

Constance, firm—Coralie, young and beautiful—Cordelia, jewel of the sea—Cornelia, crow, bird of augury—Cyrilla, lordly—Dagmar, Dane's joy—Diana, goddess—Dolores, sorrows—Dominica, Sunday child—Dorcas, gazelle—Dora, Dorothea, gift of God—Drusilla, strong—Eleanor, disguised perfume—Eliza, Elizabeth, oath of God—Ella, elf-friend—Elvira, white—Elsie, noble cheer—Emily, gentle—Emeline, melody—Emma, protectress—Ernestine, earnest—Esmeralda, emerald—Estelle, star—Eugenia, happily born—Eva, life—Evangeline, happy messenger—Fanny, Frances, free—Faustina, lucky—Felicia, happy—Fenella white-shouldered—Flora, flowers—Florence, flourishing—Gabiella, hero of God—Genevieve, white maid—Georgiana, husbandman—Geraldine, spear power—Gertrude, spear maid—Gwendoline, white-browed—Harriet, Henrietta, home ruler—Helen, light—Heloise, famous holiness—Hortense, gardener—Ida, thirsty—Inez, pure—Irene, peace—Isabel, oath of Baal—Jacintha, purple—Jane, Jenny, Jessie, Johanna, grace of the Lord—Josephine, addition—Judith, praise—Julia, downy bearded—Justina, just—Laura, laurel—Leonora, light—Letitia, gladness—Letty, truth—Lilian, Lillas, lily—Lilla, oath of God—Louise, famous holiness—Lucy, light—Margaret, pearl—Martha, becoming bitter—Mary, a tear—Matilda, mighty battle maid—Melanie, black—Melissa, bee—Mildred, mild threatener—Muriel, myrrh—Nathalia, Christmass child—Nora, honor—Octavia, eighth—Olympia, Olympian—Ophelia, serpent—Paulina, little—Philippa, lover of horses—Phæbe, shining—Phyllis, foliage—Portia, of the pigs—Priscilla, ancient—Rachel, eye—Rebecca, noosed cord—Regina, queen—Rhoda, Rosalie, Rose—Rita, pearl—Rosalind, famed serpent—Rosamond, famed protection—Salome, peaceful—Sarah, princess—Selina, moon—Seraphina, seraph—Sophia, wisdom—Stephania, crown—Susan, lily—Sylvia, wood maiden—Tabitha, gazelle—Tamar, palm—Thomasine, twin—Teresa, corn bearer—Ulrica, noble ruler—Urania, heavenly—Ursula, bear—Valeria, healthy—Veronica, true picture—Victoria, conqueror—Viola, violet—Virginia, flourishing—Wilhelmina, helmet of resolution—Yolanda, violet—Zenobia, father's ornament—Zillah, shadow.—Canadian Illustrated News.

—MRS. ALFRED GATTY has undertaken to contribute to *Mission Life* a series of articles for children, to be entitled "Little Workers and Great Work."

Science.

The Science of Plants.—Boussingault some years ago discovered that flowers and leaves separated from a plant went on evolving carbonic acid, which he accounted for by supposing that the separated leaf continued to take oxygen from the air and give off carbonic acid just as when attached to the plant. But Mr. Broughton has found, the *Globe* asserts, that various parts of plants will evolve considerable quantities of carbonic acid after they have been deprived for days together of all access of oxygen. The same happens with growing plants and with cut portions of plants, both of which evolve considerable quantities of carbonic acid, and quite independently of direct oxidation; and this evolution goes on in the daylight as well as in the dark. It appears to be due to the previous absorption of oxygen, which results after the lapse of time in the production of carbonic acid, and also to changes which take place in the proximate principles of a plant during its growth. In any case we have learned a new and interesting fact in connection with vegetable physiology.

—In a summary report of the progress of Geological investigation made in 1868, Sir W. E. Logan, says:—

"As much interest has recently been excited by the reported discoveries of gold bearing rocks in New Brunswick, Mr. Robb visited some of the lands in Victoria county which had been leased for gold mining purposes. He also visited and made special examination of those localities, within the general area designated, which have been supposed to be productive of other minerals of economic value, or in which mining operations had been instituted. Quartz veins, forming apparently lenticular masses and running in the strike, characterize the slates in many parts, and several in Victoria county were pointed out to Mr. Robb, as having yielded the precious metal. None of it was visible to the naked eye, and specimens of the quartz were therefore brought to the Survey Office for assay. They have been analysed by Dr. T. Sterry Hunt, but no gold has been found in them. This, however, is not to be taken as an absolute proof of the absence of the precious metal in every part of these veins, for the presence of gold in quartz is so capricious that of several specimens taken from the same vein, some may yield a fair quantity and others none at all. The slates in which most of the auriferous quartz occurs in the Eastern Townships of Quebec, are classed as Upper Silurian, and they appear to have some resemblance to those of Victoria. The discovery of alluvial gold also in Victoria, asserted by several respectable persons is a further evidence on the subject, though none of it rewarded the trials of Mr. Robb."

