

young plants. If coarse manure were to be used, the results would not be so immediate. In using liquid, the nutriment was taken up at once by the soil. It was in shape to make all its fertilizing power available as soon as applied, and the plant with whose roots it came in contact received vastly more benefit from it in its early stages of growth than it would have received from manure which must undergo some chemical change before it becomes a part of the soil. 'This,' pointing to the manure in the sheds, 'for by-and-by. This,' pointing to the tank, 'for to-day.'

#### COW-MILKING BY MACHINERY.

Various devices have been tried with a view to dispensing with the slow and laborious method of hand-milking. Tubes have been inserted in the teats, and rubber imitations of the grasp of the calf's mouth have been attempted, but though these plans have been partially successful, so far as drawing the milk is concerned, they have in the end proved failures. Either they do not strip clean, or they inflict injury on the udder. Most experienced dairymen have but slight expectation that milking by machinery will ever be accomplished. Still, in this wonderful age, it is difficult to tell what is impossible.

#### OVERTOIL FOR WEALTH.

It is difficult to understand for what object many people—and there are some farmers in the number—are working so hard. They have enough and to spare, both for themselves and those who are to come after them. Dr. Dio Lewis, in the *Golden Rule*, sketches the history of a man who began life poor, struggled successfully to get on, and died at sixty worth half a million. Few men ever worked so hard, and few were ever so worn out at threescore. Dyspeptic, nervous, wretched, he constantly longed for rest he could not obtain; and death was not unwelcome, he had become so weary of life. A dissipated son and two gay, helpless dolls of daughters are doing their best to squander their father's hard-won wealth. The doctor wishes this "poor rich man" could rap out or otherwise convey his present opinion of his earthly career.

#### SKETCHES OF CANADIAN WILD BIRDS.

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##### THE CANADIAN MOCKING-BIRD.

The vocal and imitative powers of the mocking-bird have long been a theme for the poet and the admiration of the naturalist. There are several varieties of the mocking-bird species, but the one common to this country, and usually called the cat bird, is about ten inches in length, the tail being remarkably long. Its plumage is sooty-black, except the wings and tail, which have a deeper hue, the bill and eyes also are deep black. It frequents thick shrubberies, vineyards, and the willow-covered margins of creeks, and seeks the most concealed spot for its resting place, though it often visits gardens, orchards, and the borders of the woods in search of food. The female builds her nest near the ground, among thick bushes or evergreen shrubs, where it is well concealed from observation. It is constructed of brambles, dry weeds and leaves, cemented with mud, and lined with fine roots and dry grass. The eggs, four in number, are of a deep green colour, and two broods are sometimes raised in the season. They are strongly attached to their nest, and the affection which they exhibit towards their young is unsurpassed by any of the feathered race. They are very diligent in supplying them with food, and should they be exposed to danger they will,

in trying to defend them, encounter the utmost hazard, seeming almost strangers to fear, and exercising all their arts to drive or draw off the invader. The vocal powers of the male bird are great. The notes of the blackbird, the song of the thrush, the robin, the grosbeak, and the warble of the canary, the call of the snipe, as well as the solos of other birds, and even the cries of some animals, are all successfully imitated, intermingled with other notes peculiarly its own. It not only sings and imitates with deceptive exactness, but seems to dance at the same time, hopping from branch to branch, as if keeping time to the music of its voice. It often deceives persons by imitating the mowing of a kitten in pain, and as soon as it is approached, either darts off through the thick brushwood, or begins to warble some other notes, apparently delighted in thus deceiving the human ear. It also seems to take pleasure in teasing other birds by imitating their love-calls or notes of distress, and as soon as they approach terrifies them by the scream of some of the hawk tribe. While hay-making is in progress, it sometimes visits the meadows near its haunts, and occasionally startles the farmer by its cat-like calls and other peculiar notes. This species is in general solitary in its habits, its movements are quick, its flight rapid, but short, and it feeds on insects, berries and seeds. It makes its appearance in Ontario in May, and disappears again in September.

