

make it as honest a word as *trustworthy*,—*masculize*, which is at least intelligible,—and *fast*, used as college-boys use it in their loose talk, but not with the meaning which sober scholars are wont to give it. With these slight exceptions, the translation appears to us singularly felicitous, notwithstanding the task must have been very difficult, which Dr. Palmer has performed with such rare success.

*Farm-Drainage.* The Principles, Processes, and Effects of Draining Land, with Wood, Stones, Ploughs, and Open Ditches, and especially with Tiles; including Tables of Rainfall, Evaporation, Filtration, Excavation, Capacity of Pipes; Cost, and Number to the Acre, of Tiles, etc., etc.; and more than One Hundred Illustrations. By HENRY E. FRENCH. New York: A. O. Moore & Co. 1859. 8vo. pp. 384.

WE remember standing, thirty years ago, upon the cupola of a court-house in New Jersey, and, while enjoying the whole panorama, being particularly impressed with the superior fertility and luxuriance of one farm on the outskirts of the town. We recollect further, that, on inquiry, we found this farm to belong to a Judge of the Court of Common Pleas, who also exercised the trade of a potter, and underdrained his land with tile-drains. His neighbors attributed the improvement in his farm to manure and tillage, and thought his attempts to introduce tile-drains into use arose chiefly from his desire to make a market for his tiles. Thirty years have made a great change; and a New Hampshire Judge of the Court of Common Pleas gives us a book on *Farm-Drainage* which tells us that in England twenty millions of dollars have been loaned by the government to be used in underdraining with tile!

We believe that Judge French has given the first practical guide in draining to the American farmer,—indeed, the first book professing to be a complete practical guide to the farmers of any country. His right to speak is derived from successful experiments of his own, from a visit to European agriculturists, and from a personal correspondence with the best drainage-engineers of England and America,

as well as from the study of all available magazines and journals. No one could handle the subject in a more pleasant and lucid style; flashes of wit, and even of humor, are sparkling through every chapter, but they never divert the mind of the reader from the main purpose of elucidating the subject of deep drainage. The title-page does not promise so much as the book performs; and we feel confident that its reputation will increase, as our farmers begin to understand the true effects of deep drainage on upland, and seek for a guide in the improvement of their farms.

The rain-tables, furnished by Dr. E. Hobbs, of Waltham, afford some very interesting statistics, by which our climate may be definitely compared with that of our mother country. In England, they have about 156 rainy days *per annum*, and we but 56. In England, one inch in 24 hours is considered a great rain; but in New England six inches and seven-eighths (6.88) has been known to fall in 24 hours. In England, the annual fall is about 21,—in New England, 42 inches. The experiments on the retention of water by the soil are also interesting; showing that ordinary arable soil is capable of holding nearly six inches of water in every foot of soil.

Not the least valuable portion of the book is a brief discussion of some of the legal questions connected with drainage; the rights of land-owners in running waters, and in reference to the water in the soil; the rights of mill-owners and water-power companies; and the subject of flowage, by which so many thousand acres of valuable arable land are ruined to support unprofitable manufacturing companies. The rights of agriculturists, and the interests of agriculture, demand the care of our governments, and the hearty aid of our scientific men; and we are glad to find a judge who, at least when off the bench, speaks sound words in their behalf.

Agriculture in the Atlantic States is beginning to attract the attention which its great importance demands. Thorough draining is, as yet, little used among us, but a beginning has been made; and Judge French's book will, doubtless, be of value in extension of the practice. If any reader has not yet heard what thorough drain-

ing is, we would say, in brief, that it consists in laying tile-pipes, from one and a half to three inches in diameter, four feet under ground, at from twenty to sixty feet apart, so inclined as to drain out of your ground all the water that may be within three feet of the surface. This costs from \$30 to \$60 per acre, and is in almost all kinds of arable land an excellent investment of capital,—making the spring earlier, the land warmer, rain less injurious, drought less severe, the crops better in quality and greater in quantity. In short, thorough draining is, as our author says, following Cromwell's advice, "trusting in Providence, but keeping the powder dry."

*The Novels of James Fenimore Cooper.* Illustrated with Steel Engravings from Drawings by Darley. New York: W. A. Townsend & Co.

THE British Museum, it is said, has accumulated over twenty-seven thousand novels written since the publication of "Waverley." With the general diffusion of education the ambition of authorship has had a corresponding increase; and people who were not inspired to make rhymes, nor learned enough to undertake history, philosophy, or science, as well as those who despaired of success in essays, travels, or sermons, have all thought themselves capable of representing human life in the form of fiction. Very few of the twenty-seven thousand, probably, are wholly destitute of merit. Each author has drawn what he saw, or knew, or did, or imagined; and so has preserved something worthy, for those who live upon his plane and see the world with his eyes. The difficulty is, that the vision of most men is limited; they observe human nature only in a few of its many aspects; they cannot so far lift themselves above the trivial affairs around them as to take in the whole of humanity at a glance. Even when rare types of character are presented to view, it is only a genius who can for the time assimilate himself to them, and so make their portraits life-like upon his canvas. In every old-fashioned town there are models for new Dogberrys and Edie Ochiltrees; our seaports have plenty of Bunsbys; every great city has its Becky

Sharpe and Major Pendennis. One has only to listen to a group of Irish laborers in their unrestrained talk to find that the delicious *non sequitur*, which is the charm of the grave-diggers' conversation in "Hamlet," is by no means obsolete. But who can write such a colloquy? It would be easier, we fancy, for a clever man to give a sketch of Lord Bacon, with all his rapid and profound generalization, than to follow the slow and tortuous mental processes of a clodhopper.

To secure the attention of his readers, the novelist must construct a plot and create the characters whose movements shall produce the designed catastrophe, and, by the incidents and dialogue, exhibit the passions, the virtues, the aspirations, the weaknesses, and the villany of human nature. It is needless to say that most characters in fiction are as shadowy as Ossian's ghosts; the proof is, that, when the incidents of the story have passed out of memory, the persons are likewise forgotten. Of all the popular novelists, not more than half a dozen have ever created characters that survive,—characters that are felt to be "representative men." After Shakespeare and Scott, Dickens comes first, unquestionably; although, in analysis, philosophy, force, and purity of style, he is far inferior to Thackeray. Parson Adams will not be forgotten, nor that gentle monogamist, the good Vicar of Wakefield. But as for Bulwer, notwithstanding his wonderful art in construction and the brilliancy of his style, who remembers a character out of his novels, unless it be Doctor Riccabocca?

After this rather long preamble, let us hasten to say, that Cooper, in spite of many and the most obvious faults, has succeeded in portraying a few characters which stand out in bold relief,—and that his works, after years of criticism and competition, still hold their place, on both continents, among the most delightful novels in the language. Other writers have appeared, with more culture, with more imagination, with more spiritual insight, with more attractiveness of style; but Leatherstocking, in the virgin forest, with the crafty, painted savage retreating before him, and the far-distant hum of civilization following his trail, is a creation which no reader ever can or would forget,—a creation for which the merely accomplished writer would gladly