my hope that among all considerate proprietors and their agents systematic "pruning" is now prohibited. More anon. *Quercus.*

Potatoes.—Early in February I chose a part of the garden where the soil is very light, and after giving it a good dressing of farm-yard manure, I planted it with Potatoes in rows 2 feet apart and 6 inches deep. They came up very strongly, and I drew the soil up to their stems, to protect them from frost. The first week in August I observed that disease was making its appearance on the points of the leaves. As the tubers had attained their full size, and were all but ripe, I had the haulm pulled up, leaving the Potatoes in the ground, and now I have as fine a crop of clean sizeable Potatoes as anyone could wish for, without the least symptoms of disease, while many in this neighbourhood have lost half their crop. *J. Rust, Enfield, Sept.* 10.

African Aloe.—A fine specimen of the striped leaved American Aloe is now in flower here. Its height is 12 feet, and it has upwards of 1200 flowers on it. I believe that the plant is between 80 and 90 years old. It has been in the possession of Sir T. G. Cullum, Bart., about 14 years. *Thomas Smy, Hardwick Gardens, Bury St. Edmunds.*

The Vitality of Seeds is a subject that ought to engage the attention of the geologist as well as the botanist, for if they were to turn their mind that way, I think they would find almost every soil of recent formation contain some seeds peculiar to it. I have come to this conclusion by observing the vegetation of plants in soil brought from a considerable depth, and exposed to the common influence of our world, under which vegetables live. I imagine that if I were to send you a quantity of carse soil from the neighbourhood of Stirling, although it was dug several feet under the old Roman road, you would obtain a crop of Charlock (Sinapis arvensis). In another locality I have met with the Epidium arvense, in soil that was newly turned up; it grew for a year or two, and has never made its appearance since, nor was it seen at least for several years before the soil was turned up. There are also some kinds of peat, when brought to the surface, which are sure to produce a crop of Knot-grass and Sorrel. Other plants may be found occasionally, but there are others we are almost sure of at all times. The stomach of man will not kill the life of the seed of the Raspberry in every case. Some years ago a lime-work was opened in a moorland district of the country, where plants of the garden were never cultivated in the memory of man, yet in a small wood adjoining there was seen a nursery of Raspberry, Currant, and Gooseberry bushes, in all probability planted by man after the seeds had been in his stomach. It is the duty and privilege often of philosophers to dispel the mists of ignorance from the world in which they live, but they sometimes overshoot their mark, and meet with signal defeats while they endeavour to clear up "popular delusions." You know steaming over to America was set down as a popular delusion by some mathematicians, and the science of calculation was brought in to show the impossibility of it, and yet one of them lived long enough to see it done experimentally. The "Penny Cyclopædia" tells us that the history of aërolites affords a most useful lesson how cautious we ought to be not to reject too hastily the narratives either of early authors or of living witnesses, however extraordinary they may be, solely on the ground that they are inconsistent with our experience of the laws of Nature. When the official notice from the local authorities of the shower of stones at L'Aigle, in Normandy, in 1803, was received at Paris, it afforded a subject of merriment to the wits of that day, and the newspapers expressed their compassion for the good people of L'Aigle, who were governed by a mayor so silly as to give credit to such nonsense as that stones had fallen from the clouds; and yet, by a series of observations and experiments, not only was the truth of the recent occurrences established, but instances recorded by the writers of past times, which had been rejected as the delusion of a credulous and ignorant age, received so high a degree of probability as to entitle them to be classed among the authentic documents of past events in the physical history of the earth. I am of opinion that the unbelievers in the doctrines of aërolites would have had the infidelity knocked out of their heads had they got a shower of the meteoric stones about their ears which I saw the other week in the British Museum. They would have felt to their experience that seeing is believing, and feeling is the naked truth. *Peter Mackenzie, West Plean.*

The Doab Grass of India.—Might not this Grass, which is one of the commonest and most beautiful in the East Indies, be imported into this country with great advantage, as a sole component in the laying down of lawns and kept grounds? In its native country, a natural velvety carpet, of the most beautiful texture, is very speedily formed, by merely chopping it in pieces, and strewing it over the ground prepared for the purpose, which, in an incredibly short space of time, is covered with a verdant sward. The question would perhaps be, would it be sufficiently hardy for our climate? I am not aware that it has been tried; but I should certainly regard it as worthy of consideration as an agricultural Grass, as there is little doubt about its nutritive qualities, considered as the food of animals. *Utile Dulci, Sept.* 8. [If our correspondent will consult Sinclair's "Hortus Gramineus Woburnensis," p. 292, he will find that this plant, *Cynodon Dactylon*, has been already tried, and found unsuited to Great Britain.]

