

so largely perverted to the miscellaneous distribution of ordinary seeds as to be looked upon by many as a serious abuse.

It has been the desire of almost everyone who has been at the head of the Department to pursue a broad and liberal policy, to the end that all branches of rural economy might receive their due share of attention. The head of the Department is, however, helpless without congressional aid and sympathy, and it has too often happened that investigations which promised valuable results have had to be abandoned because of the failure of Congress to make the needed appropriations.

I venture these introductory remarks in part explanation of the record of the Department in apiculture, which it is my privilege to present to you.

The annual products of the apiary have been variously estimated at from fifteen to twenty millions of dollars, while I need not insist to the members of this Society that the work of insects, and chiefly of our bees, in the fertilization of our seed and fruit-producing plants far exceed in value the honey and wax product; so that it is quite impossible to estimate the combined value of these direct and indirect benefits from the bees. Fifteen years ago, when I first accepted a position in the Department, there was provision only for an entomologist, without assistants or means for any experimental or field work. During the next four or five years I succeeded in impressing the Commissioner of Agriculture and Congress with a sense of the importance of the work to be done in efforts to counteract the work of injurious insects, and the appropriations for both office assistants and field work increased. But the self-evident advantage of endeavors to protect the farmer from some part of the immense losses occasioned by injurious insects, had to fight its way into recognition. It was not until 1885 that the more important work done in counteracting the work of injurious species had sufficiently advanced to justify my giving some attention to apiculture, and the fact that nothing more resulted from the work then begun may, to some extent, be laid to the lack of effort on the part of the bee-keepers themselves, i. e., to their failure to take united action such as would bring home to the head of the Department and to those in charge of the general appropriations the needs and just demands of the industry.

However, that considerable has been done by the Department, and through its agency for beekeepers—much more, probably, than most of you are aware of—the published reports of the Department show. These reports, hundreds of thousands of

which have been distributed very generally over the land, have surely had their influence in the promulgation of intelligent and humane methods in the culture of bees. Beginning about the time of the first edition of Langstroth's celebrated work, or nearly a decade before any bee journal had been printed in the English language, the Department reports have, from year to year, given some notice of progress in bee culture, statistics of honey and wax production, and on several occasions excellent little treatises on bees and bee management. Notable among these is the article on the nature and habits of the honey bee, in the report for 1857. I cannot give the name of the author, as the initials only of the Chief Clerk of the Patent Office are attached to it. In 1860, Mr. William Buckisch of Texas, gave, in an extended article, a review of bee culture as practiced by Dzierson and his school. The essay by my old friend, Mrs. Ellen S. Tupper, of Iowa, published in the report for 1865, and covering her theory of bee-keeping, was widely read and frequently quoted, creating much interest in improved methods.

The introduction of Italian bees into this country is certainly one of the advances in American bee culture which ranks second only to the invention of the frame hive, the honey extractor and the comb foundation machine. But how many even now know that the Department of Agriculture had anything to do with the matter? Leading text books on apiculture are silent on this head. The fact is, however, that the first successful importation of Italian bees from their native land to America was made by the Department, and it was almost wholly from this importation that such skillful apiarists as Langstroth, Cary and Quinby, bred and disseminated the race during the early sixties. Individual effort had, for some years previous, been directed to securing this race of bees, and in the autumn of 1859 a few queens were landed here from Germany by Mr. J. P. Mahan of Philadelphia, on his account, and by Samuel Wagner of York, Pa., and Richard Colvin of Baltimore, acting together. Those imported by Messrs. Wagner and Colvin were lost during the winter which succeeded, and those which Mr. Mahan imported do not seem to have been multiplied as rapidly as the importation made through the Department the following spring. Mr. S. B. Parsons, acting for the Department, was in Italy at this time, making purchases of cuttings and plants for testing in this country, and an order was transmitted to him by the Department to procure some hives of Italian bees. Ten