

**OUR LITTLE ONES and THE NURSERY.** *The Russell Publishing Co., Boston.* It speaks volumes for the success of "Our Little Ones" that at the end of the first year of its publication it should have absorbed the old-time favorite "The Nursery". With Oliver Optic in the Editor's chair, Andrews for engraver, and the University Press, Cambridge, for Printers, there could be little doubt that the finest child's magazine in the world would be produced. Then with Mr. Sol Smith Russell, on the road to introduce it, it is not so great a marvel that in a single year, it went through all the grades and received the highest honors on "Commencement Day." Lee and Sheppard took 30,000 copies of the bound volume for holiday sale. Every girl and boy should see it. It cannot be described.

A life-size portrait of Ralph Waldo Emerson, uniform with the *Atlantic* portraits previously published of Longfellow, Bryant, Whittier, Lowell, and Holmes, has just been published. It represents Mr. Emerson not in his old age but in the full vigor of his manhood. To those who used to hear Mr. Emerson lecture twenty years ago or more, this portrait will recall the marked features and the personal appearance of one who then was, and who still is, a leader in American thought and letters. It cannot fail to be heartily welcomed by all those who have heard Mr. Emerson lecture, and by those who have read his remarkable writings; and must also be acceptable to those who, without personal knowledge of him or intimate acquaintance with his books, yet know that he is an honor to American literature, and sheds lustre upon the American name throughout the world. The portrait was prepared for subscribers to the *Atlantic Monthly*, to whom it is furnished for one dollar by the publishers, Houghton, Mifflin & Co., Boston.

**AN ELEMENTARY TREATISE ON MENSURATION,** BY G. B. HALSTED, A.M., Ph.D., Instructor in Post Graduate Mathematics, Princeton College, ex-Fellow of Johns-Hopkins University. 232 pp. *Boston: Ginn, Heath & Co., 1881.*—All the advantages derivable from mathematical studies may be obtained from the systematic study of Mensuration, whilst its practical utility is patent. But a mere compilation of rules is a poor affair. Logical analysis and proofs should be found in a complete treatise on any mathematical subject. The author of the above-named work gives clear and simple proofs of the various rules, introducing some theorems generally found only in books on Trigonometry or Integral Calculus. The earlier chapters contain applications of Euclid i., 47, rectification of the circle, and plane areas, including conic sections and spherical triangles. The formulæ for volumes refer to prisms, cylinders, cones, spheres, prisms, unguis, and solids of revolution solved by means of Pappus' Theorem. The investigation of the applicability of the prismoidal formula enables the student to group under one general principle the rules for volumes of hyperboloids, spheroids, cylinders, etc. Weddle's method of approximating to all surfaces is fully explained. The collection of examples for practice contains over 600 problems, each of which is a type of a class. Although Dr. Halsted has treated the subject in an exhaustive manner, yet the arrangement is logical, proceeding gradually from easy elementary principles to the most complicated problems. The only error that the author appears to have committed is that of using too many abbreviations in the reference tables. But this fault cannot cause much inconvenience to the reader. We can confidently recommend the volume as a valuable addition to our list of standard mathematical works. This publication reminds us that we are living in a different epoch from the olden time, when American mathematical works were remarkable for the omission of all difficulties.

**SONG OF THE BROOK.** By Alfred Tennyson, D.C.L. *Published by Estes & Lauriat, Boston, Mass. Price, \$2.00.* We have been favored by Messrs. N. Ure & Company, King St., Toronto, with a copy of this beautiful work. It is gotten up in a chaste and elegant style, which is very fashionable at present; and the illustrations are some of the finest specimens of the engraver's art. The several phases of the "Song" are pictured by some of the leading artists of the day, each picture occupying a page. This volume is the initial one of a series, which will be entitled "Songs from the Great Poets." We know of no way by which the descriptive portion of a poet's imagery can be more forcibly impressed on the minds of readers than by that adopted in the book before us.

**POPULAR SCIENCE MONTHLY,** Jan. 1882. If a teacher can afford to read one magazine, that one should be the *Science Monthly*. Its topics include a wide range, and they are treated in such a way as to keep the teacher up with the times. The widening of his scope, and the extension of his fund of illustrations will be worth far more per month than the Magazine costs in a year. "Earthworms and their wonderful works" is a review of Darwin's new book. It would startle the pupils in any school if the teacher could explain the nature and extent of the work done by the ordinary "fish-worm." "Astronomy in High Schools" is a brief article showing how a good teacher can easily interest a class in this subject. "Copyright Law," "The Chemistry of Tea and Coffee," "Sanitary Relations of the Soil," and "Volcanic Products," are among the most interesting of the numerous articles of this number.

