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TREES AND FLOWERS IN THE CENTRAL PARK.

The long rain having ceased and the chill of winter being gone from the air, there is now a deal of activity in and about the greenhouses of the Central Park. Men are potting plants and setting out daisies and pansies already in bloom; geraniums, violets, mignonettes, are at last getting a breath of fresh air in forcing beds, the frames being raised. The bluebirds are sounding their cheerful notes, evidently satisfied that spring has really come. Preparations are now making to set out the coleus, whose leaves with their yellow and red and brown and green markings are fairly well grown. Other ornamental foliage plants will follow, such as the Solunum warscewiczoides, which grows to a height of six feet, the Alternauthera. of variegated purple, the Gnaphalium, the Acalypha, of bronze, bright red, and yellow.

In the lily house, that beautiful purple African water lily, Nymphia zanzibarensis, is almost in full bloom. and will be set out toward the last of May in all the city parks. The Nile lotus is sprouting from its tub in the lily pond, 75th Street and Fifth Avenue. In the propagating houses the wax plant, Hoya carnosa, is in full bloom-its bunch of star-shaped flowers of a rich crimson. Then there is the curious artillery plant, Pilea, whose masses of pollen, now matured, spring into the air when sprayed with water; the sky-blue Ruellia, the crocus-yellow Stephanotis, the insectivorous pitcher plant, Sarracenia, which lives on the insects it attracts and holds by the sweet, viscid liquor exposed along its edges. It has a large purple green flower, and blossoms in June. Then there is the Texas dwarf rose, pinkish-white, and dahlia, calla lily, and the beautiful narcissus.

Outside, on the side of a neighboring hill, the writer was shown some snowdrops in bloom, sheltered from the wind by a rift of snow, and crocuses, it is said, are peeping up through the thin layers of snow that here and there speck some of the park hills. The rock cress, Arabis, that clusters on many of the rocks, looks green and thriving, and soon will be white with flowers: and the moss pink is in bud. The English heather on the hills is covered with its little pink-white buds.

Many of the perennials, put out last autumn, such as tulips, daffodils, scillas, and so on, are beginning to show signs of life-some already above ground. On the hazelnut bushes, the catkins and aments of last autumn are fresh and springy, and need only a few days of warm spring weather to burst into flower.

The dogwood and scarlet maple trees are late in budding this year, for Superintendent-Gardener George, necessarily difficult to estimate. Woolson says so severe a winter has not been seen for seventeen years. The birches, Betula, look the hardy trees they are, the long and droopingcatkins are visibly swelling and ready to burst into their yellow bloom. They are less backward than any other of the park trees, being seemingly impervious to winter's severest storms, nor is this strange when we remember that the birch is found growing on highest Alpine peaks, having pressed ahead of all others in altitude of habitat, and is indeed the only tree that is able to bear the rigors of the icy North, or rather it grows further north than any other, there being scarcely any other in the whole of Greenland. The weeping birch, B. pendula, by long odds the most beautiful of all the birches, is quite as far advanced as the commoner variety. Here and there upon the hills they stand like sentinels, and, because of their milk-white bark, can be distinguished at long distances. Soon their fragrant leaves will develop and their supple boughs and branches tapering gracefully downward. The alder, which Linnæus classes in the same genus with the birch, but looked upon as distinct by later authorities, is in vigorous condition -this being true of both the heart-leafed, cardifolia, variety and the common, glutinosa; its buds as examined by the superintendent-gardener last week being in quite as good condition as usual at this time of the year. The curious pin oak seems backward, and its pendulous boughs have not yet their wonted suppleness. The Austrian pines are in bloom, the cones ear-dropped and springy. The China elm from the Caucasus, almost an evergreen, looks as if winter had uriantly green and thrifty again by this simple means. not yet come, and the greatest rigors could not dim its coloring. The beautiful, wide-spreading beeches, of which the park contains a large number, are visibly mediately under the outer bark. showing the effects of spring, but, because planted so near together, have little chance for vigorous life. This tree, even under favorable conditions, does not do as well here as in Europe, notably in England, where the Burnham beeches have attracted universal attention because of their growth. A new system has lately been adopted at the park for preventing heavy trees, divided into two toppling parts, from splitting. Heretofore, the system was to fasten an iron band under the crotch—a pernicious system, be it said, because leading to what might be called strangulation; for the growth of a tree takes place from the inner bark, or cambium layer, a name given to the viscid mucous secretion interposed between the wood and bark, and contained in delicate forming and growing cells. The new mode is to run an iron bolt through the end, and it is said this is not in any wise injurious. No 'Monthly.

means has yet been found to stop the ravages of the elm beetle, which last year did a great deal of wischief, wholly consuming the leaves of many of the elms, and at times attacking other trees.

