

present a copy of this resolution to Prof. McLean for transmission to the Department of Agriculture.

Prof. Cook, who was about to leave, expressed the great pleasure he had experienced in meeting so many bee-keepers, especially the Eastern friends. Mr. L. C. Root responded, saying that he had hoped great things for this meeting, and he now felt certain that the Society had done wisely in coming to Detroit.

It was voted to hold an evening session, and the meeting adjourned until 7.30 p.m.

#### EVENING SESSION.

The meeting was called to order at 7.30 p.m. Ex-President Root in the chair.

Mr. Dadant introduced the subject of bees-wax, and urged the desirableness of inducing the United States Government to take off the protective duty in order that a supply might be obtained from other countries.

C. F. Muth remarked that much of the bees-wax offered in this country was very inferior, and went on to speak of several adulterations, some of which were such close imitations of the genuine article as to deceive experienced dealers. The greatest care should be taken to get pure bees-wax.

Prof. Cook was appointed "the committee of one" voted in the afternoon to communicate with the Department of Agriculture in regard to obtaining a scientifically-accurate analysis of honey.

Ex-President Root addressed the meeting, summing up some of the interesting features of the present meeting, expressing his satisfaction at the success which had attended the convention, and said that the hour had now come when we must part.

Adjourned *sine die*.

W. Z. HUTCHINSON, Sec.

#### CONVENTION NOTICES.

—Eastern New York Bee-keepers Association will hold its annual convention in the Agricultural hall, Albany, January 26, 27 and 28, 1886. C. W. Philo, Secty., Halfmoon, N. Y.

—Mount Forest Bee-keepers will meet in convention in Son's hall, Halsted's block, at 2.30 p.m., January 15th. Rev. W. F. Clarke will be present. J. H. Davison, Secty.

This week we conclude our lengthy report of the proceedings at the N. A. B. K. A. With our next issue we shall re-commence to give a general selection of bee-matter. We have some very able articles awaiting publication.

#### THE POLLEN THEORY.

THE pollen theory as I understand it is simply this: Under certain circumstances bees may winter with less liability to diarrhoea, disease and death, in case there is no pollen or bee-bread in the hive to serve as winter-food.

There are reasons drawn from experiment, I think, for the belief that facts sustain the theory. For several years we have tried to arrange our bees so that some should have abundance of pollen in their hives, while others should be destitute of the same, making a careful record in each case. While we have never lost a colony by diarrhoea during these experiments, we have had several cases of such disease, but never in colonies where the pollen was all excluded. In truth, the main portion of the diarrhetic excreta is almost always—if not always—composed of pollen grains, thus showing that pollen was present if not the cause of the trouble. Careful examination of bees from colonies with no pollen—some dead, others alive and lively, show little and frequently no pollen in their intestines.

Now with the theory and these facts in mind, let us study briefly the nature of food, and see whether or no physiological science has any facts or suggestions to offer us regarding this question.

There are four kinds of food, each of which probably enters more or less largely into the food regimen of all animals. Of these the inorganic, such as water, lime, chloride of sodium, or common salt, etc., are important as entering into the structure of organs, preserving the requisite consistency of tissues, and in aiding the vital processes. Thus it is necessary that blood or the nutritive substance of the animal body should be liquid. A large proportion of water keeps it so; hence what wonder that water is so essential to life, and so craved and sought after by most animals. In all vital activity osmosis—or the passing of liquids through animal membranes—is all important, common salt promotes this osmosis, and thus it is that salt has such saving properties. Hence those of you who believe so heartily in giving water to bees may still rejoice in that you are improving the blood of your pets, while those who take pleasure in adding salt, may exult as you affirm "here goes for osmosis." These inorganic elements are usually obtained in sufficient quantities in the general food, though water is generally required in larger quantities and must be had in addition, separately to secure the best health and greatest strength. We have all seen bees sipping water, and often in such places as to suggest that the addition of salt is very welcome to them. All kinds of food