#### MAGAZINES.

**HARPER'S WEEKLY** continues the interesting stories "Christowell" and "For Cash Only" and begins in No. 1303 a new story "Benighted Travellers" which bids fair to be as interesting as its predecessors, much valuable information is given in "The Cruise of the Alliance." The Giteau trial receives considerable prominence and is not too severely caricatured if it will draw attention to the evils of the "Spells System." The excellency of the art department is well sustained especially in the supplement to No. 1303.

**LITTLE'S LIVING AGE** for 1882. This widely-known weekly magazine has been published for nearly forty years, and during that long period has been prized by its numerous readers as a thorough compendium of the best thought and literary work of the time. As periodicals become more numerous, this one becomes more valuable, as it continues to be the most thorough and satisfactory compilation of the best periodical literature of the world. It fills the place of many quarterlies, monthlies, and weeklies, and its readers can, through its pages, easily and economically keep pace with the work of the foremost writers and thinkers in all departments of literature, science, politics, and art. Its importance to American readers is evident; in fact, it is well-nigh indispensable to those who would keep informed in the best literature of the day; and its success has therefore been uninterrupted. Its prospectus is well worth attention in selecting one's periodicals for the new year. Its clubbing rates with other periodicals are worthy of notice. Little & Co., Boston, are the publishers.

**AMERICAN JOURNAL OF MATHEMATICS,** Vol. 3, No. 4. An article on "Congruences," affording a generalization of the Algebraic Theorems of Fermat and Wilson, will be found of interest. Mr. Johnson, of Annapolis, Md., writes on the species of curves to which the strophoid or logocyclic curve belongs (polar equation,  $y = a \sec \theta + a \tan \theta$ ). Prof. Sylvester shows how any rational fraction may be developed into a series of fractions, each having unity for numerator; it is quite conceivable that practical value may attach to such expansions, and the ingenuity of the distinguished contributor makes the subject worthy of a place in our work on Algebra. Dr. Whitcomb treats of certain developments belonging to that inexhaustible subject, "Taylor's Theorem." Prof. Hyde, of the University of Cincinnati, has a quaternion treatment of centres of gravity of surfaces and solids of revolution. The subject of "Quaternions" is every year receiving increased attention, and it becomes a question whether they should not form part of the pure mathematical course in our Provincial University. To those who are concerned about the matter, an article on "Linkages" will be read with some interest.

**AMERICAN JOURNAL OF MATHEMATICS,** Vol. 4, No. 1, contains the following articles:—On the 34 concomitants of the Ternary Cubic, *Prof. Cayley*; On certain Expansion Theorems, *E. McClintock*; Some Theorems in Numbers, *C. H. Mitchell*; Note on the Frequency of Use of the Different Digits in Natural Numbers, *Simon Newcomb*; Tables of the Generating Functions and Groundforms of the Binary Duodecimic, *Prof. Sylvester*; A Demonstration of the Impossibility of the Binary Octavic Possessing any Groundform of deg-order 10<sup>4</sup>, *Prof. Sylvester*; Logic of Number, *C. S. Pierce*; Remainder of Laplace's Series, *E. McClintock*.

**THE CENTURY MAGAZINE (SCHUBNER'S),** January, 1882. A very fine tinted engraving of the great Frenchman, Mons. Thiers, forms the frontispiece of this number. The illustrated articles are: "A Provincial Capital in Mexico;" "The Revival of Burana Lace," very suggestive to ladies interested in household art; "Oriental and early Greek Sculpture; and "Who Were the Chartists?" In stories there are Mrs. Burnett's "Through One Administration;" Mr. Howell's "A Modern Instance," and a finished story "Old Madame"—all good. The Magazine begins the year well.

**HARPER'S MONTHLY,** January, 1882. A beautiful engraving forms the frontispiece of this old favorite. It represents the youth who entered the lion's den, to get the glove of the lady to whom he was paying his addresses, and who tested his devotion by flinging her glove into the arena among the lions, and challenged him to bring it to her. The story is told in the "Editor's Easy Chair." "Anne" and "A Laodicean" are each advanced a stage, and grow more interesting. Nearly every article in the magazine is profusely illustrated. Among those of most general interest are, "Journalistic London," Part IV., containing the portraits and sketches of the most distinguished newspaper men of London. This paper deals with the illustrated papers; "Young Men's Christian Associations," with eleven portraits; "King Coal's Highway," and "Ancient and Modern Glass of Murano." The short stories are excellent, and the "Editor's Drawer" even funnier than usual.