##### THE AMERICAN ROBIN.

This interesting and familiar bird is generally regarded in Canada as the harbinger of spring, although, in some parts, the blue bird makes an earlier appearance. In the central parts of Ontario it does not, as a rule, arrive until the early part of April, but it is often seen in March, and even in February, on the banks of the St. Lawrence and the shores of the great lakes. In the summer season it is found throughout the greater part of the temperate regions of North America, being tolerably abundant from the regions south of the Ohio river to those around Hudson's Bay. It has been found to nest as far north as the fifty-sixth degree of north latitude. "The first bird seen by me," says Audubon, "when I stepped upon the rugged shores of Labrador, was the robin, and his joyful notes were the first that saluted my ear. Large patches of snow still dappled the surface of that wild country, and although vegetation was partially renewed, the chilliness of the air was so peculiarly penetrating that it brought to the mind a fearful anxiety for the future. The absence of trees properly so called, the barren aspect of all around, and the sombre mantle of the mountainous distance that hung along the horizon, excited the most melancholy feelings, and I could scarcely refrain from shedding tears when I heard the song of the robin, sent there as if to reconcile me to my situation. That song brought with it a thousand pleasing associations of the beloved land of my youth, and soon inspired me with a resolution to persevere in my hazardous enterprise."

The robin is a constant and beautiful singer. His lays are modest, but lively, and often of considerable power; the vivacity and simplicity of his song cannot fail to cheer the mind of the listener, and fill it with pleasing emotions. Immediately upon his arrival here in spring, while the air is still cold, and patches of the garb of winter still linger around the fences, and sparkle like diamonds in the brilliant sunshine, the soft and tender but animated melody of the robin is heard echoing through the woods, or issuing from the orchard trees, causing a thrill of delight in the heart of the listener. Everyone knows the robin and his song; he is generally cherished by old and young; and should be protected by all

with anxious care. Few atmospheric changes interrupt his song, in wet and cloudy weather, as well as in the clear sunshine, while the female is forming her nest and incubating her eggs, perched on a fence-top, or some detached tree in the fields, he gives vent to his happy feelings in the sweet tones of his ever-welcome song. In May, when the leeks, cow-cabbage, and wild flowers are peeping forth in every part of the reanimated woods; when the leather wood is covered with yellow bloom, and the dog-berry and elder are in blossom; when the sap of the maple tree has ceased to flow, and its red buds are expanding into leaves, and many other plants, assuming their summer livery, have banished the dismal aspect of winter, and the thundering sounds of the creeks and water-courses have sunk to a gentle murmur as they ripple onward towards their parent ocean, and nature in all the varied and charming beauties of spring promises pleasure and abundance to the whole creation, it is then, especially in the early morning hours, that the song of the robin is heard to the best advantage, as if he were anxious to show the human family his gratitude for the shelter afforded by the fences and the surroundings of their dwellings, where he often takes up his summer residence, in preference to the wild scenery of his native woods.

The surveyor and the pioneer find the robin in the backwoods, and though the progress of civilization may cause a treeless farm or busy town to occupy the site of the trackless forest, yet it does not, like others of its race, forsake its native homestead, but year after year returns at the voice of spring to the same vicinity, and makes its nest as readily on the farm fence or in the shade trees of the populous town, as it does in the wild woods, where the foot of man may have never trodden. The robin, when taken young and carefully supplied with suitable food, is easily domesticated, and sings well in a state of confinement. A Canadian writer, speaking of the robin as a song bird, says: "A gentleman informed me that he had one of these birds in a cage, which not only sung exquisitely, but rendered quite perfectly a number of airs, executing the different and rapid passages in an easy, graceful style, putting in the variations and modulations with fine effect. He told me that he had always been fond of singing birds, and before coming to this country had a number of larks and thrushes, but he did not hesitate to say that this bird was the best singer that he had ever heard or seen." The robin, notwithstanding its innocent and peaceful character, has to reckon man among its worst enemies; for often while the poor bird is warbling perhaps his first song after his return from his winter exile to his native land, he is shot down by some heartless gunner. Laws have been enacted in Canada in order to prevent the destruction of useful birds, but to a great extent these laws are disregarded. Besides man, owls, hawks, crows, jays, cats, squirrels and other animals conspire in diminishing the number of the red-breasted songsters, and at the migratory periods often appear in large flocks. In October these birds begin their migratory movements towards the south, and during the winter months they are found in all directions and in great numbers in the Southern States. Some few, however, are still found in Ontario, until the first fall of snow and the cold blasts of November proclaim that winter has finally set in, and instances are known in which solitary individuals have been seen in the woods as late as the New Year, and as early as February. The flight of the robin is pretty rapid, at times greatly elevated, and capable of being long sustained. At the period of their general migrations they move in loose flocks over a space of several hundred miles, and at a