

nature of your compost should vary in accordance with the nature of the plants you are proposing to rear. If, for instance, you are desirous of a plant that is to be profuse in its foliage—or rather, we should say, a plant the feature of whose beauty is its foliage—your soil should be very rich; while if, on the other hand, your object is fruit or flowers, your soil should be as little rich as you can make it. A chalky, sandy soil, with but little manure in it, would make the least rich soil. And yet it must not be too dry. But we had better now speak of a few plants in particular that require potting at this time. For instance, those calceolarias that we intend to bloom early in the summer should be now potted finally off, selecting, as we said, the strongest ones first of all for our operations. They should then be placed in a light and airy position to prevent them from growing weakly and tall, and not too much water should be given to them first of all. And the soil most suited to them should be made up of an equal proportion of sandy loam and heath mould and a good sort of white sand, all well mixed together. It has been thought, too, that calceolarias like the soil somewhat lumpy, or not *too* much powdered, and it is quite possible to combine this quality with a soil that has nevertheless been well mixed together. After being potted, your calceolarias may be set in a frame where they need have but little sun. Indeed, we think we have on a former occasion advocated the keeping of calceolarias through a whole winter, all planted in the ground itself, under the protection of a frame, a little additional protection being now and then thrown over the glass during a severe frost. Air, however, may freely be given on most days. As soon as they show evident signs of growth, a little manure-water given once a week will certainly benefit them. The pelargoniums, and more particularly those fancy geraniums which are generally in bloom in our greenhouses by the month of May, should all be potted off by the end of the month. We should certainly except, however, any quite young plants that we intend for late summer flowering; these may conveniently be shifted some time later on. Where you are potting off your fancy or other geraniums for blooming as they are, in your greenhouse, for exhibition there, and not for any bedding-out purpose, it is a good plan to tie down carefully—so as not, however, to break them—all the small branches as near to the rim of the

pot as you can, just in fact as you do when bedding-out, in order to have your plant bushy and, as we say, well feathered down all round to the very rim of the pot. A quantity of small stakes stuck in your pot has, however, certainly a very ugly appearance, so that a little wire painted green would better answer the purpose for securing neatly the young shoots. And then as to the fuchsias. All those old plants of the fuchsia tribe which have been lying dormant all the winter will now be beginning to wake up, and you will notice upon the once lifeless-looking dry stick, tiny little green eyes with a reddish tinge about them which will tell you that they merely want now a little encouragement. If you have been storing these away in a half-dark shed, or in your cupboards or upper rooms, they had better now be brought out, and their growth will be rapidly excited by stirring up the soil of the pots in which they stand, and giving occasional small quantities of water. And by-and-by when these old plants have sent out some healthy shoots, and when they have got a few inches long, you can readily take a few cuttings from them. These should be afterwards rooted in a mild hot-bed, or you might put them under a bell-glass in your greenhouse.

Many other plants of course could be named as claiming our attention in the greenhouse this month, but we can do little more than select for our notice a few of the favourite and most popular ones. Outside, however, we are beginning to hail with delight the yellow petals of the first crocus. And just before these, and their companions the snow-drops, with other kindred bulbs, come in flower, it is advisable to fork up very carefully and gently the soil around them. Attention of this kind very much increases the beauty of your spring bulbs when they burst into flower. Then in the kitchen and fruit garden there is the usual routine of forcing on, for instance, the rhubarb and sea-kale, by means of the ordinary pots made for that purpose, or by boxes, which we afterwards surround with fermenting leaves or manure in a hot state. Our wall-fruit, peaches and nectarines in particular, we prefer not nailing too soon to the wall, as doing so rather accelerates the early swelling of the buds. Peach blossom is very beautiful to look at, but we enjoy it more in March than in February, for this gives us a better hope of gathering in the following September the luscious fruit, that should then have a face far “ruddier than the cherry.”

HOW A CONSUMPTIVE FOUND HEALTH.

BY THE VERY REV. THE DEAN OF DENVER.

