

of monthly essays. We shall give our doctrine a dress partaking more of the popular than of the scientific garb."

His tenets he states plainly :—" We avow Linnaeus to be our lawful chief ; and his *Philosophia Botanica* our rallying point and standard."

In describing the seed, he likens it to an egg, and states that they are "in structure, essentially the same. It (the seed) is not a dead substance like a pebble or a pearl ; but it is a body regularly organized and arranged harmoniously into a system of vessels, glands and membranes ; and it is, moreover, like a prolific egg, alive, or at least in a state of fitness to be acted upon by certain external agents, which agents are fire (caloric), air and water." After further comparisons, he continues :—" there is a small quantity of vital air in a sac, bladder or partition at the big end of every bird's egg ; and we presume that there is a small portion of the same kind of fluid in every seed ; or it may be oxygen in a concentrated state, which is afterwards combined with caloric in the process of incubation."

As to the food of plants, he says :—" From numerous well conducted experiments, it appears that a *mucilage*, produced by the decomposition of vegetable and animal recrement, constitutes the food or aliment of plants. This mucilage is formed from stable manures, from rain water putrified, from dew, as well as from dead animals and vegetables. To reconcile the doctrine taught by some, that *salt* is the active principle in manures, it should be remembered that putrification has two stages ; the first converts animal and vegetable substances into a mucilage, and the second converts that mucilage into one or more species of salt."

Describing the structure of plants, he is generally very correct, but some of the parts were hardly understood, for instance :—" The principal vessels are of two kinds, *tubes* and *cells*. The tubes run from the roots to the different parts of the plant. they terminate in the *cells*, which cells contain the peculiar juices of the plant. The tubes contain the sap-juice."

He also says :—" In the root, the tubes are opened only at the extreme point, and fluids cannot be absorbed anywhere else."