Swifts and Hornets in Yorkshire (see p. 566.)—Your correspondent, "T. S.," is perfectly correct in stating that swifts and hornets are to be met with in Yorkshire more especially in the North Riding. I have seen both in this neighbourhood this year, and in very hot summers they may be found in great numbers. I have met with two hornets' nests this season, and I am sorry that I cannot corroborate "T. S.'s" remark with regard to wasps; for with us they are very plentiful, and are doing great injury to wall fruit. *M. W. Whitley, R.N., York.*

Rats,—How effectually to destroy.—At page 552, occur some remarks having reference to this subject, that have caused us to receive an influx of letters and communications perfectly alarming. We had hoped, after the lengthened discussions which have appeared in this Paper, that the grand panacea for the destruction of the enemy was well known,—its efficacy undisputed. It would however appear that this is not the case. At all events, the subject having for some time slumbered, the remedy seems to have been forgotten. The name of the agent employed for killing these vermin is carbonate of barytes. The best place to purchase it, is at Dymond's, in Holborn. All chemists do not sell it. It must be the *powdered* barytes; and the commoner the better, for the purified article is ineffective as well as costly. A little of this must be inserted in the stomach of a fresh herring, or a soft bloater, and the whole manipulation must be performed with a piece of thin wood. The human hand must be dispensed with altogether, or sinister dealings will be suspected. Your train being laid, a few minutes will decide the matter:

"—— *Quid enim? concurritur: horæ*
Momento cita mors venit, *aut victoria læta!*"

If the latter, and the enemy triumph by their cunning (which, if you act with judgment, can hardly be the case), all future measures of *this* kind will be futile. It would be quite impracticable, and indeed unnecessary, to recapitulate here *all* that has before been so fully discussed. By reference to the *Gardeners' Chronicle* of January 12, February 9, and March 16, 1850, the desired information will be readily obtained; and if the principle of action therein recommended be fully carried out, the destruction of the enemy is certain. All I would add is—the necessity that exists for caution in the manner of distributing and preparing the weapons of war. The astuteness of the animal to be destroyed; his instinct, removed hardly one degree from reason; and his extreme wariness,—must be kept prominently in view. If he has cause, however slight, to suspect treachery, farewell to all success with the schemes that may have been concocted for his ruin! Your measures must be well taken, and acted upon promptly. Under no circumstances whatever must you be making any ostensible preparations. Anything out of the usual way would cause the intended victims to "smell a rat," and you would be at once foiled in all your stratagems. Do all in this way, that has to be done, with closed doors; and distribute your little offerings of friendship over the garden with an apparent absence of all design. Thus alone can you hope to triumph. As I have myself, in times gone by, been so truly awful a sufferer by the depredations of these vermin, my sincerity will hardly be doubted when I bid God-speed to the exertions of the intending crusaders in this righteous war. Let it be "war to the knife!" say I,—"and may Heaven defend the right!!" *W. Kidd, Hammersmith, Sept.* 5.

Gardeners' Troubles.—The following is a verbatim copy of a letter we have just received, and which we submit to the consideration of our readers:—"Fearing within a few days I may be in a dilemma, and knowing you to be a friend to our profession, and more particularly when deserving your support, I apply to you. I have just acted as a judge at Maidstone Flower Show, and it may happen my judgment may be called in question, or at any rate may open persons' eyes, and raise curiosity to gain a sight of my garden. I must, therefore, deal candid with you, and thereby get your candid answer, for my knowledge in the profession is very limited, as will be soon seen in my garden, as the Red Spider, as they tell me, destroying all my crops, but I have fortunately got a neighbour who has spared me a few Melons; and my greenhouse plants wither and die off as I think from improper soil, and indeed I have not now it is summer, a single plant in it, or Combs, or Balsams, or Achimineas. Now do you hold with giving water to bedding plants? for mine are dead before the late showers; and my Roses, Dwarf and Standards, look queer (all) say 250 sorts, only because I cut them with shears. And last winter I cut down a Laurel hedge with a saw and hatchet, and now it is horrid ugly, as the saw cuts are all turned black, and the wounds of the hatchet gape open and crack, and many stools dead. In fact, I must say the garden is not like the same place since I first came, and my late mistress, being no more, who did not mind spending 15*l.* or 20*l.*, I fear my master will marry again, and I may have then a mistress who knows more about gardening, and lose my place, or some of the curious may now come and call here. Will you please say how, and give instruction, that I may keep it, and avoid exposure, either for myself or the nurseryman who got it for me? I confess I do not know fruits, say Pears, as they seem all alike to me; and what is meant by succulent plants; and please describe colours of flowers, and how to propagate them. I am friendly with many gardeners, and hope to gain knowledge, but I hear behind my back they laugh, and wonder how I have kept my place so long. And our old cook is always grumbling, that she cannot have what vegetables she wants, and yet I get lots of Cabbages given me by cottagers. I could ask and say much more, but I will write again when you have answered this to correspondents. *A.*"

