

of Miss Loring, of Boston. Already there are four Japanese cadets at the Annapolis Naval Academy.

Quetelet's statistics of crime in France and England show that, in the former country, out of one hundred criminals, sixty-one could not read or write, twenty-seven could read imperfectly, and only twelve could read and write well. In England, thirty-six could not read at all, sixty-one could read and write imperfectly, and only three could read and write well.

Father Secchi communicates to *Les Mondes* the particulars of a violent solar explosion on the evening of the 7th of July. The internal movements of the incandescent vapors were so intense that the luminous clouds were seen to change form rapidly, their height being six times greater than the earth's diameter. The eruption continued about two hours. On the same date, an aurora borealis was seen at Madrid and in many other parts of Europe, and the magnetic perturbations were very violent at all the observatories.

Brain-work costs more food than hand-work. According to careful estimates and analyses of the excretions, three hours of hard study wear out the body more than a whole day of severe physical labor. Another evidence of the cost of brain-work is obtained from the fact that, though the brain is only one-fortieth the weight of the body, it receives about one-fifth of all the blood sent by the heart into the system. Brain-workers therefore require a more liberal supply of food, and richer food, than manual laborers.

On the 8th of February, 1875, the University of Leyden will celebrate its three hundredth year. On that day Mr. Martinus Nyhoff, bookseller, of the Hague, will publish the roll of members of the University, from its foundation to the present time. The book will form a handsome double-columned quarto, and will be accompanied by an alphabetical index of names.

*Scotland.*—Efforts are being made for the promotion of science and art instruction in Scotland. The local papers report a series of meetings in the large towns, which appear to have been very successful. Mr. Buckmaster has forcibly pointed out what is required in the education of working men and their employers; instead of teaching boys abstractions and metaphysical ideas, as if they were all to be parishministers, they must be taught things. A knowledge of the laws and properties of matters, by which the earth is subjugated to our use, is the proper education of men who have to work on matter. Several local committees have been appointed to co-operate with the Science and Art Department in promoting scientific instruction in Scotland.

A work of much interest to teachers and advanced students is Professor Hallowell's "Geometrical Analysis." The leading features of this book are, the construction and solution of various geometrical problems from analysis, by geometry, algebra, and the differential calculus; the geometrical construction of algebraic equations; and a mode of constructing curves of the higher order by means of points. Each problem is first analysed, then constructed, demonstrated, and the method of calculation by plane trigonometry clearly indicated. The value of the system here presented and rendered available for both teachers and pupils can scarcely be overestimated, especially when we consider the admirable mental discipline which results from the use of the analytic method in any scientific study.

A Vienna contemporary speaks of an encouraging phenomenon in the promotion of practical education. The Society of Stenography in Austria has opened a competition in shorthand-writing to the pupils of the middle-class schools in Vienna. It appears from this and many other matters that in Austria as well as in the German Empire time is looked upon as money. In Belgium also the practice of shorthand-writing has of late been strongly recommended as a useful branch to be added to the curriculum of scholastic instruction.

According to the census of 1870, the total number of schools in the United States was 141,629 were males, and 127,713 females. The total number of pupils was 7,209,938, 3,621,996 being male, and 3,587,942 female. The total income of all the schools was \$96,404,726, of which \$3,663,785 came from endowments, \$61,746,039 from taxation, and \$29,992,902 from all other sources, including tuition. The total income reported is nearly three times that for 1860, and nearly six times that for 1870. It is considered quite impossible that there should have been any such increase; and the apparent augmentation is, without doubt, referable to a failure on the part of the former census officials to secure complete returns. Of the total number of schools reported, the public schools were 127,059, classical, professional, and technical, 2545, and others, 14,024. The total number of teachers in the public schools was 183,198; and in the classical, professional, and technical, 12,767. The number of pupils in the latter class was 245,190, and in the public schools, 6,228,069.

