

Notes and Comments.

G. P. PUTNAM'S SONS announce a new enterprise for the young, "a series of graphic historical studies," telling "The Story of the Nations." The Jews, the Goths, the Normans, and the Saracens will each have a chapter like the several countries. Prof. J. K. Hosmer will treat of the Jews, Mr. Arthur Gilman of Rome, Prof. J. A. Harrison of Greece, Mr. Charlton T. Lewis of Byzantium, Prof. H. H. Boyesen of Norway, Rev. E. E. Hale and Miss Susan Hale of Spain, etc. The volumes will be 12mo, and will be sold separately.

THE following books, amongst others, have been added to the library of the University of Toronto, within the past three weeks:—

Rhode Island Public School Report, 1885. Comparative Grammar of Anglo-Saxon. By F. A. March.

Homeric Dictionary. By G. Autenrieth. Translated by R. P. Keep.

John Fiske, Works of; 6 vols.

Congregational Government. By Woodrow Wilson.

Religions of Mexico and Peru. By A. Réville (Hibbert Lectures, 1884.)

Method of Least Squares. By W. Chauvenet.

The New Physics. By John Trowbridge. Naturalist's Directory, 1884. By S. E. Cassino.

Prehistoric America. By Marquis de Nadaillac (translation).

Indian Myths, etc. By Ellen R. Emerson.

Ibidatsa Grammar and Dictionary. By Wash. Matthews; 2 vols. in one.

Dictionnaire Francois-Orantagué. By J. M. Shea.

American Palaeozoic Fossils. By S. A. Miller.

Washington Irving, Works of; 18 vols.

Short Studies on Great Subjects. By J. A. Froude; third series.

History of American Literature. M. C. Tyler.

AMONGST educational works just published we may mention the following as being of interest to various classes of readers:—

Aims and Methods of the Teaching of Physics. By Professor Charles K. Wead. Washington: Government Printing-Office. Pp. 158.

Normal Language Lessons. By S. J. Sornberger. Syracuse, N. Y.: C. W. Bardeen. Pp. 81. 50 cents.

Catalogue of the New Orleans Exhibit of Economic Entomology. By Charles V. Riley. Washington: Judd & Detweiler. Pp. 95.

Report of the Entomologist, U. S. Department of Agriculture, for 1884. Washington: Government Printing-Office. Pp. 150.

Sex in Mind and in Education. By Henry Maudsley, M. D. Syracuse, N. Y.: C. W. Bardeen. Pp. 36. 15 cents.

Calisthenics and Disciplinary Exercises. By E. V. De Graff. Syracuse, N. Y.: C. W. Bardeen. Pp. 39.

University of Nebraska. Seventh Biennial Report of the Board of Regents. Pp. 32. The Chancellor's Report. Pp. 75. Lincoln, Neb.

Building for the Children in the South. By Rev. A. D. Mayo. Washington: Government Printing-Office. Pp. 16.

Bulletin of the Washburn College Laboratory of Natural History. Edited by Francis W. Cragin. Vol. I. No. 2. Topeka, Kansas. Pp. 84, with Two Plates. 20 cents.

MR. W. H. HUSTON, Principal of Pickering College, in a long article on "The College Residence" contributed to last week's *Varsity* treats the subject of the advantages and disadvantages of a residence exhaustively and elaborately. The character of a college residence will depend, Mr. Huston holds, upon: (1) Its aim. (2) The character of its officers. (3) The character of its students.

"A college residence," says Mr. Huston, "maintained merely to afford a place in which to eat and sleep can never accomplish any lasting good, unless it should strangely happen that the students were all—what few are—inspired with a love of learning and a desire to struggle against all worldly ills in an onward march towards perfection. If, however, the object of the institution be to encourage the discarding of everything that is base and ignoble, and the cleaving to that which is pure, success is deserved and to a great extent assured. A man, a book, an institution, that aims to teach that there is a reality in life, and moreover a responsibility that there is a work for all and that the call to that work is urgent and imperative, does not exist in vain. A college residence conducted with such a purpose must be a power for good—forever." He touches then upon the necessity of good authorities who should understand and sympathize with the residents and also upon the necessity of keeping up a high character amongst these residents. Applying his conclusions to University College residence, he asks,—“Shall residence be retained? ‘In its present state? No.’ ‘In an improved state? Yes.’ How improved? (1) By being regarded as a means of education. (2) By being placed under a Dean (assisted if necessary) whose sole work will be to see that it is well managed. (3) By being enlarged to such an extent as to afford accommodation to every student that wishes to take advantage of it, no matter to what university faculty he belong. . . . Two courses are open—to abolish or to improve. It is generally easy to destroy; it is

often better to retain and reform. Is it not so in the present case, where so many advantages will result from the maintenance of a first-class residence, and where an almost ideal residence is so easily possible?”

