

LONDON'S BIG GARDEN.

THE ROYAL KEW AND WHAT IS TO BE FOUND GROWING THERE.

It Sends Plants to All Parts of the World, and Diffuses Botanical Knowledge Among All Nations—Facts of Interest About Its Operations.

LONDON, Sept. 26.—About 200 years ago Lord Capel laid out the garden which has since become not only one of London's most beautiful pleasure grounds, but a scientific institution, whose influence and benefits reach to all quarters of the globe. On the death of Lord Capel in 1696, the estate passed into the hands of his son-in-law, who made the place still more famous as the headquarters of English botanists. Under the advice of the Earl of Bute the dowager Princess Augusta made it a scientific establishment, and it was called the "Physic Garden." As early as 1768 Sir John Hill published a catalogue of the plants of Kew. There were then 50 ferns, 600 trees and shrubs and several thousand herbaceous plants. In 1789 the estate was bought by George III. He devoted much money and attention to its improvement. "Farmer George" he was called, in praise by scientists and in derision by taxayers, for his pains. For a long time after this monarch's death the gardens sank into neglect. It was then proposed to disestablish and disendow them. A protest was raised and the kingdom opposed, whereupon the gardens were surrendered by the crown and became a national establishment in 1840.

Then Royal Kew in name became Royal Kew in fact under the directorship of Sir W. J. Hooker, who remained in charge until his death, in 1865, and his son, Sir Joseph Hooker, the renowned traveller and botanist, who succeeded him. The latter is known to every student of botany in the world from his "Flora Antarctica," "Himalayan Journals" and his great work, "Genera Plantarum," and the tremendous importance of Kew as an international scientific educator, has been almost wholly due to his genius for compelling its work to cover a vast and practically limitless field.

Wherever in the world classification of new plants is required Kew stands ready to attend to the matter. Wherever new plants are wanted for cultivation these Royal Gardens will supply them, and this readiness of supply is not at all limited to British subjects or colonies. Where plant disease threatens or pests approach, Kew will consult and advise. Foreign institutions co-operate in all these beneficial relations. Lists of new plants are constantly being published. Lists of seeds matured here are also printed, and the institution wisely goes so far as to exchange these seeds with regular correspondents all over the world.

This magazine of seeds is nominally collected for the benefit of similar associations which may sometimes in part return like favors. But any one in any part of the globe applying with a serious purpose for seeds or plants is not refused. At the time of my visit applications laid upon the curator's desk from Oregon, Texas and British Columbia in America; from English shores, from South Africa, Ceylon, India and Guatemala. All were to be served with equal attention. This characteristic of Kew gives the whole world an interest in its resources, proficiency and increased powers for interchange of botanical knowledge and aid.

How the rapidly increasing population of the globe may be provided with food and clothing is regarded as a problem falling within the province of Kew's authorities. The splendid success of the cinchona plantations in India also illustrate the scope of the work at the Royal Gardens. The Peruvian supply was showing exhaustion. Quinine was becoming alarmingly expensive. Cinchona seeds and young trees were secured in Peru, brought here to Kew and nursed, and finally given successful culture in Jamaica, Ceylon and Bengal, until the annual output from these sources amounts to nearly 100,000 pounds. That was a direct benefit to all mankind.

It will thus be seen that Royal Kew is not only a favorite resort for holiday visitors, but it is the great central botanic workshop of the world; not a flower show nor a pretty park merely, for serious and vast work is accomplished here every year. And nothing is too trifling to receive Kew's candid attention. It is a matter of record that "debate has been gravely held, opinions have been formed and reported upon such matters as a South African cane, which some gentlemen in those distant parts thought adapted to fishing rods; upon the values of West African palm kernels as material for coat buttons, and upon a pithy stem which the government of a West Indies island believed suitable for razor strops."

Kew is now training young men to fill botanic situations in the colonies. Instruction is given in principles of scientific botany, and the general conditions governing horticulture under differing conditions and circumstances. In the end Kew is repaid. Nearly all these men become emigrants, remain enthusiastic correspondents with and contributors to the stores of the Royal Gardens. Mr. Thistleton Dyer, who became director of Kew in 1886, is only the fifth in a period of 130 years, and is broadening rather than restricting the field of scientific investigation so nobly opened and developed by Sir William Hooker and his son, Sir Joseph.

The gardens and grounds are extensive. Those portions known as the Botanic Gardens comprise nearly thirty acres, and the pleasure grounds and arboretum have an area of 270 acres. Beyond, stretching to Richmond, is the old Deer Park of about 400 acres, though only a small portion of the latter is accessible to the public. In front of the gardens stretches a broad, smooth walk, and dotted about the lawns are noble specimens of Italian, Spanish and Corsican pines. At the end of these one sees the old red brick house in which Queen Charlotte died. To the left is the principal avenue, with flower parterres on either side. In the distance the magnificent palmhouse rises like a fairy palace, and beside it are tiny lakes with flocks of aquatic birds.

