, had never been crossed by any European. He left England at the close of 1863 and proceeded to Wydah; from thence he penetrated into the Kingdom of Dahomey, whence he dated one of his last letters addressed to the Duke of Wellington. After having in vain attempted to go into the interior of Africa by way of Dahomey, he came to Sierra Leone with a letter of recommendation to M. J. Braouezec, the French consul at that place, from M. Brossard de Corbigny, the commander of the French squadron in the Gulf of Guinea.

The English at Sierra Leone immediately furnished him with fresh means for his journey. An English man-of-war, commanded by Captain Cochrane, conveyed him to the neighborhood of the river Gallinas. In a few days after his landing he lost all his baggage, and took refuge in Sherborough county, where the French residents gave him every assistance in their power. He left the village of Begboom in the month of May or June last, but, when only at two hours' distance, was completely pillaged and obliged to return to the village, where he waited until the end of the rainy season to recommence his journey. His resources, however, being exhausted, Jules Gerard determined on returning to Sierra Leone, and he was drowned in crossing the Jong river, which had become much swollen by the rains. That river brings down an enormous quantity of mud and branches of all kinds, which form floating islands in the canal of Sherborough, erroneously called a river.