

Cheshire plan? If he is, all right, I take back all I have said. If he is not, it is Mr. Cornell's first duty to look after him and see that he goes right, if he would be a faithful servant of the bee-keeping world, rather than "forbearing" to intimate that Mr. Jones and myself show a "want of knowledge."

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We wish to give full credit to scientists, and, in fact, we owe them a great debt of gratitude for the able work they have done for us, and yet we are sure in the past some scientists have made mistakes, and none are infallible. No doubt many of those who have read Cheshire have noticed his statement on page 177, Vol. 1, in reference to the capabilities of bees building square cells. He states: "This matter is not unimportant, for, if the books are believed in, the manner of cell elaboration cannot be understood. Even Langstroth, to whom the debt of apiculture is very great, has an illustration of the intermediate cell with a prolonged internal angle of 62° , which a number of English writers have improved (?) to 51° , whereas about 100° is the limit the bee can reach." Now, notwithstanding friend Cheshire's elaborate calculations and his positive theories on this point, we have known bees to build cells in direct opposition to, and in defiance of all his rules and regulations. Many will recollect us exhibiting at Toronto Exhibition, large pieces of comb with cells built in almost every conceivable shape, and when Mr. Cowan, the able editor of the B. B. J., was visiting us in 1887, we gave him a number of large pieces of comb to take home to England, disproving beyond question these statements made by Cheshire. While scientists work largely with their microscopes, we go by practical experience. Experimenting for years with thousands of colonies ought to be some proof of a person's knowledge in reference to matters pertaining to their business. The back numbers of the C. B. J. contain many pages describing the various experiments in connection with the curing of foul brood, and we do not desire to go over them again, but we have had occasion lately to make some further tests in order to prove some points. Now, we have taken bees from a foul broody colony, that had honey in their sacs, and shaken them all up not. After remaining in this close

together so that we could not tell any difference in them. We took part of them and mashed them up, and mixed the mashed bees in honey, fed this honey to a colony and gave it foul brood. We took the other half, and fasted them until all the honey in their sacs was consumed, in fact, until they starved to death. We then mashed them, and fed them to a nucleus, or small colony, first mixing them thoroughly in honey, and the result was not a trace of foul brood. We have had repeated experiments clearly indicating to us that the honey is almost the only cause of spreading the disease. We have no knowledge of the disease ever being spread by the bees, after the honey in their sacs was all consumed. Of course, we have known it to start from hives that contained foul brood, but not after they had been scalded.

Queens are also said to lay eggs which will produce foul brood. This statement we have no hesitation in saying, was made in good faith, yet experience in America at least, proves that it is quite astray. I have made tests in more than 500 instances of queens from foul brood colonies and the disease in not one instance ever appeared again. See the thousands and thousands of foul broody colonies that are fasted every year and which never show a sign of foul brood afterwards. If the queen gives the disease or if the disease was carried by the bees on their bodies, fasting would be of no use. If the disease is in their bodies in any way, so that it could afterwards come in contact with the honey, why does it not produce the disease again? Perhaps some of these scientists can tell us why it is that a bee with its sac filled with foul broody honey can consume or remove every particle of it from the sack so that clean honey put into the sac never gets a trace of foul brood. We have set a clean colony of bees without combs on top of a foul broody hive, placing two partitions of wire cloth between sufficiently far apart to prevent the bees from feeding any of the diseased honey to the upper colony, but allowing free circulation of atmosphere between the two colonies, until the top colony was so permeated with the foul broody odor that it was impossible to tell from the smell which colony was diseased and which was