

WAIFS AND STRAYS.

To persevere in one's duty and be silent is the best answer to calumny.

No evil propensity of the human heart is so powerful that it may not be subdued by discipline.

There are many wrong ways in doing a right thing, but there is no right way of doing a wrong thing.

There is no spiritual arithmetic by which you can bring together any number of half Christians and make a whole one.

The best way to convince doubters is not to argue with them, but to labour and pray for their salvation. Love wins where logic fails.

One of the illustrations is that the present hour is not the critical, decisive hour. Write it on your heart that every day is the best day in the year. No man has learned rightly until he knows that everyday is doomsday.

Nightly rest and daily bread, the ordinary use of our limbs and senses and understanding, are gifts which admit of no comparison with any other; yet because almost every man we meet possesses these we leave them out of our enumeration of blessings.

Power will intoxicate the best hearts, as wine the strongest heads. No man is wise enough, nor good enough to be trusted with unlimited power; for, whatever qualifications he may have elicited to entitle him to the possession of so dangerous a privilege, yet, when possessed, others can no longer answer for him, because he can no longer answer for himself.

MARRIAGE IN SIAM.—A declaration of marriage in Siam is simpler even than it used to be in Scotland. You ask a lady to marry you by simply offering her a flower or taking a light from a cigarette if it happens to be in her mouth, and your family and the bride's family have to put up at least \$1,000 apiece for a dowry. The principal impediment in the way of marriage is that each year is named after an animal, and only certain animals are allowed to intermarry. For instance, a person born in the year of the rat cannot marry with a person born in the year of the dog, or a person born in the year of the cow with a person born in the year of the tiger, and there are similar embargoes about months and days.

OILING THE VOICE.—The voice of singers need an occasional 'oiling,' and some peculiar remedies have been in vogue among singers which it is interesting to know. When Gallmeyer, the famous soubrette, visited this country, she confessed that she treated her throat before each performance to a good rubbing with rum and glycerine. This statement led to further investigations in this line, with the following result:—Wachtel used the yoke of an egg with sugar. Other vocal stars drank beer, champagne, soda water or punch. Walter, the tenor, drinks cold coffee without cream and Geisinger relies on a glass of grog. Zelia Trebelli, the famous contralto, who died not long ago, always drank lemonade before she went on the stage. Some singers who are passionate smokers refrain from smoking on the days on which they are to sing, while a number of contraltos believe that their voices are vastly improved by the smoking of a cigarette just before the curtain rises.

LIGHT PRODUCES SOUND.—One of the most wonderful discoveries in science that has been made within the last year or two is the fact that a beam of light produces sound. According to Milling, a beam of sunlight is thrown through a lens on a glass vessel that contains lamp black, coloured silk or worsted, or other substances. A disk, having slits or openings cut in it, is made to revolve swiftly in this beam of light so as to cut it up, thus making alternate flashes of light and shadow. On putting the ear to the glass vessel strange sounds are heard so long as the flashing beam is falling on the vessel. Recently a more wonderful discovery has been made. A beam of sunlight is caused to pass through a prism so as to produce what is called solar spectrum or rainbow. The disk is turned and the coloured light of the rainbow is made to break through it. Now place the ear to the vessel containing the silk, wool, or other material. As the coloured lights of the spectrum fall upon it, sounds will be given by different parts of the spectrum. For instance, if the vessel contains red worsted, and the green light flashes upon it, loud sounds will be given. Green silk gives sound best in red light. Every kind of material gives more or less sound in different colours, and utters no sound in others.