THERE was a square in ancient Babylon which, as far as I know, was a spot unique on the world's surface. No painter has ventured to depict that square; no poet has described its scenery and its atmosphere. To a stranger with aught of a scientific turn of mind this square must

have been the first place visited in the great city. It was here that the Chaldean law required all the sick to congregate; and the same law required those who had been sick, but were now well, to walk round the square, and finding those who were afflicted as they had been, to give them the benefit of their experience.

And what is a doctor but a walking cyclopædia of the experience of the sick? For the nonce let me assume the *rôle* of the doctor, and detail the experience of a very experienced consumptive.

We are sitting on the verandah of what ought to be called a ranch—ought to be called—for there are no human habitations but ranches for scores of miles. The peaks around us are fantastic rocks. Well christened were these "Rocky" Mountains. Enclosed everywhere within these ranges are valleys, clothed now with such verdure as the deer and elk have seldom seen, for this last year's spring was extraordinarily wet. Here knolls capped with big timber, there a blue lake with curious lumps of rocks for islets, the dark and loamy shore marked with the trail of the elk. You can hardly persuade yourself that this is "no man's land," so cared for does it seem to be.

No wonder that years ago two Bostonians travelling this way conceived the idea of building an hotel in one of these valleys. The lumber they hauled for wellnigh 150 miles, and at a great expense finished this house. But the world is a curious creature, and few can predict which way it will take when it receives a disinterested invitation. The two Boston young gentlemen furnished their hotel, and flung open its doors to their fellow-mortals panting on the heated plains, and gave them a welcome to come and be cooled, but the world for unspoken reasons did not come. And now, after various fortunes, an English physician, fond of nature and of sport, has bought the Elkhorn house, and he gives an invitation to "consumptives" to come hither and "cough no more." Two are here: one, a young lady, is doing the last style of Persian work, which she procured only a little more than a fortnight ago in Oxford Street; the other—whose experience is to be given for the benefit of the square—is painting the valley, with no meanly-trained brush.

His is the old story. Some six years ago, out riding in wind and rain, a cold was caught. What a cold exactly is, who can scientifically say? And what a cold will eventually lead to, who can prophetically say? With our friend the cold laid fell hand upon his lungs, and after long doubting the family doctor looked grave and uttered the dreaded word "consumption."

His home is in the fomy atmosphere of Manchester. The obvious movement in the first place was to breathe as fresh and soothing air as the British Isles could offer, so down he went to Torquay. Having a well-lined purse, whatever Torquay could do for the invalid, it certainly had the fairest chance of accomplishing. It is true the roughness was eliminated out of the air, and, from causes perhaps not wholly explained, a modicum of gentle warmth enwrapped the favoured place, whilst Boreas was piercing with unfeeling vigour the North of England. But the moisture in the air counteracted what good the warmth may have effected, and down the hill he gently—almost imperceptibly—but certainly and surely went. In spring he again re-visited the scenes of his boyhood, and listened to the chimes of his great-grandfather's clock. The change of air appeared to have had a

beneficial effect, but the ruinous cause was still there, and in time it became evident that the disease was catching up the progress the general health had made.

A tonic was recommended, and our adviser found himself at Blackpool to be blown up by the breezes of St. George's Channel. So passed the summer. But the experienced eye and ear could detect no positive improvement, and it was clear that a more determined practice must be pursued. The physicians—and their names are legion—counselled a sea-voyage. The Antipodes rejoice in summer while the Englanders are braving winter; therefore Australia was decided on. Moreover, that no possible chance should be left un-governed, it was deemed inexpedient to trust our invalid to the tender mercies of the captain of a sailing ship, so with every possible want anticipated by his own doctor, who was experienced in the New Zealand climate, he sailed from London in October.