**** How to Light a Lamp with a Snowball and the Like.

The National Educator gives the following three curious experiments, which may not be new to the professional chemist, but will be of interest to the chemist student.

When a small piece of potassium, the size of half a grain of corn, is dropped into a tumblerful of water, some of the oxygen of the water leaves its hydrogen. owing to the intense heat which the chemical action produces, and combines with the metallic potassium, causing a violet bluish flame. When the piece of potassium is placed on the wick of a coal oil or alcohol lamp, the flame produced by touching the potassium with a bit of snow or ice or a drop of water will inflame it.

Fire under water can be produced by placing a small piece of phosphorus in a conically shaped glass filled with water, and some crystals of chlorate of potash covering the phosphorus, and then pouring through a long tube funnel, or a glass tube, a few drops of sulphuric acid down on the mixture at the bottom of the glass. Tongues of flame can be seen flashing up through the water. The intense chemical action produces sufficient heat to inflame the phosphorus under the water. Where there is sufficient heat and oxygen fire will burn, whether in air or water.

The force of steam boiler explosions can be illustrated by getting a tube made by a tinsmith, say half an inch in diameter, and closed at one end. Put a piece of ice the size of a cherry, or half a teaspoonful of water, into the tube and cork the open end tightly. Suspend the tube over a flame, so that the ice melts and is converted into steam. The cork will be forced out with a loud explosion. Candle bombs held over a flame will explode in a similar manner. Water will produce 1,700 times its volume of steam.

Dangers of Insufficient Ventilation.

One of the great evils of civilization lies in the crowding together of large numbers of persons in confined spaces. This is especially the case with schools and with factories, but is not limited to those instances. It has always been known that such crowding was unhealthy, but the exact amount of evil resulting is

Very recently Brown-Sequard has proved by actual chemical analysis that the air expired by a healthy person contains a poison, not a microbe, but a distinct chemical poison.

In factories, as usually arranged, there must inevitably be much evil done by the breathing of other people's breaths all day long, six days in the week. Brown-Sequard considers it a principal cause of consumption.

The only remedy lies in effectual ventilation, and there can be no doubt that in factories, schools, and all other places in which many persons live and work or study in confined space, the ventilation should be much better than it is. In some factories the air is so bad that persons unaccustomed to it are rendered faint. What, then, must be the effect on those who live in it?

I would wish, therefore, to appeal urgently to those who have the direction of schools and factories to introduce really effective ventilation. They have the health, even the lives, of large numbers in their charge, and cannot escape this great responsibility.

M. C. L.

Hot Water for Plants.

It is a fortunate circumstance that a plant will endure a scalding heat that is fatal to most of its minute enemies. Water heated to the boiling point, poured copiously over the stem of an enfeebled peach tree, and allowed to stand ,about its collar, will often have the happiest restorative effects. Trees showing every symptom of the yellows have often been rendered lux-The heat is presumably too much for the fungus which had infested the vital lavers of the tree. im-

race of probably the smallest human beings.—Their size and characteristics
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The London florists recommend hot water, up to 145° Fah., as a remedy when plants are sickly, owing to the soil souring-the acid absorbed by the roots acting as a poison. The usual resort is to the troublesome job of repotting. When this is not necessary for any other reason, it is much simpler to pour hot water freely through the stirred soil. It will presently come through tinged with brown. After this thorough washing, if the plants are kept warm, new root points and new growth will soon follow.

A lady friend had a fine calla in a three-gallon pot, which showed signs of ill health. On examination the outer portion of the filling was found mouldy, it being in large part fresh horse manure. As repotting was inconvenient, the plant being in flower, hot water was freely used. It killed the mould, and the plant trunk at the notch, with washers and nuts at either began to revive and was soon all right. -Vicks