

earnestly depreciated. On a call being made for enrolment of members, about seventy-five persons gave in their names and paid their annual fee of one dollar each.

The order of the day having been called for, Dr. G. Bohrer, of Indiana, proceeded to deliver the opening address, in the course of which, he discussed the profitableness of bee-keeping; recommended it emphatically as a paying business when well managed; answered objections; insisted on a thorough mastery of the science of bee-keeping; referred only in general terms to the subject of hives; and concluded by urging intelligence, energy, and perseverance, as essential to success in bee-keeping. The thanks of the Association were voted for the address, and it was requested to be put into the hands of the executive committee to be published in the proceeding of the Association at their discretion.

Professor Allen, of Syracuse, N. Y., then addressed the Association on the general management of the apiary in spring, summer, autumn and winter. Very sound, sensible remarks were made, but it would protract this article too much to attempt even a synopsis of them.

The subject of foul brood introduced by R. Bickford, of Seneca Falls, N. Y., and discussed at length by several members of the Association, awakened much interest. Messrs. Burbank, of Kentucky, and Rood, of Michigan, had suffered severely from this disease: the latter gentleman had lost 100 hives from this cause. They explained the symptoms and general appearance of foul brood in substance, as follows: First, a slightly raised shape of the capped cell, and a slight discoloration, sometimes hardly perceptible; next, an unmistakably dark color, and more or less putrid condition of the cell when uncapped; and finally, a bad smell, approaching more nearly to that of rotten cabbage than anything else, though not precisely like it. Sometimes a single cell would be found affected, at other times a cluster of cells, and then again, larger surface of brood comb. Mr. Burbank thought he had got rid of the disease by transferring the bees to new, clean hives, and burning the entire contents of the foul broody hives, scalding, fumigating, and treating the old hives. Mr. Rood had tried chlorine gas, carbolic acid, and Mr. Burbank's method without success; and believed that until a more effectual cure was discovered foul brood might be set down as ineradicable, and his earnest advice to all except veteran bee-keepers, who wanted to experiment, was to bury foul broody stocks, hives and all, beyond the possibility of resurrection. He was not satisfied with burning them, as particles of honey might be left sticking to half consumed brands, which for-

ging bees might gather and so diffuse and perpetuate the infection.

Mr. Benedict, of Bennington, Ohio, addressed the Association in reference to the Italian bee, and was afterwards questioned and cross-questioned on various points, especially in reference to the marks or signs of purity in Italian bees. Mr. Benedict thought it difficult to establish a standard of purity; was of opinion that the Italian bee was a cross-bred insect, probably the result of an intermingling of the common bee and the Egyptian, or some other distinct variety of bee; considered the hybrid stocks we obtain by crossing what are called the Italian bees with the common black bees as good as any, and in some cases better; he bred, for the most part, light-colored queens, because they were preferred by customers, but in his own apiary dark-banded queens had proved as prolific, and had produced as fine and useful progeny as the lighter ones. He endeavoured to breed from queens that yielded a progeny of uniform marking, and also from stocks that were of quiet disposition. In the latter respect he found a considerable difference among stocks, and believed that we could to some extent control the disposition of our bees by breeding from such as were of a mild and pacific temper.

Mr. Gallup was called on to speak in reference to natural and artificial swarming and increase of stocks. He desired that his remarks might be confined to answering questions propounded by members of the Association, and accordingly was subjected to a running fire of interrogations bearing upon various phrases of the topic assigned him, and it is needless to say that his replies gave evidence of that thorough mastery of his business for which Mr. Gallup is noted among apianairs.

Dr. D. B. Hamlin, of Tennessee, then addressed the Association on queen raising, respecting which he gave a clear and instructive account.

Mr. Dunlop moved to take up the subject of artificial combs, which, he said, the business committee had failed to place on the programme. The motion prevailed, and Mr. Bickford, of Seneca Falls, exhibited in connection with general remarks on the subject, sheets of newly patented foundation for comb, consisting of paper thinly coated with wax, upon which was stamped in facsimile what might be called the ground plan of the honey comb. This foundation, he stated, the bees were found willing to adopt and build up.

D. L. Adair, of Hawkesville, Ky., gave an interesting account of a contrivance invented by himself for the purpose of reducing wax into a shape in which the bees would take it and construct comb with it. The difficulty was in getting it fine enough. He mixed granulated sugar with the wax in the