LAUGHTER AS A TONIC.—Laugh when and while you can; fun is sometimes as beneficial to the physic, and much more agreeable to the actually believe that your laughing doctor does more good than his medicines in a multitude of instances. A sad-faced, dyspeptic looking physician, whose presence in the sick room conjures up visions of funeral wreaths, and crape on the door, has missed his calling, no matter how crammed with 'book learning' he may be. Why dwell on the melancholy phases of life? Avoid the falling leaf order of conversation; talk of weddings instead of funerals. It isn't necessary to be continually reminding those with whom you come in contact that there is sin and wickedness in the world, and that are fated to die. They know that already; they have also found out that this world is not flitting about in milk and honey, but at the same time do not believe everything is baptized in vinegar. Try not to complain of the inevitable ills of life, physical and incidental. I know a man who makes every one in his house miserable every time he misses a street car. Another is stopped in gloom whenever it rains. Unnecessary complaints and groans—what no innumerable host they are! Go where you may, the chronic 'kickers' are there before you. They kick at and about everybody and everything but themselves, and pretty nearly everybody has a laudable ambition to kick them.

NOTABLE PEOPLE

FEW men are perhaps better known in the colony than Sir James Hector, of whom we give a picture. He was, says Mr Mennell's biography, born in Edinburgh in 1834, his father being the late Alexander Hector. He was educated at Edinburgh Academy and at the University, which he entered in 1852, taking the degree of M. D. in 1856. While here he served as assistant under Professor Edward Forbes and other eminent men of science. For a short time after taking his degree, Dr. Hector acted as assistant also to Sir James Simpson; but in March, 1857, he was selected by Sir Roderick Marchison, Director-General of the Geological Survey of Great Britain, to accompany the Palliser expedition to the Rocky Mountains, as surgeon and geologist. The work consumed four years, during which time the members endured many hardships and privations. Much of the region explored had been practically an unknown land



Wigglesworth & Binns, photo.

SIR JAMES HECTOR.

previously, and the results of his expedition were embodied by Dr. Hector afterwards in a Blue Book.

A LEADING event was the discovery by Dr. Hector of the pass by which the Canadian-Pacific Railway crosses the Rocky Mountains. Before his return he examined and reported upon the coal mines of Vancouver Island, and investigated the goldfields of British Columbia, California, and Northern Mexico. For his geographical discoveries the leader of the expedition was awarded the gold medal of the Royal Geographical Society in 1861. In that year Sir Roderick Marchison offered him the post of geologist to the Provincial Government of Otago, New Zealand, which he accepted. On arriving in New Zealand he explored the mountainous lake regions of Western and Southern Otago, as also the sounds upon the coast. In 1864 he was appointed commissioner to make a tour of the colony and report upon its resources, with a view to an exhibition at London. In 1865 this exhibition was held, and in it Dr. Hector was one of the leading spirits. In this year, too, he was appointed director of the Geological Survey of the colony—a position he has held ever since, to the great advantage of the colony.

In 1875 he visited England, and in the following year was Executive Commissioner for New Zealand at the International Exhibition at Philadelphia. He was also Executive Commissioner at the exhibitions at Sydney in 1879, and Melbourne 1880 and 1888. For the Sydney Exhibition Dr. Hector prepared an official handbook of New Zealand, which is still the most convenient authority upon this colony. In 1860 he was elected Fellow of the Royal Society of Edinburgh, of the Geological Society, and of the Royal Geographical Society. In 1866 he was elected Fellow of the Royal Society (London), Fellow of the Linnean Society, of the Zoological Society, and of the Statistical and Mineralogical Society. He is also a corresponding member of numerous learned societies on the Continent and in America. He received the Lyell medal of the Geological Society in

1876 and the Royal Founders' medal from the Royal Geographical Society in 1891. In 1874 he received the Order of the Golden Cross from the Emperor of Germany.

SIR JAMES HECTOR is Director of the Colonial Museum, Laboratory, Observatory, and the Botanic Gardens. He was chief founder, and is now Director, of the New Zealand Institute, and is Chancellor of the University of New Zealand. He was created C.M.G. in 1875, and K.C.M.G. in 1887. Sir James Hector married, in 1868, the eldest daughter of the late Sir David Monro, M.D.

SCIENTIFIC AND USEFUL.

THE 'KIVAKTA.'