All went well up to the Tropics, he improved rapidly and the traces of disease very much diminished; but now as the Line was neared the heat increased, the air became drenched with vapour, the ship ceased to be wafted and appeared only to drift. Whether the generally relaxing conditions reduced the strength of the lung fabric, or whether the blood became thinned so as more easily to pass through the containing membrane, it matters little, but one evening after a sudden effort a hæmorrhage warned him of the seriousness of his condition and laid him prostrate. After a week of perfect quiet, fed on cold diet and skilfully attended, he again was convalescent, and no great harm appeared to be done, indeed the system seemed rather relieved than otherwise, and the progress towards health went on even more rapidly than at the commencement of the voyage.

So things remained until Australia was reached, and the patient landed, after an ocean-voyage of ninety days, apparently cured. But the feeling was fallacious, although the lungs seemed to have assumed their normal condition; in other parts of his system the disease appeared; and soon after leaving Sydney and landing in New Zealand, so critical became his state that his physician advised an immediate return home. So, *via* San Francisco and New York, he hurried to England, and arrived too early. The dangerous symptoms had entirely disappeared before reaching San Francisco, but the cold and damp of the early spring in America renewed the mischief in his lungs, and when he was welcomed by his family they found him but little, if any, better than when they had wished him God speed the year before.

April and May are the worst months England possesses for her consumptives. To escape their damaging consequences he retreated from the North, patiently to abide the summer in his old haunts at Torquay.

Having often written in his copy-book that "experience is the best teacher," he determined again to sail for New Zealand with the same doctor. Once more, without another tropical hæmorrhage, he arrived at the Antipodes a hale man, with practically no symptom of disease, at least none such as a casual observer would have noticed. Travelling about New

Zealand, he found the climate suited him admirably—that is the summer climate, be it remembered—but as spring returned the home-longing rose up in his breast and compelled him, as it does the swallows, to return to the house of his father. This time he had a stormy voyage round Cape Horn, and despite once more saw the chimneys of Manchester in a condition seemingly quite capable of breathing that material there called air. All went right; he enjoyed himself with his family at Beaumaris, and played rackets daily in the Castle. One day, after an exceptionally vigorous game, a shower drove the players to take shelter in one of the dungeons where King Edward had often cooled the ardour of his Welsh subjects, and, alas! hæmoptysis was the price he paid. For six weeks his lung bled continuously. Every variety of astringent had an opportunity of proving its value. They gave him sixteen doses a day, and at the end of some weeks the doctors took advantage of a slight improvement to ship him off to Mentone. Here he enjoyed the sea, the flowers, the surpassing scenery, the Italian sky, the brilliant sun, and the expensive luxury of a villa. All put together was certainly an improvement on Torquay, but yet “of the same sort.” To vary the procedure he moved about on the Riviera, spending the early spring at San Remo, passing home once more a mended individual, *via* the Italian lakes and the Mont Cénis.

