IV.—ON HOLIDAYS. PRESIDENTIAL ADDRESS TO THE CARLISLE MEDICAL SOCIETY, 11th November 1886.

By R. Maclaren, M.D., Senior Surgeon to the Cumberland Infirmary.

(Continued from page 615.)

It is a great advantage if two men arrange to travel together; the same porter or mule can carry the luggage of both. They share the expense of driving, and in some circumstances one guide will suffice for two, while one man would require two guides for himself alone. Having provided all requisites, the next thing is to get a Guides are the great difficulty of high mountaineering, from the high wages they expect. There are several ways of engaging them, but in any way they are costly. One way is simply to arrange for each excursion, not engaging a man for a fixed number of days; you then pay him according to a tariff. For the Matterhorn, for instance, you would have to pay him £4—that is, for a day and a half's work. Another way is to engage the guide for a fixed time—week, fortnight, month—giving him 7 or 8 francs a day for ordinary path walking or for wet days if the weather is bad, then 20 for snow passes, and 50 for peaks. Yet another way is to engage a man for 10 francs a day up to a certain height, say 13,600 feet, and bargain with him to go certain other higher places, which you fix on, at a given price generally somewhat lower than the tariff. The last is the most economical way, but guides will not always agree to this if it is a busy time. to choosing a guide, if you know any one who is in the habit of going to the place from which you are climbing he can generally advise you as to the man to employ, otherwise it is best to trust the hotel-keeper. You will not always do well, but better than if you try to select for yourself. Beware of guides who waylay you and ask employment. As a rule, the guides are good fellows, quite trustworthy, and know their work well. They mostly speak English, and have a very fair education. They are all licensed by a committee appointed for the purpose in each district. Each has a book which you may require him to give you, and in which you may enter any report you choose; this, and the prospect of a "pourboire," which, though expected, you should not give unless you are pleased, are the guarantees you have for good behaviour.

Most high peaks are ascended in two days. On the first day you go from your hotel to a club hut. This means usually a four to six hours' walk, sometimes over a glacier and its moraines, sometimes up a steep rough mountain track. The club hut itself is a rude shed of stone, not always quite watertight, for the roof is made of the flattest stones at hand, and these may not be very flat. Each hut is provided with a wooden platform, which serves as a bed. Some have a stove; some an open hearth fireplace without

any chimney, the smoke escaping through the crevices; some have loose hay to sleep on, others thin mattresses. They are all provided with rugs and cooking utensils. Generally the start is timed to reach a club hut a little before sundown. The guide prepares an evening meal—bread and butter with cold meat and coffee or chocolate, the latter the best-and everybody gets to bed as soon as possible. In a few situations, instead of a club hut you have an "auberge," not very much better; but there is this difference, that the hut has no resident keeper, while the auberge is a little inn. You have more choice of food and a little attendance. There are two such on the Theodule Pass, 10,899 feet above the sea-level, and there is the same at the Grand Mulets on the ascent to Mont Blanc, 10,000. The club hut brings you in height within 4000 to 5000 feet of the summit of your peak, and in time within four to six hours of it. From the club hut a start is made very early in the morning-2, 3, or 4. The top should be reached before 8 A.M., and the time of setting out is regulated to allow of this. The early start has many advantages. First, the snow is hard up to 8 A.M., which renders walking on it incomparably less fatiguing, and also much less dangerous, as the coverings of hidden crevasses are hard, and bear the weight of crossing. Then it is much easier walking in the cool morning air than under a midday sun; and, lastly, the views are finest in the morning before the sun has caused evaporation from the hills, to condense in cloud as the day goes on. It is usually soon after leaving the club hut that snow walking begins, and sometimes there is little else to the summit. It is at this stage that the rope comes into use. With most mountains, in addition to snow walking, there is a good deal of rock climbing, requiring the use of both hands and feet, and in a few instances the conditions are reversed, and there is much rock climbing and little snow walking. The descent is much quicker than the ascent, and generally you return to your hotel on the same day that the summit has been reached. For though on rock the descent is very slow, perhaps slower than ascent, on the snow you can rush down with giant strides, or accomplish in five minutes by glissading what takes an hour to toil up. Glissading, when you are sufficiently used to it to do it well, is delightful. You stand on the snow slope, lean well back on your pole, and let yourself go. You are soon at the bottom of the slope.

