

THE FLOWER GARDEN.

Libonia Floribunda.

This plant is a native of Brazil, and was first introduced into cultivation about ten or twelve years since, by its discoverer Libon, after whom it was named. It belongs to the natural family of the Acanthaceae, and forms a neat bush about 1½ or 2 feet high, with downy stems and branches which are somewhat swollen at the joints. The leaves are small oval lance-shaped, opposite, of a fine glistening green on the upper surface, and whitish underneath. The flowers, which are very numerous, are tubular in shape, and of a scarlet color, tipped with yellow at the mouth. They usually begin to appear in January, and the plant continues to bloom until March or April. It requires the heat of a moderately warm plant house, and thrives in a compost of sandy loam, leaf mould, and heath soil. It has been objected against this plant, that it is very prone to shed its leaves unseasonably, and so becomes unsightly. This, however, may be avoided by keeping it in a steady, equable temperature. If placed abruptly in a high temperature, the leaves are sure to fall. The plant is easily multiplied by cuttings struck in heat. The following mode of culture, communicated by M. Bisson to the *Revue Horticole*, is stated by him to be perfectly successful in preventing the plants from losing their leaves. "I strike my cuttings in spring, when they are well-rooted I plant them out, at distances of 7 or 8 inches in a well-drained bed, composed of half sand and half spent hot-bed material, and keep them covered with a frame until all danger from frost is over. I admit air by degrees, finally removing the frame altogether, and leaving the plants in the open air until the end of September, when I transplant them again into a bed of the same material, and cover them with a frame, under which I leave them for a month or six weeks, when I remove them to their permanent quarters in the plant-house, and find that they turn out equally well whether I place them in a warm house or a temperate one. Plants a year old, treated in the same way, succeed quite as well. I cut them back and prune them in before planting." *The Garden*.

Lily of the Valley

The flowery month of May produces no plant more exquisite either in form or fragrance than this. Most plants have an especial beauty of their own—a something distinctive that is capable of endearing them to us, but this lily has attractions peculiarly its own. The graceful manner in which its pretty white bells hang on the slender, arching stems, and the agreeable contrast which they make with the bright green foliage, have rendered this little flower not only a favorite with all parties, but especially so with our poets. This little modest flower formerly grew in our woods and valleys in great abundance, but increased cultivation has rendered it comparatively rare in a natural state. In gardens, however, it is the most cherished of all hardy flowers, and the quantities of it used for forcing in early spring would surprise the uninitiated in these matters. Old writers on gardening tell us that about the end of the fifteenth century it grew abundantly on Hampstead Heath, in Bushy Park, at Lee, in Essex, and indeed in most counties in England. It grows plentifully in the woods of France and Germany, and is indigenous to most parts of Europe—from Italy to Lapland. It is sometimes called May flower; but as it grows spontaneously in shady places, though not in reality a lily, the name lily of the valley seems a natural one. The best situation in which to place this lily in the garden is where it will be partially shaded by shrubs and trees, and it flowers even better in a north aspect than when fully exposed to the noonday sun. It will succeed in almost any kind of soil, but it blossoms in greatest abundance in a light soil, rather poor than otherwise; for, when planted in rich garden earth, the roots spread and multiply rapidly, but the plants produce but few flowers, and, like many other creeping-rooted plants, it seldom seeds. This lily may be planted with advantage by the sides of water where, beneath the branches of some weeping willow, or other pendulous tree, its fragrance quite scents the air. Autumn is the best time for placing the roots of this lily in the ground, in which they should be covered about two inches in depth, and should not be disturbed oftener than every third or fourth year, as they seldom flower strongly or plentifully the year after being removed. When above ground they will require no other attention than that of keeping them free from weeds. Lily of the valley is said to be so abundant in woods in Hanover that the ground in many places is completely carpeted with it, and the air to a considerable distance scented with its agreeable per-

fume. In Germany it used to be common to make a wine of these flowers, by drying them in the summer, and in the time of vintage mixing them with grapes when pressed. A snuff has also been sometimes made of the dried flowers and of the leaves and essential oil of Marjoram. The fresh blossoms, gathered while wet with the morning dew, have also been used for purposes of distillation. *The Garden*.