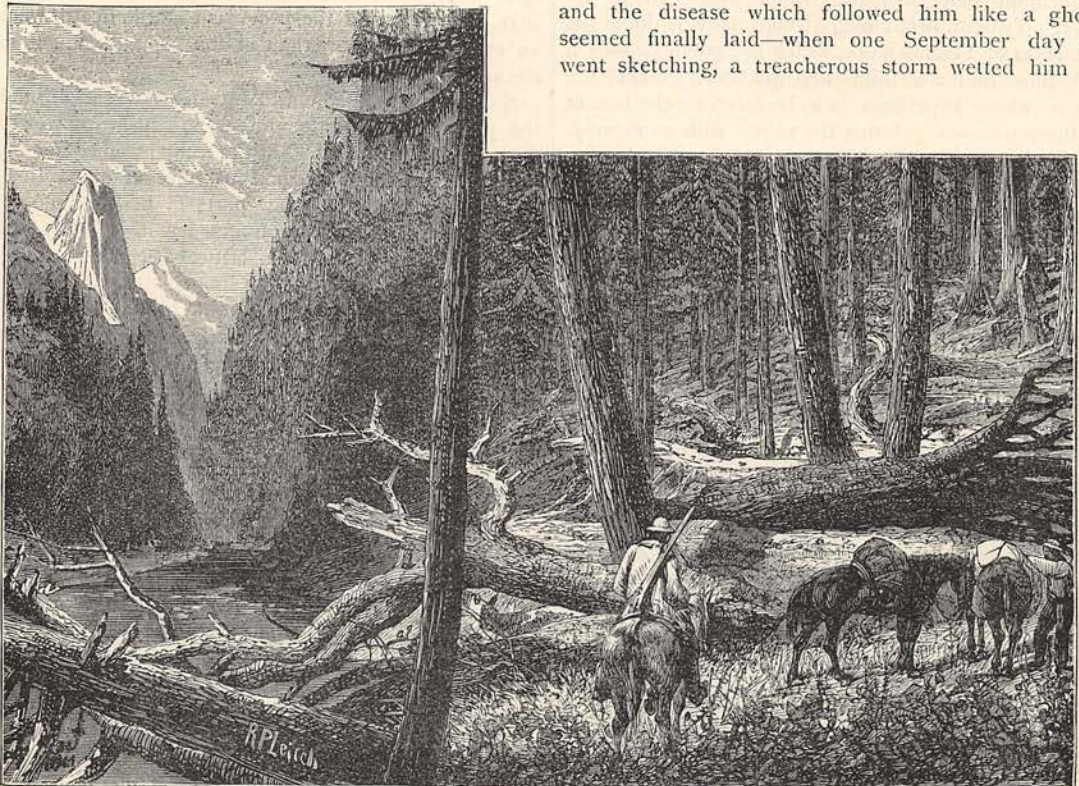
Up to this point the old plan had been adhered to. Soft and gentle airs had been courted—made soft and

gentle by sheltered positions, warm latitudes, and the near presence of water, filling the air with moisture almost to saturation—and the plan had failed.

The opposite of this was to find places enjoying dry cold air and bracing, not at the sea-level, but as high above that position as could be attained with surroundings sufficiently comfortable for an invalid. Inquiry for these conditions brought Davos into favour, and thither our consumptive was hurried. Davos is a Swiss village nestled in the Grison Alps; it lies in the direction of the Engadine, but, leaving Chur, you turn to the left, and after ascending all day you arrive at Davos, which boasts an altitude of 5,000 feet.

Here our friend spent two seasons; the first season proved exceptionally fine. The company at the Belvedere was choice; for weeks together the sun shone brilliantly, whilst the dry cold air gave keen appetites and tinted cheeks with a better colour than the hectic flush. But now March arrived, and the exodus from Davos began. At their wit's end for a refuge from the treachery of April and May the corps of invalids spread themselves over Europe, most of them to contract more mischief during the two fatal months, and often completely undoing the benefit of the winter's residence. To escape with the least possible risk our convalescent consumptive turned his steps to Baden-Baden, thence to Glion—perched picturesquely 1,000 feet above Lake Geneva—and as soon as May was expiring again he found himself comparing the sky of Manchester with that of Italy.

Now “all went well as a marriage bell;” renewed health brought with it a zest for the enjoyment of life, and the disease which followed him like a ghost seemed finally laid—when one September day he went sketching, a treacherous storm wetted him to



the skin, pneumonia set in, and recalled into vigorous activity all the worst symptoms he had combated for years, and once more he became a wanderer on the edge of the grave. Active medical treatment, the most careful nursing, and the blessing of God, once more renewed his strength sufficiently for journeying, and again he reached Davos, and again the light dry air, the possibility of complete out-door life, with opportunities of exercise, abated and finally removed the lingering symptoms of his relapse.

Experiment had now decided that the atmospheric conditions found at Davos were those most conducive to the healing of damaged lungs. The next question to solve was, Where is there a place where similar conditions exist, but where it is possible to remain all the year round?—the pernicious drawback of Davos being the necessity of leaving the valley at the very time it is most necessary to escape the variableness of April and May.