The herbarium at Kew is undoubtedly the finest in existence. The number of specimens now exceeds 1,500,000, dupli-

cates not included. They fill a large structure in the northwest corner of the green, including a great hall, added in 1876, fitted with two tiers of light iron galleries. Beginning with the Ranunculaceae on the ground floor, they conclude with the grasses up aloft. There is no red tape here to oppose the student. A table stands in each corner for his convenience. All specimens are arranged after the system of Sir Joseph Hooker's great work, the "Genera Plantarum," so that the visitor only has to give the number attached to a particular genus, and the portfolio containing the corresponding specimen is before him in an instant.

In the garden proper the smaller plants are found in almost endless variety. Altogether there are nearly 30,000 species. Small as is this proportion to the total sum of nature's wealth, the knowledge, patience and labor in forming such a vast collection are in themselves almost inconceivable. Think of 3,000 species of trees and shrubs, 3,000 greenhouse plants, 2,500 "stove plants," 1,200 ferns, 1,000 succulents and 1,000 orchids among this bewildering collection, in one compact garden!

The Museum of Economic Botany was established in 1847. Its influence upon trade has undoubtedly since been increasing. Every tree and plant known to serve a useful purpose is represented here, with illustrations of the manner of its employment and most valuable use; while the Museum of Timber is a permanent world's exposition of woods. The showing in this from the two Americas and the West Indies exceeds that of all the rest of the world in extent and variety; and every great American city should duplicate this timber exhibit. Its economic suggestiveness and hints to woodworkers, from most ordinary necessities of building timbers to the highest possibilities in art woods and woodworking art, would prove invaluable.

To the casual visitor the show places of Royal Kew are the great palmhouse and the structure housing the huge water maze of Central America, named *Victoria regia* by its discoverers in compliment to Queen Victoria. The palmhouse is a veritable crystal palace. It is 362 feet long and 100 wide. It stands near the centre of the garden, with a broad terrace and the lakes with their aquatic flocks in front. Nearly 25,000 feet of hot water piping are required for its heating. Though sixty-five feet in height, its most gigantic habit—the finest specimen in Europe of the *pandanus*—is continually being lopped and pruned to keep it within bounds. There are besides magnificent specimens of the betel, the wax palm, the bread tree, the orange, the coral plant, the coffee shrub, the coconut and the tamarind.

A few yards distant is the home of the tremendous water lily, the *Victoria regia*. Its gigantic leaves and flowers spread completely over its allotted water space of 18,000 square feet in the summer months, while at this season of the year its wide oval leaves, yards in surface diameter, with beautiful curled edges, suggest the fabled shells in which Aphrodite is waited upon obedient seas.

EDGAR L. WAKEMAN.

WHAT METEORS ARE LIKE.

They Are Falling Every Day, but Do Not Cause Much Damage.

Any clear night, if the watcher has patience, he may see one or more "shooting stars," or meteors. These are not stars at all, but often are more brilliant than any star, because they are so near us that their friction against the earth's atmosphere either causes them to glow at white heat or to flame up like a torch. Even a very small meteor, one not much larger than a pin-head, might become distinctly visible in this way, and seen against a background of constellations, outside the North Star.

The whole solar system, astronomers say, is strewn with particles of matter known as star-dust, while larger bodies known as meteoroids chase one another about the sun at intervals of a few miles. Usually when these meteoroids encounter the earth's atmosphere they break into small fragments and fall harmlessly to the ground. It is thought that only 600 or 700 of these meteoric stones reach the surface of the earth unbroken in the course of a year, while the number of small particles which fall has been estimated at 2,000,000 a day. It the air did not act as a cushion, no casualty would be more common than being hit by a meteorite.

Meteorites are usually composed of iron, silicon and oxygen, the three elements which are most common in the earth, and as no new elements have been found in these visitors from space, it is believed that the solar system and perhaps the universe, are made out of the same material as the earth. The motion of falling meteors is very curious. One has been known to travel on a line almost parallel with the earth's surface, and from 60 to 100 miles above it, all the way from Indian Territory to central New York, where it is supposed to have fallen in fragments. Another passed from Michigan across New York State and on to sea between New York city and New Haven. These meteors travel 600 or 700 miles an hour after they become visible.

Meteors are most common about Aug. 10 and Dec. 7, when the earth annually encounters long droves of meteoroids as they journey around the sun. Once in 33 years the earth crosses the thin stream of Leonides, which seems to come from the constellation Leo, and is so long that six or eight years are required for this flock of meteors, travelling 26 miles a second, to pass a given point. When the earth meets this great torch-light procession there is a display worth seeing. The next one will take place in November, 1899.

Where meteors come from is not known. Whether they are fragments of a burst planet or collected star-dust can only be surmised. Once it was thought that they kept up the sun's supply of heat by running into him, but that theory has been abandoned. What is certain is that the planets are becoming somewhat larger and heavier every year through the shower of meteors and star-dust that is constantly falling. Thus it happens that it never rains pitchforks, yet iron enough to make a pitchfork rains upon the earth every day.—Harper's Young People.

They Come Higher.

Hojack—Statistics show that the average height of the American woman is two inches greater than it was twenty-five years ago. Tomdick—Yes, they come higher, but we must have them, —N. Y. Sun.

SOME FAMOUS NOMS DE PLUME.

