"When the breeze
Is making the stream around them tremble!"

Every variety of the water-lily—from the Egyptian lotus, with its wonder-fables, to the beautiful flower that nestles on the calm surface of our English lakes is exquisitely lovely.

HOW PLANTS COME FROM SEEDS.

BY ANNIE J. MACKINTOSH.

(Continued from January Number.)

But let us return to the germs. Place them under the magnifying glass, and you will find that some have a root. stem, and two leaves, while others have a root, stem, and but one leaf. You will also notice that all those having two leaves have been taken from two lobed seeds, while those having only one leaf have come from the undivided seeds; and you will find, when they begin to grow, that they present the same differences The two-lobed seeds put out two leaves at first, the undivided only one. So that, by looking at a young plant, you can tell at once from which class of seeds it has sprung; or, looking at a seed, you will be able to fore tell the appearance of the plant.

Now, we shall require the plants in the tumbler, and such leaves as you may be able to collect.

Observe first, that although you may have placed the seeds in various positions upon the cotton, still in every case the leaves have shot upward into the air, while the roots have passed downward through the cotton into the water Some of them have had to do a good deal of twisting in order to accomplish it. It has been hard work, but they have succeeded: It is one of Nature's laws that leaves must go up, roots down. But how or why the plants should know what this law requires of them, we cannot tell. Experiments made upon this point, prove that, rather than break the law, plants will sometimes slowly transform their parts; that is, the branches of trees which have been planted upside down, will in time become roots, while the roots will turn into branches.

Now take the leaves which you have before you, and examine the veining of each, by holding it between your eye and the light. In some of them--maple, oak, and beech leaves for instance—you will find the veins, or fine lines of the leaf running in every direction; while in others. as the leaves of the calla, lily-of-the-valley, grasses, etc, they are parallel to each other—that is, they run side by side, extending from the top of the leaf to the bottom, or else from the outer edge to the stem, which passes down the middle. The blades of grass and lily-of-the-valley leaves are examples of the first; the calla leaf of the second.

Look at the plants in the tumbler, and you will find that the leaves all come under one or other of these two classes; they are either net veined or parallel-veined.

Next consider the seeds; those that are two-lobed have all produced net veined leaves, while the leaves growing from the undivided veins are all parallel-veined.

Let us sum up what we have learned in this way. Two-lobed seeds: Two leaves at first, net-veined leaves. Undivided seeds: One leaf at first, parallel-veined leaves.

If you will commit these two short lists to memory, you will often find it an advantage, as one point will immediately recall the others.

But let us look once more at our young plants. You will notice that in the case of the two-lobed seeds, the lobes have grown up with the plant, and are now to be found one on each side of the stem (Fig. 4. *a*, *a*.) They have changed not only their appearance, but their name, since our last lesson, and are now called

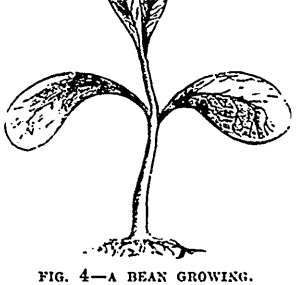

FIG. 4—A BEAN GROWING.

seed-leaves. Perhaps by the time of our next lesson they will have turned green, but they will never resemble other leaves in anything but color, and by and by they will begin to dry and shrivell up, as they part company with the true leaves and as soon as they have given out all the nourishment that existed in them they drop off, leaving the young plant to depend on its own resources.

Perhaps you are wondering what the plant is going to do after it has exhausted the food contained in the seed, but by that time it is quite able to support itself, by drawing upon the earth and the air. From the earth it obtains earthy matter and moisture; from the air, some of the gases of which it is composed; and these three things constitute the food of the plant.

CITY FLOWERS.

Oh city flowers, what kin are you
To country children of sun and dew?
Hot-house-bred posies, glad to be sold,
To bloom and be sweet merely for gold!
Willing to play your prettiest part
For Jack and the bride of his honest heart;
Or to fill the air with perfume rare
As Ethocel waltzes with wild Dick Dare.
And yet though I know you sometimes go
With a message of light to the home of woe—
And weary and woeful things are you
To the little flower girl, "tired all through."
Nature disowns you, O flowers of town,
And even when Sorrow shall lay you down
On the new-made grave, you are worked in a wreath,
As lifeless and cold as the clay beneath.
—*Puck.*

FASHIONS IN FLOWERS.

The *American Florist's* reporter in New York City here gives some of the dainty styles in flowers and the charming floral designs used in the great Metropolis:—

Flowers are now much used as valentines; styles are exceedingly dainty; heart-shaped boxes made of satin-finish pasteboard are lined with white, cream color, pale blue and shell-pink satin and velvet, and some are cushioned with these materials in tints to match the favorite Jacqueminot rose. These boxes are in several sizes, and will contain a cluster of flowers best suited to express the sentiment desired. Myosotis, lilac, roses, lilies of the valley, are tied with ribbon and fitted in the box Many "violet boxes" will be exchanged among friends. These are neat white boxes, made in sizes to hold from 25 to 100 violets. Simple clusters of ivy leaves will be sent in the heart shaped boxes. This foliage is a favorite on account of its language—"Friendship." Many gifts will be sent *sub rosa* in valentine bouquets. Under the blossom of a large rose in the centre of a loose bunch, a little green velvet box will be securely fastened with wire In this box there will be a slender circle of gold set with a gem

The introduction of birds into floral designs is a very taking device White Java sparrows are perched on the edges of centre pieces that stand on oval plates of glass which represent water; the birds' heads are bent down as if they were drinking. An oblong centre piece five feet in length is massed with choice ferns; the centre is a field of lily of the valley, on which a bevy of white birds are assembled with outspread wings as if about to fly. In the fern-fringing of the piece cattleya Trianæi are freely interspersed. Long-stem Bon Silene buds were strewn over the table for favors. "Green dinners" are extremely fashionable, which