bloom, rolling and packing and literally rioting in the golden dust, pregnant with the microscopic germs of plant life, until the golden pellets are packed away in its hair baskets, to be carried to the hive for storage as an indispensable portion of the food of its young during the winter months to come.

"It requires no expert knowledge to comprehend how perfectly the bee thus performs the office of pollination. Indeed, it is Nature's chief agent in this indispensable work. No seed, no fruit, is the universal law. Here is the only insect useful in all its habits, having a fixed habitation accessible to man, dependent upon the pollen of every variety of flower as an indispensable portion of the food of its young, and going to the bloom specifically to gather that pollen, thus making possible the marvellous fruit crops in Washington and the Pacific Northwest. That is why I say, give the bee a chance and it will literally break the boughs of your trees with the weight of fruit.

"Delve into the realm of applied mechanics or structural engineering, and your research is incomplete until a lesson is conned from the structure of the honeycomb with its marvellous strength as compared with the fragile nature of its fabric. No more marvellous structure exists among the myriad marvellous works of Nature. This waxen fabric, derived primarily from liquid honey converted into wax in that marvellous laboratory of the bee, formed by some mysterious instinct or intelligence into the very form of all others designed for economy of materials, space and extremity of strength, passes beyond the measure of human skill in its perfection.

"Somewhere between 1744 and 1768 it was discovered that wax is produced between the plates on the lower side of the worker bee's abdomen. It was John Hunter, the celebrated anatomist, who discovered just how the bees secrete wax, and thereby settled a vexed question. He communicated his discovery in a paper read to the Royal Society of London, Feb. 23, 1793.

"Wax is produced at the will of the bee, and when called for by the necessity of the hive. The wax-producing bees obtain a somewhat higher temperature, usually by close clustering, though they sometimes hang in slender festoons and chains.

"Wax is not chemically a fat or glyceride, and those who have called it 'the fat of bees' have grossly erred; yet it is nearly allied to the fats in atomic constitution, and the physiological conditions favoring the formation of one are curiously similar to those aiding in the production of the other. We put our poultry up to fat in confinement, with part light; to secure bodily inactivity we keep warm and feed highly. Our bees, under Nature's teaching, put themselves up to yield wax under conditions so parallel that the suitability of the fattening coop is vindicated.

"Chesire in his investigations says that on the inner side of the eight plates lining the lower side of the abdomen are about 140,000 glands, from which the wax is secreted as a white liquid, which hardens on exposure to the air.

"It is evident from the best authorities that the form and method of wax secretion were known as early as 1691, and possibly at even an earlier date. The extraordinary economy of the use of wax is shown by the fact that the hive of eight to ten gallons' capacity will yield but about two pounds of wax when melted. According to Dr. Donhoff, the thickness of the sides of a cell in a new comb is only the 1-180th part of an inch. Cheshire states that he found some that measured only 1-400th part of an inch.

"Notwithstanding the fragile nature of the honeycomb, it is still sufficiently strong to carry the relatively immense load of sweets stored in its cells. The perfection of insect labor is shown by the fact that human ingenuity has never been able to make artificial honeycomb. The