BOOK-REVIEWS.

Missouri, a Bone of Contention. (American Commonwealths.) By LUCIEN CARR. New York, Houghton, Mifflin, & Co. 16°.

THE history of Missouri, like that of the other Western States, is necessarily lacking in the interest that attaches to that of the older parts of the Union; but it has elements of interest belonging to itself, which the author of this work has skilfully availed himself of. He begins his narrative with the earliest French explorations and settlements in the basin of the Mississippi, and traces the history of the region west of that river, then known as Louisiana, down to the time of its annexation to the United States; and the chapters treating of these subjects, though they rather pass the proper limits of a history of Missouri, are among the best in the book.

From the time of the annexation the narrative is confined to Missouri itself; and the author then shows how the fertile spot which had been contended for by France, Spain, and England, became a new 'bone of contention' to the advocates and opponents of slavery. The struggle began with the application of Missouri for admission into the Union as a slave State; and though the difficulty was then thought to have been settled by the well-known Missouri Compromise, yet this proved to be only the beginning instead of the end of the trouble, which could not be removed except by the complete abolition of slavery. Accordingly, the latter portion of Mr. Carr's work is necessarily occupied almost exclusively with the various phases of the slavery contest and the civil war, so far as these affected Missouri, which they did in a marked degree. In his account of this great struggle we are sorry to find Mr. Carr's sympathies so strongly on the side of the South. He does not defend slavery; indeed, he shows a decided dislike of it. But, like most of the Southerners and of their Northern sympathizers, he fails to comprehend the moral significance of the anti-slavery movement and the moral earnestness of those engaged in it. In describing the secnes and incidents of the war, however, he shows himself a firm friend of the Union; and in his last chapter he relates with evident pleasure the action of Missouri, alone of all the Southern States, in abolishing slavery within her borders. The stirring themes of war and political struggle fill so large a portion of the later chapters of the book, that we do not get from them so full an account of the social condition of the people in the generation just passed as might have been wished. In some of the earlier chapters, however, the life and industry of the people are described more fully; and careful notice is taken of the financial disturbances that occurred at various times, and of the legislation of the State in regard to banks and railroads and the still more important subject of education.

Taken as a whole, the author's choice of topics is excellent; and he has been particularly successful in showing the connection of Missouri's history with that of the neighboring States and of the Union. The style of the work, though somewhat diffuse, like most of the historical writing of the present day, is clear and dignified; and some portions of the story, such as the conquest of New Mexico and the events at the opening of the civil war, are related in a way that is both interesting and impressive. The book will fill a useful place in the series to which it belongs.

Popular Physics. By J. DORMAN STEELE. New York and Chicago, Barnes. 16°.

TO quote from the author's preface, "this work has grown up in the classroom," and all those who have used any of Steele's Fourteen Weeks Series in natural science will know how admirably this series is adapted to use with elementary classes. The author was in the habit of making a memorandum of any explanation which fixed the attention of the learner, and his books were built up on this experimental method. It is not pretended that the treatises are exhaustive, but it is believed that they are such as to interest beginners, and so to place science before them that some at least may be induced to go further.

Shortly before his death, Dr. J. Norman Steele, finding that he was unable longer to perform extra labor, requested Prof. W. LeConte Stevens of the Packer Collegiate Institute, Brooklyn, to revise the text-book in physics, as so many advances had been made since the last edition of the 'Fourteen Weeks in Physics,' published in 1878. Professor Stevens's revision has been so thorough and extensive, that it has seemed desirable to change the name to 'Steele's Popular Physics,' and it is under this title that the well-known book now makes its appearance. The book is intended for use in high schools, and gives enough in each branch of the subject to make clear to high-school pupils such physical phenomena as they see about them. All those who know the reviser will feel confidence in the thoroughness of his work.

Our Native Ferns and Their Allies. By LUCIEN M. UNDERWOOD, Ph.D. 3d ed. New York, Holt. 12°.

THE third edition of this useful book will be welcomed by all fern-lovers, and we predict for it a ready sale. One hundred and fifty-six species of true ferns are described as native to the territory, — sixteen more than were included in the first edition, printed in 1881; while of the related plants, lycopods, *Equisetæ*, *Isoetæ*, etc., sixty-eight species are given. The descriptive portion of the work is preceded by a carefully prepared account of the structure-habits, haunts, geological history, and the relation of *Pteridophyta* to the other sub-kingdoms of plants. This last is especially treated in the chapter on 'The Fern's Place in Nature,' including brief accounts of the several systems of vegetable classification. Professor Underwood gives greatest prominence to what he terms the 'American System,' which, dividing the *Thallophytes* into three sub-kingdoms, founded entirely on the characters of the reproductive organs, completely destroys the natural groups of algæ, lichens, and fungi, and, in the writer's opinion, is not to be commended. This is, however, quite unessential to the general purpose of the book. Older specific names for many of the species are extant, and we regret that Professor Underwood did not take the opportunity of adopting them. In the next edition he may, perhaps, conclude to do so.

The Fundamental Principles of Chemistry. By ROBERT GALLOWAY. London and New York, Longmans, Green, & Co. 12°. $1.75.

IT would probably be difficult to find a better exemplification of the fact that the critical and creative faculties are not invariably associated in the same individual than appears in several recent attempts, on the part of prominent fault-finders with existing models, to produce something better in the way of elementary text-books of science.

The volume before us emphasizes this point once more, and with force. It is an effort to replace the chemical text-books in use in the schools, and for teaching junior students generally, by a production "more in harmony with the laws of thought." The author has "long held that chemical works intended for beginners are unsuitable as educational works; if these books extend only to a few pages, the arrangement and construction is the same as that adopted in Gmelin's great work of *reference* in the science, which extends to eighteen large volumes: the plan is encyclopedic, — excellent for a book of reference, unsuitable for an educational work. In this system the facts are unclassified; the laws, the highest generalizations, are placed apart from the facts; and no plan for teaching the language of the science, which requires to be taught like any other language, is given beyond a few general observations." Twenty years ago these views were announced, and, if we are to judge from the internal evidence of the book, changes of method during the interval which has elapsed have not commended themselves to the author. The work is ostensibly devoted to the "fundamental principles of chemistry;" but examination reveals the fact, that, of three hundred and fifty-six pages, nearly one-half is given up to the exposition of the subjects of molecular attraction, heat, gravitation, the properties of gases, the elastic force of vapors, density, sublimation, precipitation, adhesion, and capillary attraction, which are regarded as the general principles of physics "suitable for the course of pure chemistry given in the after-part of the work." It is without doubt most desirable that the student of chemistry should possess a knowledge of the principles of physics, and, were this part of the work endowed with any particular novelty or merit, the misleading character of the title might be passed by; but the sad fact is, that in the preparatory half of the book we fail to find any thing but the old tale of multitudinous facts and