

LITERARY NOTES.

"THE Agency of the Chisolm Monumental Fund" will soon issue a complete and authentic history of the Chisolm Massacre; written by James M. Wells.

—Victor Hugo's "History of a Crime" has reached its 30th edition in France. The sale of the work is almost unprecedented, 20,000 copies of the two-franc edition were sold in Paris in one day. A translation of it is now appearing as a serial in *Harpers' Weekly*.

—WORDS; THEIR USE AND ABUSE: By *William Mathews, LL. D.* Chicago: S. C. Griggs & Co.—The style of Dr. Mathews is so fascinating that the reader of this work does not imagine that he is receiving a severe censure for abusing his vernacular; neither does he realize that he is chiefly gaining such information as renders the dictionary the least entertaining of books. In a work of this nature, one would not expect that the greater portion of the facts stated would be discoveries of the author. In regard to the subject-matter the author doesn't claim to be original, but he says that "He has been traveling in his own way over old and well-worn ground, and has picked up his materials freely from all sources within his reach." But it is the peculiar and animated style, so characteristic of Dr. Mathews, by which he has woven together these facts, which makes this one of the most charming, as well as instructive, works on philology. It is replete with anecdotes and, indeed, we could recommend it as a collection of mirth-provoking stories, if there were no higher aim in view than a mental diversion. But no irrelevant stories are introduced, each has an important relation to the subject discussed, and is useful to fix permanently the author's ideas in the mind of the reader. The work is a noble and logical appeal to all English speaking people, to use their language properly. Each page serves as a proof that "the words which a man of genius selects are as much his own as his thoughts. They are not the dress, but the incarnation of his thoughts, as the body contains the soul." The chapter on the Morality of Words is especially important, to remind the reader that words have a vital power, and are often more forcible than thought; and that words aptly used may move a multitude to good action, while a misapplied word may be the source of the greatest evil. This volume cannot be too highly recommended as a source of information concerning the most important and most neglected branch of knowledge and culture. The reader will find here, not only precepts in regard to the proper use of language, but also an example most worthy of imitation.

—THE DIFFERENT FORMS OF FLOWERS ON PLANTS OF THE SAME SPECIES: by *Charles Darwin, M. A., F. R. S.* New York: D. Appleton & Co.—This, perhaps, does not indicate as much original and deep thought as some of Mr. Darwin's previous productions; but the care and exactness with which all the experiments have been performed, from which he has drawn his conclusions cannot be too highly estimated. The author has adopted Linnæus divisions of flowers, according to their sexual organs, *i. e.*, hermaphrodite, monœcious, diœcious and polygamous species; each one of which he has subdivided; "but," he says, "the classification is artificial, and the groups often pass into one another." The hermaphrodite class he divides into many sub-groups, the two most important of these being the heterostyled and the cleistogamic. As a typical specimen of the heterostyled dimorphic plants, the *Primula veris* or cowslip has been chosen. The author says, "It has long been known to botanists that the common cowslip exists under two forms, about equally numerous, which obviously differ from each other in the length of the pistils and stamens. This difference has hitherto been looked at as a case of mere variability, but this view, as we shall presently see, is far from the true one. Florists who cultivate the *Polyanthus* and *Auricula* have long been aware of the two kinds of flowers, and

they call the plants which display the globular stigma at the mouth of the corolla, 'pin-headed' or 'pin-eyed,' and these which display the anthers, 'thrum-eyed.' I will designate the two forms as the long-styled and short-styled." The writer then gives a minute description of the lengths and forms of the pistils and stamens of the "long-styled" form and of the "short-styled" form of flowers. The diameters and peculiar shape noticed in each form of stigma, and the length of the papillæ are carefully compared. The most remarkable distinction noticed between the two kinds of flowers, is the difference in the sizes of the pollen-grains. Measurements are given of both the wet and dry grains, which prove that the diameter of the grain from the "short-styled flowers is to that of the grain of the "long-styled" as 100 is to 67. A difference in shape and color was also noticed. And by trial he found that the "long-styled" plants have a tendency to flower a little earlier than the "short-styled." About which he says, "I had twelve plants of each form growing in separate pots, and treated in every respect alike; and at the time when only a single 'short-styled' plant was in flower, seven of the 'long-styled' had expanded their flowers. It may be asked," says the author, "what is the meaning of the important differences in their structure. Looking to these trials made during two successive years on a large number of plants, we may safely conclude that the 'short-styled' form is more productive than the 'long-styled' form, and the same result holds good with some other species of *Primula*. Consequently my anticipation that the plants with longer pistils, rougher stamens, shorter stamens and smaller pollen-grains, would prove to be more feminine in nature, is exactly the reverse of the truth." The author terms the fertilization of either form with pollen from the opposite form "legitimate union," and that of either form with its own form "illegitimate union." The results of a large number of experiments on the different kinds of union of these flowers, prove many facts extremely interesting to the scientist, which may be seen from the following: "From the facts now given the superiority of a legitimate over an illegitimate union admits of not the least doubt; and we have here a case to which no parallel exists in the vegetable or, indeed, in the animal kingdom. The individual plants of the present species, and as we shall see of several other species of *Primula*, are divided into two sets or bodies, which cannot be called distinct sexes, for both are hermaphrodites; yet they are to a certain extent sexually distinct, for they require reciprocal unions for perfect fertility. As quadrupeds are divided into two nearly equal bodies of different sexes, so here we have two bodies, approximately equal in number, differing in their sexual powers and related to each other like males and females." The second chapter, which treats of the hybrids, is exceedingly interesting. Many experiments are enumerated, showing the changes which occur by crossing the *Primula veris* and *vulgaris*, resulting in the production of the common oxlip. Also the effect of crossing "long-styled" and "short-styled" oxlips with one another and with the two forms of both parent species, and the character of the offspring from oxlips artificially self-fertilized, and cross-fertilized, in a state of nature. In the fourth chapter he describes the three forms, and the eighteen different unions, possible in the hetero-styled trimorphic plants. The fifth chapter contains many pleasing facts in regard to the illegitimate offspring of hetero-styled plants, their dwarfed structure and sterility. Some were found to be utterly barren, and others fertile. And in the sixth chapter the essential character of hetero-styled plants is treated, the nature of the advantages derived from them, and the means by which they became hetero-styled. The seventh and eighth chapters, which describe the peculiarities of the polygamous, diœcious, gyno-diœcious plants and cleistogamic flowers, are quite as interesting as the preceding. The work speaks for itself to those who are already acquainted with science; and for the embryonic naturalist, it is particularly instructive inasmuch as it teaches him how to study and observe the works of nature. For sale by Sheehan & Co.