



THE AGRICULTURAL DEPARTMENT AT WASHINGTON.

It is a matter of surprise and regret that it is but recently that the claims of agriculture have received national recognition, and that the Government should not have appreciated at an earlier date the necessity of applying a portion of the

national wealth to such development of the resources of the country. Some thirty years ago, the first appropriation, the merely nominal sum of \$1,000, was, at the instance of the Commissioner of Patents, Hon. H. L. Ellsworth, devoted by Congress for this purpose. For two years previously the

above mentioned patriotic gentleman had been distributing seeds and plants gratuitously, and for nine years, during his entire term of office, did he continue his good work. His successors in the Patent Office kept up the practice, but it was not until 1862 that the Department of Agriculture was formally organized.

The appearance of the building and its adjacent gardens is well depicted in our engraving. The grounds and conservatories are filled with specimens of almost every plant and tree indigenous to our country—from the luxuriant tropical vegetation of the Southern States, to the dwarfed and hardy foliage of our northern borders. A division is devoted to horticulture and the propagation and acclimatization of new and foreign species. Studies in ornamentation, in the best means of hybridizing, budding, pruning and grafting in treating diseases of plants and trees, are thoroughly pursued in the experimental gardens. Seeds of new varieties and of superior quality, as soon as they are obtained, are freely distributed throughout the country on application to the Commissioner of Agriculture.

The Department maintains at least one correspondent in every county of the United States, through whom statistics of quality and quantity of crops and other facts are forwarded to Washington, to be there distributed by means of the monthly and yearly reports. Specialists are also employed to prepare for these reports instructive articles on suitable topics. Questions from agriculturists are freely answered and the fullest possible information afforded. The purchaser of a farm situated in a region with which he is unacquainted has only to inquire, and the department will tell him the crops likely to prove remunerative in the special locality, advise him regarding cultivation, and warn him of obstacles to be surmounted and the best means of overcoming them. A chemist will analyze the soil, report as to its properties and the value of fertilizers to be used thereon; a botanist will give every particular regarding the natures and diseases of plants, and will point out in what families to seek needed products and what effect a change of soil will have upon them. An entomologist will give advice regarding the insects which destroy vegetation, and as to the best mode for their extermination.

As compared with the other national bureaux, the expense of this department is remarkably small. The cost of the library and museum was \$140,000, and the conservatories were built at an expense of but \$52,000 more. The library contains a valuable collection of agricultural literature in several languages. Volumes of rare pictures are arranged on long tables—one work a present from Francis Joseph I, Emperor of Austria, entitled "Nature Printing," containing representations of ferns so exquisitely printed that it is difficult to believe them unreal. In the museum are specimens of fibrous products, cereals of this and other countries, stuffed birds and plaster casts of fruits from all the different sections of the United States, arranged so as to show at a glance the products of each region and the specific changes caused by transportation. On the walls of the fruit cabinet are hung diagrams, showing the character and habits of the different insects that prey upon fruit and fruit trees, and in glass cases are preserved the native birds that feed upon destructive insects and should be protected by the kind treatment of the agriculturist. The whole arrangements are neat and handsome, and well repay a visit to this department of science and agricultural art, which is filled with rare specimens of artistic excellence and skill.

AMMONIA IN SNOW WATER.—Dr. Vogel refers to Dr. von Liebig's researches, made in 1826 and 1827, on the quantity of ammonia as nitrate in rain water, and then records at length his own researches on the presence and quantity of ammonia contained in snow and snow water. By the method employed by him the following results were obtained, 1 liter of snow water being the unit:—Freshly fallen snow, collected in a porcelain basin, at 0° gave 0.003 gramme; at -3° gave 0.002; at -9° to -15° gave 0. Snow water, from

snow which had lain for twenty-four hours, on a piece of garden manured during the previous autumn, contained 0.012 gramme. Snow water from snow which had been twenty-four hours on a meadow contained 0.009. Snow which had been twenty-four hours on a zinc roof contained 0.004.