

ner and Christ were notable. Christ invented the magazine hive which consisted of several boxes placed one upon another.

After the thirty years' war apiculture made exceptional progress on the north German plains, as, for example, at the mouths of the Elms, the Weser and the Elbe, and especially in that portion which to-day is included in the Province of Hanover and the adjoining lands, where endless areas, covered with *Erica Vulgaris*, and here and there buckwheat, offered to the bees a good autumn harvest. Here bees were kept, and are still kept to-day, in the round, bell-shaped straw hives. The method followed is a very rational one. The colonies, through feeding, are urged to give off numerous natural swarms, and if, for example, 50 colonies increase to 150, of these 100 are sulphured in the fall. In good years for honey these yield about 3,700 pounds of honey and 50 pounds of wax. The returns are obtained mainly by irrigating. Even though in many other localities in Germany bees were kept in straw hives, this is of little moment. Box and long hives have nearly disappeared. Housing bees in living trees is no longer followed.

Apiculture in Germany did not again receive a general impulse until Dr. Dzierzon came forward in 1818 with his discovery of the movable-comb hive, which appeared in the bee journal founded in Eichstaedt, Bavaria, founded not long before this by Von Berlepsch. But when the latter, with bag and baggage, went over into Dzierzon's camp and other prominent bee-keepers followed him, the new system gained ground constantly, especially after the invention of comb foundation and that of honey-extractor were added, and the itinerant convention of the German and Austro-Hungarian bee-keepers came into existence. The first one of these conventions was held in Arnstadt in 1859, and the thirty-ninth in September of this year in Vienna. These conventions are always accompanied by apian exhibitions. The apian societies which are scattered all over Germany have had the greatest influence upon the spread and elevation of apiculture. We have in the first place the separate societies which are made up of members of a given locality. These societies meet monthly, half-yearly or yearly. A number of these societies form, in the several lands or provinces of a state, so-called central associations. Nearly all of the central associations, that of the kingdoms of Bavaria and Wurtemberg excepted, have banded themselves together to form a German Central association which numbers about 20,000 to 30,000 members. The German Central society, by the side of the German-Austro-Hungarian itinerant asso-

ciation, but independently, holds every two years a great convention with an exhibition. The last one was held in 1893, in Heidelberg. All of the separate central associations receive subventions from the state. The Mark association, for example, to which I belong, and which is composed of 83 separate individual societies, having about 1680 members, receives yearly about \$300. Other societies more, and others less. Every member of an association receives at a reduced rate, the official organ of the society. The Hanoverian Centralblatt, organ of the Hanover Central association, is most widely distributed among the members of societies, the editions being 13,000 numbers. It appears monthly and costs to members of the society 24 cents yearly. In addition to these official organs, numerous other bee journals are published. Besides these journals—there are about sixteen of them—besides the multitude of other apian publications which are poured forth annually, and aside from the activity of the societies, the so-called bee-keepers' schools work for the elevation of apiculture, as, for example, the bee-keepers' school under the protectorate of the Archduchess of Baden, which is located at Eberbach on the Neckar, where several courses are given every summer, many ladies also attending; also the bee-keepers' school of Pastor Weygandt. Notwithstanding all these extraordinary exertions, the elevation of apiculture in Germany proceeds only slowly. Indeed, it has even gone backwards in the last twenty years, but it is now on the increase, especially the method with movable combs. In the year 1883 the number of colonies of bees was 1,911,797, so that there were 3.5 hives per square kilometer, and for every 100 inhabitants 1.2 hives. Of these 193 were movable comb hives. According to the last census, in 1892, there were 2,034,479 colonies, that is 3.8 hives per square kilometer, or for every 100 inhabitants 4.1 hives, 31 of which were movable comb hives. Unfortunately, no exact figures concerning the honey yield of these colonies are at my command, but it may be fairly estimated that in what are called good honey years, the honey harvest reaches 82,000,000 pounds and the wax harvest 1,000,000 pounds. It should be noted here that in Germany very little comb honey is produced, there being for the greater part no market for it. From the hives with fixed combs the best honey that is obtained is what is called run honey, and it approaches extracted honey very nearly in quality. The crushed combs are placed in a sieve or a trough and the honey permitted to run off. What remains is gently heated and strained. Extracted honey and run