—*Transit of Venus.*—The Queen has sent a message to Parliament that due provision has been made for observation of the transit of Venus in 1874. Transits of Venus are as rare as they are important. They occur in couples in June and December, about eight years apart, and then not again for several generations. Kepler was aware of the phenomenon, and as early as 1604 announced that one would take place in 1761, but young Horrocks, of Liverpool, with better tables and additional data, calculated that there would be a transit on the 4th of December, 1839. He let a friend into the secret, and these two, on the day named, for Venus was punctual, were the first ever known to observe it. It was soon calculated that one must have taken place on the 16th of December, 1631, and another in June, 1826, and that the next would not occur till the 5th of June, 1701. But of all the transits, past and to come, the climax would be that of the 3rd of June, 1769, when Venus passed across the disc of the sun very near the centre. The next one, but not visible in this country, will take place five years hence, on the 8th of December, 1874, which will be a grand one for science considering the great advance in scientific instruments, but far inferior to the last. If, however, it produces only half-a-dozen Cæsars it will be a godsend to this rapid century. Let young folks take note of the date, 1874. Another will occur on the 6th of December, 1883, but not again till nearly five quarters of a century later, on the 7th of June, 2004; to be followed eight years after, on the 5th of June, 2012; to be repeated in December, 2117, and so on. The last *Transit of Venus* was a conjunction of planets coincident with the birth of twelve imperial men of nature, more renowned than the twelve Cæsars. No other single year, probably before or since, ever produced such men as Napoleon, Wellington, Soult, and Ney; Brunel, Mahomet Ali, Turner, Sir Thomas Lawrence, Chateaubriand, and Castlereagh; Cuyler and Humboldt; men who upturned the world and set it right again; who revolutionized science, art, politics, states, and affairs of mankind.

Art.

—*A New Process in Lithography.*—"Messrs. Maclure, Macdonald & Macgregor, of this city," writes the *Manchester Guardian*, "have recently perfected a simple process whereby every artist can become his own lithographer. It consists in a peculiar preparation of the surface of the paper and the provision of prepared chalk. With a solid sketching pad of this paper an artist may draw what he please and the sketch is itself transferred to the stone, whence any number, can be struck off. In this way the many inconveniences of the old transfer paper are avoided. No intermediate draughtsman is required, and thus the expense of multiplying a portrait or sketch of any kind is reduced to the cost of the paper and of working off the copies. We have seen architectural drawings, groups of figures, portraits, ornamental designs, and landscapes that have been lithographed in this way, all were good. Indeed the print is necessarily a *fac-simile* of the original drawing. The paper is made of various degrees of fineness, and the prints are correspondingly of broad or fine stipple. By the aid of the india-rubber pentagraph, these lithographs may be reduced in size almost indefinitely.

Two Curious Needles.—The King of Prussia recently visited a needle manufactory in his kingdom, in order to see what machinery combined with the human hand, could produce. He was shown a number of superfine needles, thousands of which, together, did not weigh half an ounce, and marvelled how an eye could be pierced in such minute objects. But he was to see that in this respect even something still finer and more perfect could be created. The borer—that is, the workman whose business it is to bore the eyes in these needles—asked for a hair from the monarch's head. It was readily given, and with a smile. He placed it at once under the boring-machine, made a hole in it with the greatest ease, furnished it with a thread, and then handed the singular needle to the astonished king.

The second curious needle is in the possession of Queen Victoria. It was made at the celebrated needle manufactory at Redditch, and represents the column of Trajan in miniature. This well-known Roman column is adorned with numerous scenes in sculpture, which immortalize Trajan's heroic actions in war. On this diminutive needle, scenes in the life of Queen Victoria are represented in relief, but so finely cut and so small, that it requires a magnifying-glass to see them. The Victoria needle can, moreover, be opened; it contains a number of needles of smaller size, which are equally adorned with scenes in relief.