The snow-line in Switzerland is met with at 8000 to 8500 feet above the sea-level. Above this line the snow-fall throughout the year is in excess of the power of the sun to melt it. Below the line the melting power of the sun is sufficient to remove all the snow that falls. Above the line snow falls all the year round, summer and winter, yet its depth does not go on constantly increasing, because it is perpetually moving downwards on the higher peaks and steep slopes. It slides towards the

plateau, from which the peaks rise, sometimes slowly, sometimes with a headlong rush called the avalanche. When it gets lower down, the ground is not so steep, and it accumulates. Snow under pressure becomes ice. Ice, again, has the property that it readily breaks up and readily reunites. It is, moreover, highly elastic. Consequently, the downward movement results in huge rivers of ice filling the bottoms of the upper valleys, and forming accumlations so vast that they are thrust down far beyond the snow-line, and are at last gradually melted away at their extremities, and are the sources of some of the largest rivers of Europe. These ice accumulations are known as glaciers. Their origin, movements, and history have long been subjects of great interest to scientific men. It is nearly one hundred years since methodical investigations of them were made. It seems now proved that their movements differ but little from that of water, except in speed. They move fastest at the centre and surface, slowest at the sides and bottom. It is owing to the properties of the ice above mentioned -its elasticity and its readiness in breaking up and reuniting-

that a solid substance can really flow.

It is, as you have heard, over the glaciers and snow-slopes that the traveller makes his way in ascending the high peaks. Below the snow-line glacier walking is not difficult, as a rule, if you know the route; and even if you do not, a few general principles help you. The centre is the least crevassed. The concave side of the valley is less fissured than the convex; the steeper the glacier the wider are the crevasses. Most glaciers have, in some part of their course, a very steep descent, the ice-fall or serac, the latter name derived from a kind of crumbly cheese which used to be made about Chamounix. As it bends over the ice-fall, it is riven into ridges, pyramids, and blocks in the wildest confusion, and in some instances is here quite impassable, but even the ice-fall often looks worse than the reality proves when it is seriously tackled. Crevasses, I may say, are of all sizes, from a slit which will just admit a knife-blade to huge chasms which would engulph a regi-They run directly or obliquely across the glacier. They are never very long. The average width is not great. As a rule they can be taken in the stride as you walk up or down. Sometimes you have to cut a few steps to save the time and fatigue of circumventing them. Except on the serac glacier, walking up to the snow-line does not require a rope. But the moment you get on snow the rope should be used. The snow-field lies smooth and unbroken, and conveys to the mind none of the aspects of danger. Here and there on the surface you see a faint depressed line, and your guide, if he thinks you unused to the work, will call out crāvass as a warning to you to take a long step over it, and keep the rope tight, for under that faint line is a crevasse of unusual breadth. Perhaps, after you are safely over, he will take his ice axe, push it through the snow, and show you the depths below.

For one such, which shows some sign on the surface, you probably pass over a score which do not, and nothing can be more treacherous than the snow-covering. It may be inches thick, or feet, you cannot tell on the surface. This is why morning walking is so much better than day walking. A few inches of frozen snow will carry you, while you will sink through a few feet of soft snow. No man, therefore, who sets the least value on his life goes on the snow unless roped; and there should be at least three tied together, the rope securely knotted round each. can always hold one on snow, and it is almost impossible for more than one to break through at once. Only in the event of the party getting lengthwise on a hidden crevasse would more than one go in at a time, and, as they lie transversely to the ascent, this can rarely happen. A sudden drop through the snow crust into a crevasse is not a very usual thing in any case. It is no uncommon thing, however, to sink pretty well down in the snow choking the mouth of a crevasse. Instinctively you feel what you are doing, and involuntarily throw yourself rather forward, and scramble along generally without even a pull on the rope, hardly conscious that you have done more than make a false step. I have described how the snow slides down and becomes glacier. Where the upper end of this glacier touches the steep mountain slopes it often breaks away from the mountain side, leaving a yawning chasm between the glacier and the slope called a "bergschrund," sometimes almost forming a trench round a peak. This is often bridged with snow, and from its size is more difficult than the crevasse. On the snow the rope is a safeguard against accident, but in rock climbing it is of use to really assist you in getting on; that is to say, one of a party, usually the guide, can help you over a difficult bit by holding you with the rope. In rock climbing, the proper procedure is for one of a party to move at a time, while the others stand where they have good foothold.