Sleeping Flowers.

Almost all flowers sleep during the night. The marigold goes to bed with the sun and with him rises, weeping. Many plants are so sensitive that they close their leaves during the passage of a cloud. The dandelion opens at five or six in the morning, and shuts at nine in the evening. The goat's head wakes at three in the morning, and shuts at five or six in the evening. The English daisy shuts up its blossoms in the evening, and opens its "day's eye" to meet the early beams of the morning sun. The crocus, tulip, and many others close their blossoms at different hours toward the evening. The wyleaved lettuce opens at eight in the morning, and closes forever at four in the afternoon. The night-flowering cereus turns night into day, it begins to expand its magnificent sweet-scented blossoms in the twilight; it is full blown at midnight, and closes, never to open again, with the dawn of day. In a clover field not a leaf opens till after sunrise.

Those plants which seem to be awake all night have been called the "bats and owls of the vegetable kingdom."

Tulips.

Of the several species of the tulip, the common, or *Tulipa Gesneriana*, on account of its hardness, brilliancy and wide and easy cultivation, has been termed "the poor man's flower," as well as "the king of florists' flowers." It was brought to Europe from Persia, by way of Constantinople, over three hundred years ago, and becoming an object of trade in the Netherlands, single bulbs sold for two or three thousand dollars or more, giving origin to the name "tulip fools." The mania afterwards extended to England, but more recently it has given way to a taste for rare plants from foreign countries. A correspondent of *The Garden* furnishes the following list of species and their native localities, taken from Tchihatcheff's "Asie Mineure." "*Tulipa armena* grows at an elevation of 6,000 feet; *T. montana* found on the Troad, Mysia, at Erzerum, and on Mount Ararat, at elevations of from 6,000 to 9,000 feet; *T. Gesneriana*, found in Armenia at from 6,000 to 7,000 feet; *T. Julia*, also found in Armenia; *T. undulatifolia* is found in rich pastures near the top of Mount Tahtali, near Smyrna; *T. Sibthorpiana* is found at Makri, on the Lycian coast, and at Porto Cavaliere. Two species not noticed by Dr. Regel are also mentioned, namely, *Tulipa pulchella* found by Kotschy, in the Silician Bulgardagh, at an elevation of 6,000 to 7,000 feet (Ky. Reise in Cilie Taur., p. 379), and *Tulipa Thirkiana*, C. Koch. [*T. tricolor*, C. Koch, in Linn., xix., non Lideb.] (sic in Tchihatcheff), found near Broussa." To which we may add that there are several other species, some of which are difficult to distinguish from each other, and a few known to cultivators, under the name of Van Thol's, Turkish tulip, and Clasio's and Cels, the last two elegant little border bulbs.—*Country Gentleman*.

To Root Roses and other Cuttings.

In midsummer fill an old milk-pan (says a correspondent of the *Laws of Life*) with the purest sand obtainable; set it full as you like of cuttings suitable for rooting, that is, fresh growing shoots of herbaceous plants, that when bent suddenly will snap off, or new growths of roses and other woody plants; pinch out the terminal bud and take off all the leaves except the two upper ones; insert two or three joints of any cutting below the surface of the sand. Place the pan out of doors where the sun at no time of the day will strike it so as to wilt the leaves, and keep the sand all the time wet as mud, using warm water. It may need to be wetted twice a day to keep sufficiently moist, as evaporation is very rapid in the open air in dry weather. As soon as the slips show growth, pot them off in thumb-pots in light, rich soil, largely mixed with sand so that the new forming roots may have free course. Keep them shaded and well watered; they are more easily cared for if set in a box of moist tan bark or sand, and as the pots fill up with roots, transfer to larger pots in stronger soil, as the different plants may need. If there is a suitable place for them they may be set out at once in a border. By this simple means, choice plants may be increased indefinitely.

