position of the levulose. The longer the honey is dried in the water oven the greater the loss from this cause and hence larger percentage of water (apparently) shown.

The samples of honey that we have been at work upon were, as I have said, obtained from an experiment instituted to ascertain the differences in quality between honey which had been taken from the comb before capping, taken while being capped, or as we have termed it half capped,and that which remained in the hive until the comb had been fully capped. We have supposed the honey from the uncapped comb to be in an unripe condition, that which was half capped has been considered as approaching maturity or ripeness and that which has been left until the bees had entirely capped it, as ripe or matured honey.

The experiment included further features besides the foregoing. One was to ascertain what difference as regards ripeness and quality would result by keeping the honey in glass stoppered bottles as against keeping the honey in bottles covered merely by two layers of cheese cloth. Under these conditions Mr. Fixter kept uncapped, half capped, whole capped honey.Another feature of Mr.Fixter's experiment was, keeping honey in the honey room (upstairs) as against preserving it in the cellar. So that we have had in the honey room and in the cellar samples of each of these honeys kept in glass stopped bottles and in cheese cloth covered bottles, uncapped.

Those twelve samples you see before you are the honeys I have been speaking of and which we have analysed.

First of all my endeavor was to find out if uncapped or partially capped honeys contained more water than the fully capped honey; and also if the cheese cloth covered honey was thicker and contained less water than those which had been kept in glass stopped bottles.

The point which we have to consider of the greatest importance this morning from a chemical standpoint is the readiness with which levulose breaks up or decomposes when honey is subjected to heat. I don't mean heat such as you would think of in connection with a stove, I refer to a temperature below that of boiling water; because,if you remember, this tube containing the honey solution is never subjected in the drying process to a temperature greater than that of boiling water. But we have ascertained from our experiments that we cannot estimate accurately the amount of water in honey just simply from the fact that the levulose breaks up while the honey is being dried. You have heard of caramel, you know what it is; when sugar is browned it denote that a certain decomposition has taken place; the sugar has been partly carbonized and the result is called caramel. If you were to take honey in such a tube as I have spoken of and shown you and place it for 24 hours in the water oven you would find the honey had turned brown. Then if you poured water on this tube a thin and extremely brown fluid, quite unlike honey, would be obtained showing that caramelization has taken place. When sugar caramelizes it loses weight,it is really subjected to a process of slow combustion. It loses weight. Now, my contention is this, that what we have been supposing to be water and water only as passing off in the drying process is really in part the decomposed products of the honey. The longer you heat it and the higher the temperature the greater the amount of caramelization decomposition, or, in other words