Colorado was suggested and examined, and being approved, our consumptive arrived in Denver in the autumn of last year. Denver is a marvellous city. Little more than twenty years ago the buffaloes were grazing in quiet security on the plains where now there is a splendid city. Yes, a city, not a mushroom town of frame-houses dignified with the name of a city, but a city in every sense of the word. Here is a bishop and a cathedral, not a small church dubbed "cathedral," but the most cathedral-like building in America, with splendid organ, beautiful windows, reverend services.

Although the nearest city to Denver is as far off as Naples is from London, still Denver is reached by four great trunk railways, and many lines branch out of the city into the mountains. Wellnigh 2,000 miles from the oceans, and exactly a mile above their level, within fifteen miles of the Rocky Mountains, whose ever-changing grandeur skirts the western horizon, the air of Denver perforce is rare and dry; no dew falls here; the wind seldom blows, and then in gusts which have expended themselves in a couple of hours; the sun ever shines; and all combines to produce a climate difficult to match on the earth. Many and many an inhabitant of Denver came apparently to die, so far gone in consumption as to be unable to walk; ladies, who are now the "joyful mothers of children," have been carried out of the railway carriage. These, however, are the exceptions, still they exist to prove that this class of hygienic condition is singularly favourable for arresting the fatal course of phthisis. Yet our invalid, although revelling in the climate, and quite as well as when at Davos, found that the inducements for ever living in the open air and taking exercise were not sufficiently strong. Moreover, the dust inseparable from a busy city and a dry climate, and despite sprinklers, would occasionally blow and prove peculiarly irritating to sensitive bronchial apparatus. He therefore determined to try ranch life, and here we are in the mountains. He has pur-

chased the "improvements" of a squatter for £100; this gives him 160 acres and a vast range whereon to graze his cattle. And now what is the result?—Every adverse symptom has all but vanished, and although myself no slow walker, he can easily keep pace as we cross the Divide to tempt the trout in the *Cache la poudre*. He fishes with zest all day long, and bears the real fatigue of hard rock-climbing as well, nay, better than most men who have not been in search of health for six years.

Probably an element to which the success of the cure is largely attributable has not received that notice at the hand of scientists it deserves. Every one admits the vitalising power of fresh air. The air which comes to Denver meets nothing to contaminate it for literally hundreds of miles; as that on the ocean, it must be almost absolutely free from organic germs and those gaseous ingredients which are supposed to be noxious. But is this visiting air that which alone is breathed? The earth on which we tread is saturated with air; no depth has been reached where the presence of air is not evident. This air, perfectly still, and in constant contact with the materials of the crust, not only suffers from the changes which any organic matter that may be present is ever undergoing, but materially contributes to hasten and produce these changes. Now the barometric pressure lessens, and in obedience to the rise of the aerial wave this earth-air comes above the surface, and is the very air breathed by animals and men. If, as is the case in the country, there is no animal matter in the soil, there is nothing present to contaminate the air—nay, dry earth has great antiseptic properties and purifies what is corrupted, so that the earth-air which is away from the habitations of man is probably purer than any other. This no doubt explains the reason why the "country" is so refreshing to the invalid, and this is why "camping out"—sleeping on the very ground—has a wondrous effect. Koch's discovery that consumption, like typhoid fever, small-pox, and other such diseases, is due to animalcule life infesting and breeding in the blood and producing tubercle, points to many considerations. Perhaps it is one of the conditions of the life of these minute organisms that the air breathed should contain certain organic pabulum, mixed too with moisture; deny them this and gradually they are starved out of the system. Then again, the lung fabric becomes flaccid and loses its stamina, but the high altitude requires that the organ should expand fully in order to supply the blood with the necessary amount of oxygen, and this forced expansion tends largely to restore the lung to its normal size and condition, hence the higher the location, the further from the sea, and the more distant from the haunts of men seem to be the best conditions for restoring the frame dilapidated by phthisis, and for eradicating the cause which produces that scourge of England—consumption; and these conditions are to be found in the valleys of the Rocky Mountains.