I come now to the question of danger. Is there necessarily more danger in Alpine climbing than a man is justified in incurring when not called on by duty? A most competent authority puts the causes of accidents as follows:—1. Incompetent climbers; 2. Incompetent guides; 3. Foolhardiness; 4. Doing what the guides say should not be done; 5. Dislike to assistance; 6. Rotten rope; 7. Attempting mountains in bad weather; 8. Attempting them after snow, or too early or too late in the season; 9. Attempting from pride impossible places; 10. Rank carelessness. The above you will see are all preventable, but we now come to a series which are not entirely preventable—1. Avalanches; 2. Falling of rocks; 3. Falling of ice; 4. Breaking of snow under the feet, as over crevasses; 5. Breaking of rock under the feet;

6. Sudden bad weather; 7. Sudden illness.

The Echo des Alpes publishes an interesting statistical summary of the fatal accidents that have occurred since 1859 in climbing the

Swiss Alps. During this period there have been 80 such accidents, whereby 134 persons lost their lives. Of these, 40 were guides or porters, 80 tourists, 2 monks of Mount St Bernard, 11 were workmen journeying over the mountains, and 1 was a crystal-seeker. In 6 cases, 16 persons perished from exhaustion, cold, or some organic affection; in 14 accidents, 15 persons were killed by falling into crevasses, etc.; in 10 accidents, 15 persons were killed by slipping on ice; and in 35 cases, 41 persons were killed by slipping on rocks or grass; in 4 cases, 4 persons lost their lives by stones falling upon them; 27 lives were lost in 7 avalanche accidents; and in 4 cases, 16 persons perished by falling through frail ice or snow. From this it appears that accidents from slipping on rocks or grass are the most numerous; probably unsuitable boots are the most frequent cause. But in too many cases, imprudence or carelessness is the source of mischief. In 16 accidents, the climbers were not roped together; in 28, the tourists were alone, or unaccompanied by a guide; unfavourable weather caused 14 accidents; in 9 cases, the climbers were fastened together at spots where the fall of one would be sure to bring all down; and in 22 cases, complete ignorance of the condition of the snow was the main cause of accident.

Well, there is no doubt this is a heavy death-roll; but when you take into account the great number due to preventable causes, -I have seen it estimated as high as 9 to 1,—the risk run by any one who acts cautiously and wisely, and is fit for what he attempts, is a very small one indeed. I hold that the test of justifiable risk in sport is —will fitness, experience, and caution very materially diminish it? If the risk is one inherent in the sport itself—if it is like the bullet in battlefield, perfectly indiscriminating—if the man of experience and long practice runs the same chance of injury as a mere beginner, that is a sport for every prudent man to avoid. But such is not the case with Alpine climbing. Eight-ninths of the accidents are notoriously and confessedly avoidable, and even among those classed as not preventable, prudence can diminish the risk. For instance, avalanches are noted as unpreventable, yet a man who knows mountains has a good idea where avalanches are likely to fall, and avoids these places. So with falling of rocks and ice. Firm rocks or firm ice will not fall, and it is generally possible to form a fair idea of where they are not firm. But you may say, What about the risks of the learning stage? Here, again, prudence comes in; and if you are not experienced yourself, you take care to put yourself in the hands of experienced men, and moreover, have sufficient for the work. You get competent guides and trust them. For my own part, I have had no experience of danger. In none of my excursions have I been knowingly in any risk. Once only have I had even trouble. I had arranged to join a party at a club hut, where we were to spend the night, and then cross a snow pass the following day. In spite of

warnings I delayed to start till rather late in the day for the sake of getting letters. A porter accompanied me, who was supposed to know the way. Evening overtook us about half-way across a glacier. The porter's knowledge of the route was very imperfect. I had, however, been over the same ground before, and was not much dependent on him. We certainly had a bad half-hour dodging crevasses in the deepening twilight. However, I was able to keep him in the right direction, and we got on to the moraine, where there was a path which we could feel with our feet. It was too dark to see, and this duly brought us to our hut.

