

satisfactory collections, and so prompt and useful a report, could not have come about without qualities of a high order in both the party and its chief. That the magnetic and astronomical observations were less precise than could be wished seems to have been the result of circumstances beyond the control of the members of the party.

HORSE-BREEDING.

M. ALASONIERE has written a very sensible little book upon horse-breeding, which has been honored with a medal by the French national agricultural society. He gives first a discriminating account of the points which mark a good horse, and then proceeds to characterize the two principal equine types, *speed* and *strength* being their respective characteristics, or, according to his more elaborate definition, 'type à étendue de contraction' and 'type à intensité de contraction.' His central idea as to the breeding is that the two types should not be mingled, because in the offspring incongruity results, one part of the animal inheriting its qualities from the mother, another part from the father. The wisdom of this precept he enforces by a discussion of the rules to be followed for the amelioration by breeding of special parts of the animal, and maintains that injudicious mixing of the two types produces horses of an incongruous build. To put the matter more bluntly, to get good colts the mare and stallion should resemble one another, else the colt will be a hodge-podge of qualities not harmonious.

The treatise is pleasantly written, and, though not properly a scientific work, is still valuable for, if we may be pardoned the phrase, its good horse sense, and we take pleasure in commending it to the notice of those engaged in rearing horses in this country.

ELECTROTECHNICAL HANDBOOK.

DR. KITTLER'S book, of which the first part of vol. i. has just appeared, will be welcomed by every one who has to do with any of the applications of electricity to the arts. It begins with a consideration of the phenomena and laws of induction, giving particular attention to the special cases that are of importance in the operation of the telephone and dynamo-machine, and then proceeds to discuss at length the various separate parts of the dynamo-machine, and indicates the points especially to be observed in their construc-

Amélioration de l'espèce chevaline par des accouplements raisonnés. Par L. ALASONIERE. Paris, Baillière, 1885. 15+156 p. 8°.

Handbuch der elektrotechnik. Bearbeitet von Dr. E. KITTLER. Stuttgart, Enke, 1885. 8°.

tion. The circumstances influencing the magnetization of soft iron—as the dimensions of the piece, the strength of the magnetizing current, and the quality of the iron—are next analyzed. Most of the remainder of that portion of the book as far as issued is occupied by a lengthy and detailed description of the principal forms of electrical measuring instruments. Their theory and construction are somewhat minutely considered, and most of the important special forms of instrument are figured. A list of a few of these will best show the character and completeness of the work. We notice, among others, Kohlrausch's bridge for use with a telephone, Siemens's modification of Thomson's bridge for measurement of low resistances, several forms of Wiedemann's galvanometer with copper dampers, Obach's cosine galvanometer, Siemens and Halske's convenient form of Thomson's mirror galvanometer, and D'Assarval and Deprez's aperiodic galvanometer. All of the leading forms of current and potential galvanometers for technical purposes are described, including several which we have not seen elsewhere, except in the original papers.

The work is written (as should be the case with a work of this kind) for students possessing a good knowledge of physics and mathematics. It would be of great advantage to American students of electrotechnics if some of our publishers would issue a translation of this work. We are sure that it would meet a much-felt want.

FROM PALERMO TO TUNIS.

ONE of the pleasantest of the many delightful trips aside from the beaten track—to which Americans in Europe carefully cling—is that from Naples to Tunis by way of Palermo and Malta. Besides seeing the Sicilian capital—a splendid city in itself and renowned throughout Italy for the beauty of its women—and Malta, the dwelling place of one of the most remarkable races of the Mediterranean, one gets a glimpse of oriental life in all its filth and picturesqueness for a fraction of the time and money required for a visit to Cairo or Constantinople.

With regard to Malta, the fact which most impressed itself upon M. Melon's note-book—for this little volume pretends to be nothing but a collection of notes—was the signal failure of the English to assimilate the native population. To use his own words: "After eighty years of domination the line of demarcation between the Maltese and the English, their masters, is as sharply defined as on the first day." The greater

De Palerme à Tunis. By PAUL MELON. Paris, Plon, Nourrit & Cie, 1885. 212 p., illustr. 12°.