How They Were Formed and Who Owns Them.

It might be thought that noms de plume or "sobriquets"—or, as the French call them *noms de guerre*—are chosen haphazard fashion, but though this may be so in some, it is far otherwise in most cases. As much thought is often devoted to their construction as ever was expended to the title of a book.

By far the simplest form—and these constitute a goodly number—consists of the initials of the author's real name, such as "L. E. L." (Letitia Elizabeth Landon), "G. A. S." (George Augustus Sala), and "B." (the late Lord Bramwell); or of some transposition of the real name, such as "Dromedary" (for George MacDonald), and "Draw," which is simply ward written backwards. As another example of this I might mention the famous prima-donna, Madame Trebelli, who has just died, and whose real name was "Gillebert," her *nom de theatre* being her surname spelt backwards, the initial "G" being omitted.

Most people, however, assume fictitious names. Many authors frame these upon the initials of their own names; thus, Annie Bronte wrote as "Acton Bell," Charlotte Bronte as "Currer Bell," and Emily Bronte as "Ellis Bell." And I might here mention the interesting but scarcely known fact that Robert Burns was a *nom de plume*, the poet's real name being Robert Burns, but it has by right of usage become the family name, as in the case of Henry Irving and H. M. Stanley.

Names of the opposite sex are often adopted, especially by lady writers, such as Mrs. Henry Wood, who used to write "Johnny Ludlow;" Mrs. Cross, who immortalized herself as "George Eliot;" Madame Dudevant, who held no mean essay in the literary and social circles of the last century as "George Sand" and Mrs. Stannard, who delighted the world not long since with the military tales of "John Strange Winter."

This is sometimes reversed, and Algernon Swinburne has graciously returned the compliment by besting a petticoat for his standard when he named himself Mrs. Horace Manners. Perhaps Swinburne objected to Thackeray's comment upon his initials. It is related that Swinburne wrote some verses in a young lady's album, to which Thackeray was asked to contribute. Thackeray simply wrote: "Two-thirds of the truth," under Swinburne's initials, "A. S." By the way, Sir Arthur Sullivan has dropped his middle name, Seymour, owing to the awkward combination of the initial letters of his full name.

Several well-known names owe their origin to some special circumstance; for instance, the cry of the leadsmen when his line marked two fathoms of water, has suggested to Samuel L. Clemens his world-famed *nom de plume* of "Mark Twain;" and Mlle de la Ramee's mispronunciation of her own name, Louisa, when a child, has furnished her with the popular sobriquet of "Ouida." And here might be mentioned that John Rowlands, in signing himself H. M. Stanley, has taken the name of his adopted father.

Many names, however, are entirely due to individual fancy, no particular law or circumstance being concerned in their evolution. Such for example are the "Edan Lyall" of Miss Ada Bayley; the "Artemus Ward" of Chas. F. Brown; the "Max O'Kelly" of Paul Blount; the "Henry Irving" of John H. Brodribb; and the "Lewis Carroll" of the Reverend Chas. Dodgson—the charming author of "Alice in Wonderland." Regarding the last, it is related that the Queen was so delighted with the amusing fairy tale of "Alice in Wonderland," that she gave orders that all the works of Lewis Carroll were to be procured for her. Her Majesty's surprise and disappointment on receiving a parcel of the mathematical works of the Reverend C. Dodgson (who is lecturer on mathematics in Christ's church, Oxford) can easily be imagined.

Now we come to another class of pseu-

donyms where, instead of names of persons, real or imaginary, some descriptive phrase, or title, or motto, is employed. As examples of the first I might mention "A Lady of England" (generally contracted into A. L. O. E.), the pseudonym of Charlotte M. Tucker; and "A Besieged Resident of Paris," owned by Mr. Labouchere.

As for mottoes and titles, etc., the most famous of all, owing to the controversial war waged round it, is "Junius." No less than fifty-one persons have been credited with it; and though the bulk of evidence points to Francis as being the author of the celebrated letters, it still remains a matter of dispute as to who really deserves that honor. The "Iconoclast" of the late Mr. Bradlaugh; the "Historicus" of Sir Wm. Harcourt; the "Kunymede" of the late Lord Beaconsfield; and the "Etoman" of Mr. Gladstone, are others of this class which have become of historic interest.

Though not legally protected by copyright, pseudonyms are effectually guarded by literary etiquette, and it would constitute almost a sacrilege for any person now to appropriate any such title as "Box," which has become by usage the exclusive right of the inventor—viz., Charles Dickens.—Tid Bits.

Locating Brazil.

The geographical name Brazil has been migratory in space and singularly changeable in form. An early geographer lays it down not only on the eastern coast of North America, but also gives it as the name of an island between "Ireland" and the Isle of Man. A map of 1566 calls by that name an island southeast of the Gulf of St. Lawrence. A map of 1582 sets down an island near the Cape Verde group and calls it Brazil. Other maps give the name of Brazil to an island somewhat east of "Nova Francia," and a group of islands southwest of Ireland. As to the spelling of the name, it appears as Brazil, Bresilia, Prisia, Brasi, Presilly, and in half a dozen other forms.

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