Cuthill's plan of growing Potatoes.—About three or four years ago you had a notice of this plan of managing Potatoes in your Paper, which induced me to try the system. I set about measuring the land intended to be planted, in the autumn, and to select the sets required for planting. Having plenty of loft room, well supplied with light, I placed my sets regularly above the floors, with the eye end upwards. They remained there until the beginning of the following March, by which time they had made bold stout eyes, some of them as large as the top of my finger. The tubers were then planted according to Mr. Cuthill's plan, and a more healthy and better crop I never saw. I have continued to prepare as many sets as I have had room for ever since, and I have never had a diseased tuber from those prepared in the manner alluded to. Mr. Whiting is quite mistaken in regard to rubbing off the sprouts before they get long enough to abstract nutriment from the tubers. They are suffered to sprout as little as possible, in order that they may thereby shoot forth more vigorously when planted, and produce an early and healthy crop prior to the usual time in which the disease makes its appearance. I purchased Mr. C.'s pamphlet after the first year's trial, and I found it to contain many useful hints which every gardener ought to put himself in possession of. *B. Fielder, gardener, Arlebury, Alresford.*

Hedera Rægneriana.—Permit me to refer to the notice of Messrs. Veitch's new plants, at page 579, and do justice to Hedera Rœgneriana, by ranking it as a species and not as a home-raised variety. The Imperial Botanic Gardens of St. Petersburgh and Mikita distributed it with other plants indigenous to the Caucasus. *J. N. H., Edinburgh.* [We cannot find this Hedera mentioned in any work on systematic botany; and we should be very much obliged to you for further information. Where is it described?]

Notices of Books.

Hunt's Handbook to the Official Catalogues of the Great Exhibition. 2 vols. small 8vo. London: Spicer and Clowes.

It would have been a great advantage to the visitors to the Crystal Palace, if this excellent guide had been ready when the Exhibition first opened. The difficulties attendant upon the operation having rendered that impossible, we may, at least, congratulate the public upon the completion of the work before the close of the stupendous undertaking. There are still three weeks in which Mr. Hunt's remarks may be profitably studied; and when the Exhibition has finally closed, his terse and instructive pages will form one of the best records of what it contained.

We learn from the preface to the second volume that, in the multifarious subjects treated of in these volumes, Mr. Hunt has received important assistance, Professor Forbes having taken in hand the vegetable and animal kingdoms, Professor Wilson the agricultural implements, Mr. Joshua Trimmer agricultural produce, Professor Gordon machinery, Capt. James military engineering and arms, and many other subjects having been specially written by very competent persons. This gives great value to the work, and renders it an indispensable companion to the Illustrated Catalogue and the jurors' reports. A few examples will show how the editor and contributors have fulfilled their tasks.

"*Pumps.*—There are several centrifugal pumps which, from the splash they make, attract the attention of every one. They are termed centrifugal pumps, but centripetal pumps would be more appropriate, for the water goes from the outside to the inside, or centre, of the bottomless bucketed wheels which form the forcing instrument or pump. These 'centrifugal pumps' are, in fact, inverted turbines—inverted Barker's mills. They produce a very low useful effect, and are only convenient for special application. The Archimedean screw, properly constructed, is the best 'pump' for raising a large quantity of water through a small height, as for engineering purposes, in clearing foundations, &c.; and the solid plunger-pump is the best for raising water to great height, as in mining and in numerous other cases."

"*Corks.*—The Hollow Corks and Combination Stoppers of the same exhibitor are constructed for bottles having a peculiar neck; a ring of cork fits into this, in which is placed a glass or stone-ware stopper. The principle of stopping or closing the orifices of bottles or other vessels with the substance so well known and so universally approved as cork is well understood. Nevertheless, the present method of its application is open to many objections, the enumeration of which will serve to illustrate the superior advantages that the new invention and application of hollow corks present; and as a superior effect is produced, and no new material used, their introduction is not calculated to excite any antipathy on the part of those persons who are in favour of the present or solid corks. The application of hollow corks in reality improves upon the principle of applying solid corks, and it is hoped; that their superiority will remove the disadvantages which have hitherto existed; among which, it will be remembered, that the solid corks are often difficult to extract, and, when pierced with a corkscrew, if only a portion of the contents is required, are with difficulty reinserted, made liable to leak, and no longer effectually exclude the air; in the act of drawing with a corkscrew, they often break in many pieces, and as the fissures in all cork contain dust, its presence and flavour are a disagreeable addition to the contents of the bottle.

"*Canadian Agricultural Produce.*—But though