This is the name of an inkstand which operates on a perfectly new principle. In the centre is a glass tube, containing a leaden ball; this tube is enlarged at the upper end, and fits into a guide formed in the cap. The bottom end is provided with a rubber cup. By applying a slight pressure with the pen the glass tube is depressed, and the ink flows to supply the pen; the ball preventing the ink being rapidly sucked back when the pen is withdrawn, and the right supply of ink is obtained, the surplus ink slowly passing back into the pot through a small hole provided in the tube, and the circulation of ink is thus effectually maintained so as to prevent the usual deposit of sediment. The ink is kept free from dust, and, while the ball valve prevents spouting, it retains the ink long enough to allow a proper supply of ink to be obtained by a single dip of the pen.

EXTINGUISHING FIRES.

From Salem, Massachusetts, comes news of a novel experiment in fire extinguishing. A sheet iron cylinder, about 3in in diameter and 16in long, was charged with gases and chemicals sufficient to throw a stream half the size of an ordinary lead pencil to a distance of about 12ft for five or six minutes continuously. Then a box 8ft long and 4ft high and 4ft wide was smeared on the inside with tar, and a half-gallon of kerosene oil was sprinkled over it, and the whole thing set on fire. After the fire had burned the boards nearly half through the contents of the little cylinder were turned on to it, and the flames are said to have been extinguished in something less than a minute.

PAPER HOSIERY.

Paper hosiery yarns have been lately invented by an ingenious American. They are made entirely of paper, shear flocks and loose fibres, but so closely resemble good woolen yarns that, at first sight, it is stated, one is easily deceived. The objection to these yarns seems to be that they fall to pieces as soon as they become damp, and that they have no elasticity, durability, or in fact, any of the qualities of good yarn, except appearance. The inventor, says an indignant Canadian journal, has the audacity to devise a means by which he can form a strand of paper, polish it, cover it with cheap flannel, give it a coating of fibre, knit it into goods, and then palm it off on the hosiery trade. We do get some queer 'yarns' of one sort and another from America now and then, and it looks as if this was an exceptional specimen of quite a new kind.

THE PUGNACITY OF THE HUMMING BIRD.

A correspondent of *Science* writes of the bravery shown by humming birds in attacking other birds much larger than themselves. He has seen a rufous-hummer attack and put to flight a wren and another and larger bird that had been having a spirited dispute. Tiring of their noisy warfare, or thinking them too near his chosen haunts, he made a dash first at one and then at the other and quickly put them to flight. The wren he chased into a brush pile, buzzing vigorously about its ears until it sought the seclusion of the interior of the pile. All who have spent any time in the country are aware that a crow can chase a hawk, a blackbird a crow, and a flycatcher in turn put a blackbird to flight; but few know that this driving power increases in exact ratio with the diminution in the size of the bird; so that the flycatcher yields to the sparrow and the sparrow to the hummer. The latter is, as far as I know, the only bird that can always put an English sparrow to flight. I have seen our little Eastern ruby-throat break up a group of sparrows that were chattering too loudly and too near a clump of flowers in which he was busy. In Jamaica the 'doctor bird,' a long-tailed species of hummer, so named by the natives because they go around presenting very long bills, are most fierce, even in attacking men. Having, after infinite pains, followed one of these creatures to its nesting-place, and reached a most perilous position in a silk cotton tree, I was driven to retire in self-defence. Both birds, as I got near the nest, flew directly against my face. Had I not been a spectacle waster it would have been difficult to keep them out of my eyes; as it was, they several times knocked my glasses awry.

AN ARTIFICIAL LARYNX.

DR. PERRER, of Lariboisere, France, has constructed an artificial larynx, which enables the patient to speak by means of air supplied to it by a pneumatic appliance fastened on his chest. The larynx is of silver tubing, and contains a reed which gives to the artificial voice a uniformity of tone. The air pump, if we may call it so, consists of two indiarubber bulbs, communicating together and with the larynx by flexible pipes; and it is actuated by a collapsing bulb held in the hand. The bulbs serve as reservoirs for the air, like the bag of a dabbie, and the other bulb is used to fill them and keep up the supply.