

**Bacteria in Eggs.**

It has been reserved for Dr. McClintock, of the University of Michigan, to point out that not even that dainty adjunct to the breakfast table—the egg—is free from the ravages of the “ubiquitous microbe.” Hitherto this article has been consumed in happy ignorance, but the result of Dr. McClintock’s investigation will be to seriously interfere with the peace of mind of many. In an evil moment the doctor took up the task of ascertaining whether eggs were infected with bacteria, and, if so, whether before they were laid or not. A healthy laying hen was obtained, and after repeated washings in a sublimate solution, she was placed in a sterilized cage. The hen laid regularly every other day, and the eggs were obtained as soon as possible after being laid and some of them wrapped in sterilized cotton and placed in an incubator. All these eggs became decomposed and swarmed with bacteria. Other eggs taken from the hen as soon as laid were broken and cultures made from their contents. Some of these culture tubes developed; others remained sterile. Some days after the hen was killed, and with due precautions, culture tubes were inoculated from various portions of the oviduct. Most of these tubes developed.

The evidence here seems to point to the fact that the egg was inoculated during its passage down the oviduct before the shell was formed. It does not, of course, follow that all eggs contain microbes, nor does it follow that even where bacteria are present they are in any way harmful. It is a matter of common knowledge that eggs kept excluded from the air will keep almost indefinitely. It is, moreover, difficult to understand how the experimenter succeeded in completely sterilizing his hen and her cage, and, if he succeeded in that temporarily, in keeping her sterile. The feathers of the bird, especially when shut up, would offer the more favorable medium for propagating bacteria, and it is quite possible that hence came the microbes. But, after all is said, what we want to know is the utility of information of this kind? If Dr. McClintock had boiled his eggs, and after that found in them the germs of some specific disease, such as typhoid or diphtheria, there might be cause for trouble; but, if there are any bacteria which will survive a few minutes in a frying pan along with a rasher of bacon, we would feel inclined to ask the Michigan professor to proceed with his investigations.—The Chemist and Druggist.

**Pleasant Words from an Appreciative Neighbor.**

Our esteemed contemporary, the Manufacturer and Builder, which has with marked ability through many years catered to the wants of a most discriminating class of readers, is pleased to make the following kindly commendatory remarks upon our work:

“The career of the SCIENTIFIC AMERICAN, that universally known and popular journal, has been one of remarkable success. It may now claim the distinction of being the oldest among the popular scientific journals of the United States, and it has always been among the best. The SUPPLEMENT, which was started in the Centennial year, has come to be recognized by all who are interested in the progress of science as the best source of general information, respecting the current of scientific thought, to be found in any language. It is almost exclusively eclectic in its make-up, but its selections are made with such intelligent discrimination that every field is culled of its best fruits. The ARCHITECTS’ AND BUILDERS’ edition of the SCIENTIFIC AMERICAN is of more recent origin, but fulfills its mission so well that it ranks with the best—as it certainly is one of the most useful—of American technical journals.

“Of the miscellaneous publications of Munn & Company, the ‘Scientific American Cyclopaedia of Receipts, Notes and Queries,’ a large quarto volume of over 700 pages, is perhaps the most notable. It is a valuable work of reference on all subjects relating to the arts and industries, containing 12,500 receipts carefully collated from the latest and most trustworthy sources. Another admirable, practical work, especially praiseworthy for the excellence and wealth of its illustrations, is ‘Experimental Science,’ edited by G. M. Hopkins. As a hand-book for the study of natural philosophy it is unsurpassable. Without dwelling upon a number of miscellaneous technical works, all characterized by their practical treatment of the subjects to which they relate, we may refer finally to the ‘Scientific American Hand-book,’ an attractive little pamphlet, giving in concise form a large amount of important information respecting patents, caveats, trade-marks, etc., which every inventor will find highly useful to know. The great experience and extensive business of the firm of Munn & Company in this branch of professional work has made their name more widely known throughout the country, as well as in Europe, than that of any other American house.”

THE President of the French Republic has a salary of £24,000 a year, and a further allowance of an equal amount of expenses.

**AN IMPROVED HARP.**

In the accompanying illustration is represented a harp in which are embodied late devices designed to improve the instrument in every way and to greatly enhance the quality and quantity of the tone, especially in the lower register. For these improvements a patent was recently issued, and they have been incorporated in the really superb instruments known as the Lyon & Healy Harps, built by the firm of that name in Chicago. As harps have been ordinarily built heretofore, the upper end of the sound board is of a width equal to the length of the string at that point, say three inches, while its lower end is less than one-fourth the length of the string, or is only about fourteen inches wide for a string about five feet long. To widen the base of the body of the harp and spread the pedals is impracticable, and has obvious objections in considerations of convenience and appearance. But by a combination with the body of side extensions, and a sound board secured thereto near their outer edges, with most skillful mechanical construction, the width of the sound board in the lower register is increased without increasing the width of the body, whereby the power, clearness, and beauty of the lower notes is greatly increased, so much so that they can be readily distinguished in full orchestra passages. Eminent virtuosi upon the harp have passed



THE LYON & HEALY HARP, WITH ENLARGED SOUNDING BOARD.

high encomiums upon the Lyon & Healy harps, and the new harp catalogue issued by the manufacturers contains portraits and the strongest kind of testimonials from such world famous artists as Aptommas of London; Cheshire of New York; Cervantes of Constantinople; Bressler of Paris; Possé of Berlin; Breitschuck of New York; Snoer of Leipzig; Bauer-Ziech of Dresden; Schuecker of Boston and others.

