

Mr. Moon was called to the chair and Mr. Van Slyke spoke of the chemical nature of honey, and its capacity for being manufactured into candy. It was not of the cane sugar class. Honey was grape sugar, with a small preparation of cane sugar. Its composition was six atoms of carbon, twelve of hydrogen and six of oxygen. It was made susceptible of crystallization by treating it in the candied state to two and a half parts of alcohol to one of honey subjected to pressure, then treated to one-tenth part of alcohol, warm. Then it would form semi-circular candy crystals. Another method was to put candied honey on bricks, allow the bricks to absorb the cane sugar element, then treat it with alcohol. The result was beautiful, needle shaped crystals—a candy retaining all the flavor of the honey in the comb. The uses of honey in pharmacy, in domestic use in the arts, were not sufficient to consume the quantities offered in the American market.

Mr. King said honey could be hardened so as to flint off by heating. This might be sold in railroad cars and elsewhere as candy.

Mr. Muth said he had some of his honey in jars candied, and he simply put the jars in warm water and it became liquid.

Mr. Peck, of New Jersey, said that the consumption of honey must be encouraged. The price must be put down so as to enable the poor to use it. It might be sold at ten cents-a-pound, and would rebound ultimately to the advantage of bee keepers.

NINTH TOPIC.

What are the best honey producing plants to cultivate in a poor honey district? Mr. Root preferred basswood. He did not know how long the bees worked it.

Mr. Dallas, of Kansas, said that in Kansas there was no basswood, and with some persons, the eating of honey produced in the State was attended with sickness. White clover honey was his favorite.

General Adair found a variety of turnip very excellent for apollen producer. There was also a shrub called the *Aralia Spinosa*, which bore one of the best honey producing flowers. He had few of them, and when in bloom they were covered with bees. He had never seen any buckwheat honey.

Mr. Porter, of Minnesota, said buckwheat was one of the best honey producing plants in the country. He had saved a swarm that came in the middle of September and owed his success to buckwheat. A good plant, in Minnesota for honey was the golden rod. Raspberry flowers were good honey producers. He also favored basswood. The dandelion was one of the best as well as one of the earliest honey plants. He had seen a variety of the lilac that would make as good a hedge as the Osage orange, and which was a fine honey producing plant. The willow also was good.

Mr. Langstroth indorsed what Mr. Porter said about the honey producing plants generally. He said that in some seasons there was no honey at all in the buckwheat. He had gone over acres and acres of it and had not seen a bee upon it. Again, he said the buckwheat was one of the best honey producing plants. He had gone through acres of it, and found it laden with bees. Much depended on climate, season and location. South of here it was worth little for honey. So with white clover. Some seasons it was good and some bad for honey making. The same was true of the golden rod. He meant these remarks to show the different and contradic-

tory observations that might be made from different standpoints, and to show the need of charity in comparing experiences.

The Rev. Mr. Van Slyke said that near New York city there was plenty of golden rod. His bees last season did not make any honey till the golden rod bloomed, and then they made great quantities.

THE MEL-EXTRACTOR.

Mr. Langstroth was requested to speak on the subject of the mel-extractor and its relation to bee culture. He said that in 1853 he became interested in the subject of extracting honey from the comb and using the comb for the bees again. He consulted mechanics. None of them helped him. If any one had said to him centrifugal force, he would have exclaimed "eureka." A foreigner discovered the process. This discovery would again revolutionize bee culture in this country. Twice or thrice the amount of honey could be produced from the same stock of bees and the same care now as formerly without it. Now some means must be devised to disarm the public of the suspicion that the extracted honey was a manufactured concoction. The candying of honey was not an objection. Age did not hurt it. He tasted some twenty-five years old and it was good. He had good authority for saying that good honey was taken from the ruins of Pompeii nearly two thousand years old. We have got to convince the public that this extracted honey was not adulterated. The way was to put the price down so that adulteration would be unprofitable. He thought the more the knowledge of how to manage this extraction and preserving of honey was diffused and acted upon, the better it would be for bee culture.

He suggested the use of a blue grass wisp, with which to brush off the bees from the comb.

He had experimented in artificial combs, and the result had been just nothing at all. He had doubts about the bees being induced to use the metallic comb.

He hoped that the invention of artificial combs would be successful, in which, even if the bees could not be induced to breed, they might deposit honey.

A vote of thanks was given to Mr. Langstroth for his address.

Mr. Langstroth added, in relation to young queens, that he ascertained that the supposed enmity of bees to unfertilized queens was in a great measure a mistake. He had put a young, unfertilized queen on the opposite side of the comb on which a fertilized queen was walking. A bee would sometimes stop and stare at the intruder, as much as to say, "Does your mother know you are out?" Sometimes a bee would take hold of her as if about to hustle her out, but let go again. A fertilized queen would be killed, and an unfertilized one accepted.

Mr. Langstroth being called upon again, said he thought the drone progeny of an Italian queen would be pure Italian drones, be the drone by which the queen was fertilized, a black drone on an Italian drone. He said that when the Italian Queen was first introduced into the country there was opportunity to test the theory. He said that in warm blooded animals where there was a common circulation between the mother and the unborn offspring, there was a decided influence exerted upon the mother. Mares that have produced mules had