

I trust that I have made plain the outline of the organisation suggested—the advantages offered—the duties devolving upon its members, and the responsibilities resting on its executive officers; and now, in conclusion, let me ask, may we not hopefully look to the future, expecting to see Apiculture prosper, and its votaries the intelligent, successful and happy, enjoying the full fruition of the grand organisation which may result—from the labors of this day? In the language of Webster, when laying the corner stone of the Bunker Hill Monument. I will say of this proposed organisation: "Let it rise! Let it rise, till it meet the Sun in its coming; Let the earliest light of Morning gild it, and the parting day linger and play on its summit!"

But little discussion followed the reading of Mr. Newman's paper, and on motion of Dr. Mason a committee consisting Prof. A. J. Cook, W. Z. Hutchinson and A. I. Root was appointed by the President, to take into consideration the proposed amendments to the constitution and report upon the advisability of its adoption.

Later on the committee reported as follows: "We recognize, with no light gratitude, the great labor and thought bestowed by Mr. Newman upon this scheme. We have given it all the thought and consideration that our limited time would permit, and in view of the sweeping changes suggested, and the somewhat intricate and involved plan proposed, we recommend that the matter be postponed for one year, and that Mr. Newman be requested to print the scheme, and that after a year's thought and study we then consider the matter again, when we can do the important subject the justice which it demands."

Next came a paper from C. P. Dadant, Hamilton, Ill., entitled:

#### COMB FOUNDATION, ITS MANUFACTURE AND USE.

The first requisite for a good article of comb foundation is, to get a pure article of beeswax. The making of foundation of wax mixed with paraffine, or with ceresine, has been tried several times, and has resulted in a loss to the manufacturer, as the bees detect the imposition more readily than men can. Besides, these artificial compounds melt at a lower degree than pure beeswax, and endanger the safety of the colony, when put in use. In this country, where the extremes of heat and cold are so marked, even pure beeswax, in naturally built combs, sometimes gives way under the heat and weight combined. It is by their lighter specific gravity that paraffine and ceresine are most readily detected. Happily, however, these adulterations are very scarce. The most frequent adulteration of beeswax, that with tallow, is easily noticed by the dull and greasy appearance of the cakes. This wax should be carefully rejected.

After selecting the beeswax, we melt it in a large boiler, and keep it liquid for 24 hours or more, to give all the impurities time to settle to the bottom. These are afterwards melted over, to separate what may remain in them.

The wax is then dipped into sheets, by the use of thin pine boards, which have been kept dampened in water, to prevent sticking. We formerly used glass, and finally rejected it as too expensive. The sheets are made thick enough to stretch in the rolls when moulded. In this way all the inequalities of their surface

are laminated out, and the foundation turned out of the rolls is dry, or nearly so, all the moisture being forced out with the pressure. It is in this particular that resides one of the many advantages of the roller mill over the press. In the press, the lubricating material, whatever it is, is left on the sheets, and is very objectionable to the bees.

There are many points in the manufacture of comb foundation that are worthy of attention, but it is impossible to notice them all in this short essay. In this branch of industry, as in all others, practice is required to acquire skill, and speed in manipulations.

Of the use of comb foundation, it is not necessary to speak, for there is certainly not a bee-keeper at this meeting who does not know of its advantages.

Two of our bee-papers have lately published an article from my pen, which first appeared in the *Western Agriculturist*, several years ago, when comb foundation machines were yet in their infancy. In this article I advised the use of narrow strips in the brood frames, for we did not then know how to make foundation that would hold, in full sheets in the hive, when used for natural swarms. But everybody now uses comb foundation in full sheets in hiving swarms, and we have done so ourselves for years with entire success.

Let me close with the remark, that of all nations, the American is the most progressive, as far as practical or material advancement is concerned. America leads the world in practical bee-culture, and though many are the scientific discoveries that we owe to our brothers across the Atlantic, they readily acknowledge that in the practical production of honey, they only follow in the footsteps of the apiarists of the New World.

C. P. DADANT.

Mr. H. R. Boardman took issue with the essayist upon the point of "everybody" using full sheets of foundation in hiving swarms. Mr. Boardman said many bee-keepers did not use them.

The President and Secretary expressed doubts as to Mr. Dadant's having stated the matter exactly as he intended.

James Heddon gave the results of experiments showing that the lye used for lubricating when using the Given press was in no way objectionable. He admitted that Mr. Dadant made as fine foundation as is made, more even, than is usually, upon the Given press, but with the press the excess of wax is forced into the side walls, the base of the cells being even throughout the sheet. He failed to see anything objectionable in this inequality in the height of side wall of foundation made on the press.

Dr. Miller used the press and liked it.

Here the discussion branched off into a consideration of the use of drawn combs versus foundations in the supers.

J. A. Green had used both old and new foundation as well as drawn combs. The new foundation was drawn out and filled first, then came the drone comb, and last of all the old foundation.

F. Wilcox used foundation in sections and could not understand how Mr. Doolittle and others could make the claims they did for starters of comb, much less sustain them.