

The Senior Editor accepts Brother Mason's congratulations with thanks, and wishes to say at the same time that he was not backward in putting in a good word for the "Yanks" when opportunity afforded.

THE VALUE AND USES OF HONEY.

ITS ADAPTATION TO THE HUMAN SYSTEM.

THE following interesting paper was read by Dr. J. W. Vance before the Wisconsin State Bee-Keepers' Association at their annual meeting held in Madison February 3rd:

The subject of honey ought to be of interest to the agriculturist, knowing as he does that every flower which blooms on his farm and along the highway yields its delicious nectar to the busy bee that, with tireless wing, flits from flower to flower in quest of its food.

"How doth the little busy bee improve each shining hour,
Gathering honey all the day from every opening flower."

From every meadow, orchard and forest the summer wind bears away upon its wings countless tons of this precious product that ought to be gathered for the good of mankind.

It is not of the importance of bee-keeping as a pursuit, or the progress of bee-culture, that I wish to descant, but rather to say a few words about honey—to speak of its constituents, and its perfect adaptation to the wants of the human system, and of its superiority as a saccharine product to all other sweets in common use.

Although honey has a very ancient history, both sacred and profane, having been in use from time immemorial, its praises sung by inspired and uninspired poets, yet in modern times it has fallen into comparative disuse, perhaps on account of the competition of cane and grape sugars, and syrups made from them.

The use of honey has almost become a lost art. It seems to be regarded by most people as a luxury only, and seldom appears on the table except on great occasions.

Away back in the annals of time, our ancestors used it as a common article of food, and in cooking.

Honey is a physiological sweet; in other words its constituents are such that it is absorbed into the blood without undergoing chemical change.

Such is not the fact with regard to sugar. Sugar is indigestible, or rather not as susceptible of absorption and assimilation as honey, but it

requires the action of the gastric juice to split or invert its elements, the muriatic acid element of the gastric juice being the chief agent in this chemical transposition. This change produces what is termed in chemistry dextrose and laevulose. I presume this explanation does not convey a very clear or definite idea of the nature of these products, for the names applied only indicate how they affect polarized light. After this change occurs, absorption takes place. If in any way it is hindered or, on account of an excess of sugar above the capacity of the gastric juice to transform, there remains a residue, the result is decomposition into elements that irritate and inflame the mucus membrane of the intestinal canal, producing a list of ailments too numerous to mention here. Think of the legions of little ones who have been the victims of their universal fondness for sweets, and who so frequently suffer from gastric troubles which, are in a large degree, the result of sugar indigestion. How many, many children have perished from eating candy? Their little graves are innumerable.

The importance of sugar as an element of food may be inferred from the large proportion of the elements of our food which is transformed by the action of the digestive organs into the constituents of sugar. Consider the proportions of bread, potatoes and vegetables, we consume daily, all of which must undergo this saccharine change before they are suitable to be appropriated by the human system; it may give you an approximate idea of the amount of these elements that are required to nourish our bodies.

If, therefore, the saccharine comprises so large a part of the elements of our food, does it not become an important question as to what form of sweet is the most appropriate and healthful for the nutrition of the human body? For the reasons I shall hereafter enumerate, it seems, to me you will agree with me that honey is the most important and the most healthful, because it is absorbed into the system without change, and because, unlike sugar, it does not easily undergo fermentation. The formic acid which is an ingredient of honey prevents chemical change and the morbid processes arising from decomposition of sugar.

Let me repeat the points of difference in ordinary sugar and syrups, and their comparative inferiority to honey as a saccharine food.

Honey is an inverted sugar consisting of laevulose (fruit sugar) and dextrose (starch sugar) and readily absorbed into the system without being acted upon by the gastric juice.

Sugar and syrup require the action of the gastric juice, converting, or as it is expressed in