Mathematics.

PAPERS IN FACTORING. III.

1. $x^4 + x^2y^2 + y^4$.
2. $x^4 + x^2 + 1$.
3. $x^4 - 3c^2 + 1$.
4. $a^4 + 3a^2b^2 + 4b^4$.
5. $x^4 + 7x^2 + 16$.
6. $x^4 - 9x^2y^2 + 16y^4$.
7. $a^4 - 7a^2 + 1$.
8. $a^4 - 14a^2 + 1$.
9. $x^4 - 17x^2y^2 + 16y^4$.
10. $a^4 + 6a^2b^2 + 25b^4$.
11. $x^4 - 19x^2y^2 + 25y^4$.
12. $9a^4 + 29a^2x^2 + 25x^4$.
13. $16x^4 + 47x^2y^2 + 49y^4$.
14. $25a^4 + 51a^2b^2 + 36b^4$.
15. $36x^4 + 11x^2y^2 + 25y^4$.
16. $x^4 + 4a^4$.
17. $a^4 + 64b^4$.
18. $9x^4 - 51x^2y^2 + 49y^4$.
19. $(a+b)^4 + (a+b)^2c^2 + c^4$.
20. $a^4 + a^2(b-c)^2 + (b-c)^4$.
21. $(a+b)^4 + (a+b)^2(a-b)^2 + (a-b)^4$.
22. $(x+y)^4 + (x^2-y^2)^2 + (x-y)^4$.
23. $(a+b)^4 + 4(a-b)^4$.

PAPERS IN FACTORING. IV.

1. $a^3 + b^3 + c^3 - 3abc$.
2. $x^3 + y^3 + z^3 - 3xyz$.
3. $a^3 + b^3 + 1 - 3ab$.
4. $a^3 + b^3 + 8 - 6ab$.
5. $8a^3 + b^3 + c^3 - 6abc$.
6. $a^3 + 27b^3 + c^3 - 9abc$.
7. $x^3 + 27y^3 + 1 - 9xy$.
8. $x^3 + 8y^3 + 27z^3 - 18xy$.
9. $a^3 + b^3 - c^3 + 3abc$.
10. $a^3 - b^3 + 8c^3 + 6abc$.
11. $a^3 - b^3 - c^3 - 3abc$.
12. $1 - b^3 - c^3 - 3bc$.
13. $x^6 - y^6 - z^6 - 3x^2y^2z^2$.
14. $a^3 + b^3 - 1 + 3ab$.
15. $a^3 + 1 - c^3 + 3ac$.
16. $a^3 - b^3 + 8 + 6ab$.
17. $1 - b^3 + c^3 + 3bc$.
18. $8 - x^3 - y^3 - 6xy$.
19. $x^3 - 1 - a^3 - 3ax$.
20. $a^3 - b^3 - 27c^3 - 9abc$.
21. $8a^3 - 27b^3 - 125c^3 - 90abc$.
22. $a^3b^3 + b^3c^3 + c^3a^3 - 3a^2b^2c^2$.
23. $x^3y^3 - y^3z^3 - z^3x^3 - 3x^2y^2z^2$.
24. $x^3y^3 - y^3z^3 + z^3x^3 + 3x^2y^2z^2$.
25. $1 + a^3 - b^3c^3 + 3abc$.
26. $(a+b)^3 + (b+c)^3 + (c+a)^3 - 3(a+b)(b+c)(c+a)$.
27. $3(a^2 + 2bc)(b^2 + 2ca)(c^2 + 2ab) - (a^2 + 2bc)^3 - (b^2 + 2ca)^3 - (c^2 + 2ab)^3$.
28. $(a+b)^3 + (b-c)^3 + (c-a)^3 - 3(a-b)(b-c)(c-a)$.
29. $(a-b)^3 - (b-c)^3 + (2b-a-c)^3 + 3(a-b)(b-c)(2b-a-c)$.