The London School Board *Chronicle*, speaking of Mr. Walford's "Juvenal," the most recently issued volume of that entertaining series, "Ancient Classics for English Readers," compares it to Mr. Theodore Martin's "charming Horace," of the same collection, and adds, "We like the divisions into which Mr. Walford has arranged

the treatment of his difficult subject, wherein he discusses the most interesting points in the life of Juvenal, compares Horace and Juvenal as satirists, pictures in colors neither too strong nor too vivid the moral phenomena of imperial Rome as it appeared in Juvenal's time, as well as its philosophy and religion (if super-titulation of the grossest and atheism of the most pronounced character may so be called); and delights us with a review of the state of literature and the condition of the *literati* in the imperial city." In concluding its criticism, the *Chronicle* remarks, "We cannot part from Mr. Walford's little book without acknowledging that we have learned much from its pages, and have been much charmed by a work that will add considerably to the reputation of one of the most mature and most accomplished Latin scholars yet among us."

The London School Board is still actively engaged in procuring the dimensions of existing school-rooms, and has just sent out forms to schools recently examined by the inspectorate and judged inefficient, requesting the managers to improve the teaching power of such schools, and so enable them to keep down the rates. This has only been the case where the buildings have been judged suitable for school purposes.

Three prizes have been placed by the Joiners' Company at the disposal of the Birkbeck Literary and Scientific Institution for the encouragement of technical education. The same company was pleased last year to present two prizes for a similar purpose. Since its foundation, in 1823, the Birkbeck Institution has continued to impart instruction in the arts and sciences. In so doing it has carried out the design of its benevolent founder, Dr Birkbeck, whose efforts in this respect will be remembered by many. The council hopes that many other of the City companies will be led to follow in the steps of the Joiners' Company by instituting prizes for the extension of technical education.

The principle that it is lawful to learn from the enemy seems to have been adopted in France. Compulsory drill for schoolboys has been introduced, and the enemy's language is to be taught at the Polytechnic Institutions and the military school of St. Cyr. From the 1st January, 1873, lectures at both establishments in German are to be given.

Drawing has been adopted as a branch of instruction in all the departments of the Public Schools of Philadelphia, except the Primary, and in this department it will be taught as a matter of course. This is considered by the friends of education in that city a very gratifying step in advance.

*Of Schoolmasters now Bishops.*—Of the famous men of England now living, who were formerly schoolmasters, are the Archbishop of Canterbury, who was master of Rugby, the Bishop of London, who was master of Islington School, and the Bishop of Lincoln, who was master of Harrow.

*Don.* In the middle ages the professors of the University of Oxford were called "Dominus," or "Don." In the case of the learned professor whose name is known to scholars as "Duns Scotus," the title was of course conferred, and the opprobrious name, "dunce," came into use somewhat on the *lucus a non lucendo* principle. Hence the common term "dunce."

*Oxford.*—The nobleman's gown, and the gold "tuft" on the velvet cap which was formerly worn by peers' sons at Oxford, is now a thing of the past; the "gentleman commoner's" silk gown, too, is all but extinct in the University, and quite extinct at Christ Church, where it formerly prevailed most extensively. Is this a sign of the increasing "liberty, equality, and fraternity" which mark the present age?

*An experiment in Saxony.*—A novel and most interesting experiment in the field of elementary instruction has just been resolved upon in Saxony. Hitherto, as everywhere else, so in that small but highly-developed kingdom, the youth of the lower orders, upon being apprenticed to a trade, have been left at liberty to forget the little they have learned at school. Attendance at Sunday school and evening instruction provided by the State and charitable societies was perfectly optional. By a law just passed this liberty is abridged, and compulsory attendance at evening schools exacted for a period of three years. This is the first time, if we are not mistaken, in the annals of the world, that an attempt has been made by a State to extend the education of the humblest classes beyond the rudiments, and after they have entered upon the business of life. Saxony, already the best taught portion of Germany, will by the new law be more than ever in advance of her sister States.

*Schooldays and Festivals in Switzerland.*—The festivals and holidays of a Switzer are connected with his life at school. Each change is made the pretext for a feast. On going to school there is a feast; on leaving school there is a feast; at every stage of his advance there is a feast. There is a vacation feast, assembling feast; when a new teacher comes there is a feast, and when a teacher leaves