**Flowers as Food.**

Although it is well known that many kinds of flowers are used in medicine, the fact may not be known to many that the blossoms of certain plants are employed as articles of food. In many parts of India the flowers of a sapotaceous tree, *Bassia latifolia* or mah-wah, form a really important article of food. These blossoms, which are succulent and very numerous, fall at night in large quantities from the tree, and are gathered early in the morning and eaten raw. They have a sweet but sickly taste and odor. They are likewise dried in the sun and sold in the bazars. The Bheels dry them and store them as a staple article of food, and so important are they considered for this purpose that when in expeditions for the punishment or subjection of these tribes, when unruly, a threat is made by the invading force to cut down their *Bassia*

trees, the menace most commonly insures their submission.

An ardent spirit like whisky is distilled from these flowers, and is consumed in large quantities by the natives of Guzerat, etc. The Parsees and hill people eat the flowers both raw and cooked, often with the addition of grain, and also make sweetmeats of them. A single tree will afford from two to four hundred pounds of the flowers.

The blossoms of another species, *B. longifolia*, are employed in a similar manner by the natives of Malabar and Mysore, where it abounds. They are either dried and roasted and then eaten or are bruised and boiled to a jelly and made into small balls, which are sold or exchanged for fish, rice and various sorts of small grain.

The flowers of the Judas tree, *Cercis Siliquastrum*, of Europe, have an agreeable acid taste and are sometimes mixed with salads or made into fritters with batter, and the flower buds are pickled in vinegar. The flowers of the American species, *C. Canadensis*, the red bud, are used by the French Canadians in salads and pickles.

The flowers of the *Abutilon esculentum*, bençao de deos, are used in Brazil as a boiled vegetable.

The flowers of *Moringa pterygosperme*, the horse-radish tree, are eaten by the natives of India in their curries.

The large and showy flowers of *Tropæolum majus*, the Indian cress or nasturtium, are frequently used along with the young leaves as a salad. They have a warm taste, not unlike that of the common cress, and it is from this circumstance that the plant has obtained the name of nasturtium.

The young calices of *Dillenia scabrella*, and *D. speciosa*, which are swollen and fleshy, have a pleasantly acid taste and are used by the inhabitants of Chittagong and Bengal in their curries and also for making jelly.

The flowers of *Rhododendron arboreum* are eaten by the hill people of India, and are made into a jelly by the European visitors. Yet poisonous properties are usually ascribed to the species of this genus, and it has been said that the *R. Ponticum* was the plant from whose flowers the bees of Pontus collected the honey that produced the extraordinary symptoms of poisoning described as having attacked the Greek soldiers in the famous retreat of the ten thousand.

The flower buds of *Zygophyllum Fabago* are used as a substitute for capers, and the flowers of *Melanthus major*, a plant of the same order, are so full of honey that the natives of Good Hope, where the plant grows wild, obtain it for food by shaking the branches, when it falls in a heavy shower.

*Coccoloba urifera* is remarkable from the peculiarity of the calyx, which becomes pulpy and of a violet color, whence the plant is called the seaside grape. This pulpy calyx has an agreeable acid flavor and is edible.

The flower stalks of *Hovenia dulcis* become extremely large and succulent and are used in China as a fruit. It is said that in flavor they resemble a ripe pear.

The flowers of the pumpkin were cooked and eaten by some of the tribes of the American Indians, especially by the Aztecs, by whom they were highly esteemed.

The cauliflower, which has been known from remote antiquity, differs in a remarkable manner from all the other varieties of the cabbage tribe, whose leaves and stalks alone are used for culinary purposes. Instead of the latter being used, the flower buds and fleshy flower stalks, which form themselves into a firm cluster or head varying from four to eight or more inches in diameter, here become the edible portion and one of the greatest of vegetable delicacies.

The flower buds of *Capparis spinosa*, a plant which grows on walls, etc., in the south of Europe, are pickled in vinegar in Italy and form what are commonly known as capers. These are chiefly imported from Sicily, though the plant is largely cultivated in some parts of France.

The cloves of commerce are the unexpanded flower buds of *Caryophyllus aromaticus* (Myrtaceæ), a small evergreen, native of the Moluccas, but cultivated in several parts of the East and West Indies. Before the expansion of the flowers, which are produced in branched panicles at the extremity of the branches and are of a delicate peach color, the buds are collected by hand, or else sheets and mats are spread under the tree and the buds brought down by beating it with sticks. They are cleaned and then dried in the sun. A uniform brown color is imparted by slightly smoking them over a wood fire. The flower buds of *Calyptanthus aromaticus*, another plant of the same order, may be advantageously substituted.

The flower buds and the berries of the myrtle, *Myrtus communis*, were eaten as spices by the ancients, and are still used in Tuscany instead of pepper.

Long pepper is furnished by the immature spikes of flowers of *Chavica Roxburghii*, which are gathered and dried in the sun. In chemical composition and qualities it resembles ordinary black pepper and contains piperine.