school class for beginners. As it appears from his preface that this was the sole object of the author in writing the little book, he is entitled, we think, to consider that his object has been attained.

Bacillary Phthisis of the Lungs. By Germain Sée, translated by William H. Weddell. (London: Kegan Paul, Trench and Co., 1885.)

THIS is in many respects an unsatisfactory book. It is divided into seven parts. Of these the preliminaries and the first four parts comprise anatomical and histological notes, the biological study of micro-organisms generally, and the study of the bacillus tuberculosis especially, and all kinds of promiscuous notes on the causes of tuberculosis; but, owing to the dogmatic way in which these subjects are treated, the omission of details and the numerous mycological inaccuracies this portion of the book is very weak. The rest, treating of clinical, hygienic, and therapeutic subjects, is more within the author's proper domain, and will be found instructive to the medical practitioner.

Mineral Resources of the United States. By A. Williams. (Published by the U.S. Geological Survey, 1883.)

THIS book consists of a series of essays, of various degrees of importance, on the mining and metallurgic industries of the United States. The work has been mainly carried out by entrusting each subject, or a special branch of each subject, to a gentleman intimately acquainted with that branch. The thoroughness with which the subject is treated is shown by the fact that the natural history of so rare a substance as hiddenite is very fully discussed by the original discoverer, Mr. W. E. Hidden.

Naturally the most important and the most extensive essays are those on coal, iron, copper, and zinc. Silver, the position of which is at present one of the most difficult problems connected with the metals, was excluded by Act of Congress from the present investigation, and tables of the production of gold and silver in recent years are all the information given. Former publications of the U.S. Government have already made known the enormous wealth of the silver-mines, and have given fair means by which persons interested in mining may estimate the prospect of success in such undertakings.

Under iron, an account is given of the Bower-Barff process of protecting iron from rust by means of a thin film of magnetic oxide—a process which bids fair, if it stand the trial of some years' wear, to replace the process of galvanising.

To professional people who need accurate information as to the condition of the various industries, the book possesses great value. It is also full of interest to the scientific mineralogist who has mainly to depend on the opening of new mines for fresh discoveries in the mineral kingdom. One cannot help regretting, however, the space given to a history of the divining-rod, "natural magnets," and similar absurdities. The subject is as much out of place as an account of the astrological nonsense practised in the Middle Ages would be in a modern treatise on spherical astronomy.

LETTERS TO THE EDITOR

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.*

[*The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to insure the appearance even of communications containing interesting and novel facts.*]

Pitcher Plants

PERHAPS you will allow me to set "W. C. M." right with egard to *Sarracenia variolaris* and pitcher plants generally (p. 295). I am afraid the sources from whence he obtained his information were not very reliable, as will be seen from the following:—

There are six species of Sarracenia found in North America, all of them characterised by the same trumpet-shaped leaves growing in tufts, and in several of the species attaining a length of a yard. In addition to these there is the *Darlingtonia californica*, which has long twisted trumpet-shaped leaves, the top of which is curved over, forming a sort of hood, and having a rather small aperture on each side. These constitute the whole of the pitcher plants of North America. "W. C. M.," whilst professing to describe the "curious characteristics" of the Sarracenia, really describes the leaf and pitcher of Nepenthes, which, as almost everybody knows, are tropical plants, mostly natives of the Indian Archipelago, and well known in this country as ornamental stove plants. The pitchers vary much in size, some of the species producing them quite eighteen inches long and capable of holding a quart of water, whilst others have pitchers no larger than a thimble. "W. C. M." is quite wrong in saying that the lids of the pitchers of Nepenthes, or indeed of any pitcher-plant known, close again after they have once opened. When the pitcher is about full-grown, the lid pushes open, widely in some species, only slightly in others, and remains quite stationary till the pitcher dies. When the lid opens, the pitcher is found to be about one-quarter filled with a sweetish watery liquid. Under cultivation it is necessary to keep the pitchers filled with water, or they soon shrivel; and it is found that, however frequently the water is renewed, it soon acquires a slight sweetness; so that the secretion of "honey" going on in the pitcher must be somewhat copious. If the water which is in the pitcher when it first opens dries up, there is no further secretion of liquid—at least such is the case with cultivated plants. At Kew the oldest pitchers on the Nepenthes attract insects as long as they contain moisture. The Sarracenias have their pitchers formed by the folding and joining of the edges of the leaves, so as to make a long funnel which is wide at the mouth and narrowed to almost a point at the base. Over the mouth the flap-like lid is fixed and in some of the species stands erect so as to admit rain-water into the pitchers, whilst in others the lid curves over in such a manner as to hinder the rain from falling into them. In 1815 the then President of the Linnean Society, Dr. James McBride, read a communication on the fly-catching propensity of Sarracenias, from which the following is worth quoting, as it describes accurately what we have repeatedly observed in the collection of Sarracenias cultivated at Kew. He says, writing chiefly about *Sarracenia variolaris*: "If, in the months of May, June, or July, when the leaves of these plants perform their extraordinary functions in the greatest perfection, some of them should be removed to a house and fixed in an erect position, it will soon be perceived that flies are attracted by them. These insects immediately approach the fauces of the leaves, and, leaning over their edges, appear to sip with eagerness something from their internal surface. In this position they linger, but, at length allured, as it would seem by the pleasures of taste, they enter the tubes. The fly, which has thus changed its situation, will be seen to stand unsteadily, it totters for a few seconds, slips, and falls to the bottom of the tube, where it is either drowned or attempts in vain to ascend against the points of the hairs. The fly seldom takes wing in its fall and escapes. In a house much infested with flies this entrapment goes on so rapidly that a tube is filled within a few hours, and it becomes necessary to add water, the natural quantity being insufficient to drown the imprisoned insects. The leaves of other species might well be employed as fly-catchers; indeed I am credibly informed that they are in some neighbourhoods. The leaves of *Sarracenia flava*, although they are very capacious, and often grow to a height of three feet or more, are never found to contain so many insects as those of other species. The cause which attracts flies is evidently a sweet viscid substance resembling honey, secreted by, or exuding from, the internal surface of the tube. From the margin, where it commences, it does not extend lower than one-fourth of an inch. The falling of the insect as soon as it enters the tube is wholly attributable to the downward or inverted position of the hairs of the internal surface of the leaf. At the bottom of a tube, split open, the hairs are plainly discernible pointing downwards; as the eye ranges upwards they gradually become shorter and attenuated, till at, or just below, the surface covered by the bait, they are no longer perceptible to the naked eye nor to the most delicate touch. It is here that the fly cannot take a hold sufficiently strong to support itself,