

the fall, to have young bees go into winter quarters I consider a great mistake. Nature or providence has regulated this matter. The bees cease gathering and the queens cease laying because the hive during that condition loses but little vitality, the bees remain quiet and do not wear themselves out. Begin to feed them and they are excited, begin to wear and brood rearing begins to keep up the vigor of the hive. You will likely be out the cost of the feed and your labor.

At this stage the president of the Commercial Club gave a very pleasing address of welcome to the delegates. Dr. Miller replied in a very pleasing manner.

APICULTURE IN GERMANY.

It is with pleasure that I accede to the request to prepare article for the convention in St. Joseph, Mo., and I select, of course, the subject which has been suggested as one about which information is required. Although this subject is such a prolific one that I might write volumes on it, I will nevertheless make my article as short as possible.

The keeping of bees in Germany is very old. Records which show this reach back 400 years before the Christian era. The bold mariner Pytheas, of Massilia (Marseilles), a contemporary of Alexander the Great, records in history that on the north coast of Germania on the banks of the River Elms, he had found honey used in the preparation of mead. Junius states that before the battle of Arbalo against the Cherusker (11 B. C.) a large swarm of bees settled on the cord and shaft of a lance in front of the tent of the camp-prefect, Hostilius Rutilius, in the camp of Drusus. Moreover, Peinius records the finding in north Germany of a honey comb eight feet long taken from a log hive, that is, a hive hewn out of a tree trunk. He tells how the old Germans followed the keeping of bees in forests and in gardens, in living trees in which a lodgment for the bees was hewn out, or in hives which they had cut from the trees and placed near their dwellings. Especially the Slavic laws prove that already in the fifth century of the Christian era, covered as well as uncovered bee-houses existed.

The greatest development that apiculture has ever had in Germany occurred in the so-called middle ages. This began, however, with the introduction of Christianity, from which time on the consumption of wax in the shape of candles and tapers constantly increased. The information which has become available to us through the writings left by the monasteries and churches proves through the records of taxes for honey and wax which had to be met annually by the

peasants, that bee-keeping yielded enormous returns. Thus it came about in the middle ages that the trade in honey, wax and mead reached its highest prosperity. Great quantities of the products of bee-keeping were exported by way of Hamburg and other seaports to Spain, Constantinople, Syria and Palestine. This flourishing of apiculture was greatly aided by the great attention paid to it by princes and owners of great estates. The so-called *zeidler* societies were founded. These were composed of those who were engaged in the care of bees, and also such as were engaged in collecting and straining honey and clarifying wax, and were called *zeidler*. These *zeidler* societies formed closely allied branch associations, which were given special rights and privileges. The strictest laws protected them. Only skillful bee-keepers were accepted as members. They elected judges (*Starosten*) and elders from their own numbers. The forests were divided off into districts, and each district was under a *zeidler*, while several districts form a society which in most instances managed large numbers of colonies. The Upper Lusatian *Zeidler* society, for example, had 7,000 colonies. The *zeidler* system was especially flourishing in the Marg of Brandenburg. It was developed on a similarly extensive scale in the so-called royal apiary in the Bavarian forests in the vicinity of Nuremberg. In the year 1538 the value of two colonies was the same as that of a cow.

But, unfortunately, from this time on, apiculture in Germany went down hill at a great rate. On account of the Reformation the price of wax decreased greatly, for the glittering lights in most of the churches were extinguished. But what contributed most to the downfall of apiculture in Germany was the fearful thirty years' war which raged on account of religion, after the close of which, in 1648, three-fourths of the inhabitants of Germany and 80 per cent. of the cattle had been destroyed, and one-third of the cultivated land laid waste. Only gradually, very slowly, people thought of apiculture again. During this time conditions had also greatly changed. People had learned to replace wax with substitutes, and honey with cane and beet sugar, etc.; the mead breweries which had cost so much had disappeared, the forests had been decimated, and, through intensive culture, many of the honey-producing weeds were exterminated. The belief that bee-keeping was no longer profitable gained ground rapidly. To awaken even a degree of interest in it again required great and persistent efforts. In this men like Nikol Jacob in Silesia, Schirach in Saxony, who first practiced the artificial increase of colonies, Reim Spitz-