Artificial Flowers of Tin.

In a recent number of a Berlin journal we find the following directions for making accurate copies of natural flowers and leaves from ordinary sheet tin: The method is somewhat similar to that employed for wax flowers, and the dies, of course, require to be made of stronger material. The leaf or petal to be copied is first oiled on one side, and then laid lightly upon some dry plaster of Paris, or very fine sand, in such a manner that the oiled surface is uppermost. A little bank of clay is built around it and the mixture of plaster of Paris and water poured in, care being taken to remove the air bubbles with a soft brush. In stead of plaster of Paris melted stearine, mixed with powdered gypsum, may be employed, where the leaves are quite thick and strong. Very delicate leaves must first be painted over with a brush dipped in soap water, after which several thin layers of plaster of Paris are applied with a brush, fine wire being introduced to give it firmness. The leaves thus prepared are either oiled or used to make plaster casts, or they may be coated with black lead and have copper deposited upon them by electricity. The upper stamp having been formed, the matrix, or lower stamp, is easily made from this. The tin is first cut into the required shape, either by hand or by a suitable die, and then pressed into the required shape between iron or steel stamps, cast after the plaster moulds just described. Each of the pieces required to form a flower, having been prepared separately, are carefully soldered together, a stem and leaves added, and the whole object so bent and twisted as to avoid the appearance of stiffness. They may finally be painted with the natural colors and varnished.

THE WRITING POTION. says *The American Agriculturist*, is now being written up abroad, and this will probably convince our planters, what we have for years insisted upon, that it is one of the most valuable of lawn trees.

"A SOLID U.K.NESS steals around, a dread oreums the sole, when in my pocket's depth I sound and only find a hole. O thus when life's brief span is past, and death yanks out my sole, how dreary life will seem at last, when taken as a hole. But still this consolation's left, to cheer the drooping sole, though through it I m of all bereft, I cannot lose the hole."

AMMONIA FOR FLOWERS.—The *Fruit Recorder*—good authority—says, that the sulphate of ammonia is an excellent manurial used to apply to verbenas or any other flower, giving to the foliage a dark green luxuriant and healthy appearance. It is economical, and easily applied. Prepare it the evening before using by dissolving one ounce of ammonia in two gallons of water. It may be applied once a week with safety.

DWARF FLOWERING ALMOND.—The *Rural New Yorker* recommends the budding of this beautiful shrub on plum stocks, for giving a handsome form like miniature trees. A small head is first formed to the plum stock about three feet high, by cutting back at that point, giving three or four side shoots. These are budded in summer with the almond, and treated as other budded trees. It is recommended also to work the new and beautiful *Prunus trilobata* in the same way.

ORNAMENTAL HEDGE.—Mr. Edwin Marsh, nearly a mile west of Agawam Centre, Mass., has a very handsome hedge of white pine. This tree was placed by Downing at the head of the beautiful evergreens. Planted near it is a well trimmed Hemlock hedge, and opposite, on the grounds of Mr. Goddard, a very beautiful hedge of the American Arbor Vitae. On account of its brighter and never changing green, we had, in this case, to give our preference to the white pine. For dry sandy soil it is peculiarly adapted.—*New England Homestead*.

NITROGEN AND PLANTS.—In a notice of Deherain's work on agricultural chemistry, recently published, the important question is raised—In what form is nitrogen assimilated by plants? Kuhlmann maintains that nitrates are not taken up until reduction has taken place, and their nitrogen has entered into an ammoniacal combination. On the other hand, Colez holds that ammoniacal salts are inactive till their nitrogen has passed into a nitro-compound. Neither of these views has as yet been demonstrated. Mr. Deherain combats the view of M. Ville that plants can assimilate directly the free nitrogen of the atmosphere; but he holds that in soils containing decomposing organic matter, the nitrogen of the air forms ammonia in the absence of oxygen. Carbonic acid is formed and nascent hydrogen unites with the atmospheric nitrogen to form ammonia.—*Chemical News*.