Wherein lie the attractions of Alpine climbing? In many things, immediate and remote; in the satisfaction of having encountered difficulties and overcome them; in having undertaken arduous labour and accomplished it; in the weird beauty of the snow-clad peaks touched by the first rays of the rising sun, gilding them with a delicate and tender radiance which words and the painter's brush alike fail to convey; in the awesome bergschrund festooned with icicles like huge stalactites of alabaster, and hollowed into deep shadows and gruesome caverns; in the deep crevasse filled with a blue light of fairylike delicacy; in the darkblue sky, the pure air, and the ice-cold water; in the awe-inspiring rushing of the avalanche; and remotely in the strengthened muscles and invigorated appetite, in the general feeling of body and mind fully fit for all work which their capacity allow; and, lastly, let me say, in the recollection of a comradeship closer than the absorbing labours and cares of everyday life allow, which not only shared every toil and every pleasure, but materially dimin-

ished the first, and formed no small portion of the last.

I cannot better conclude what I have to say on this head than by quoting to you the words of one of the most courageous, and at the same time one of the most cautious of Alpine climbers, Whymper. Speaking of mountaineering as "the purest, healthiest, and most manly of sports," he says :- " Often in grappling with everyday difficulties, sometimes in apparently hopeless tasks, encouragement has been found in the remembrance of hard won victories over stubborn Alps. We who go mountain-scrambling have constantly set before us the superiority of fixed purpose or perseverance to brute force. We know that each height, each step, must be gained by patient, laborious toil, and that wishing cannot take the place of working. We know the benefits of mutual aid, that many a difficulty must be encountered, and many an obstacle must be grappled with or turned; but we know that where there is a will there is a way. and we come back to our daily occupations better fitted to fight the battle of life and to overcome the impediments which obstruct our paths, strengthened and cheered by the recollection of past labours, and by the memories of victories gained in other fields." "We glory in the physical regeneration which is the product of our exertions; we exult over the grandeur of the scenes that are

brought before our eyes, the splendours of sunrise and sunset, and the beauties of hill, dale, lake, wood, and waterfall; but we value more highly the development of manliness and the evolution under combat with difficulties of those noble qualities of human nature, courage, patience, endurance, and fortitude." "The recollections of past pleasures cannot be effaced. Even now, as I write, they crowd up before me. First comes an endless series of pictures, magnificent in form, effect, and colour. I see the great peaks with clouded tops, seeming to mount up for ever and ever. I hear the music of the distant birds, the peasant's jodel, and the solemn church bells, and I scent the fragrant breath of the pines; and after these have passed away another train of thought succeeds of those who have been upright, brave, and true, of kind hearts and bold deeds, and of courtesies received at stranger hands—trifles in themselves, but expressive of that goodwill towards men which is the essence of charity." And then, referring to his Matterhorn disaster: "Still the last sad memory hovers round, and sometimes drifts across like floating mist, cutting off sunshine and chilling the remembrance of happier times. There have been joys too great to be described in words, and there have been griefs upon which I have not dared to dwell; and with these in mind I say, Climb if you will, but remember that courage and strength are nought without prudence, and that a momentary negligence may destroy the happiness of a lifetime. Do nothing in haste, look well to each step, and from the beginning think what may be the end."

There is one holiday of which I have not had personal experience, but of which some notes have been placed in my hands.¹ It is so unique in its character that I will avail myself of these at some length. I allude to Tangier. Its great charm is the magnificent climate and the glimpses it affords of primitive Eastern life. The climate is singularly equable, seldom rising above 80° in summer, or falling below 50° in winter. It can be reached by taking steamer from London or Liverpool to Gibraltar. From the north the latter is the more convenient. The voyage takes about five days, and the return ticket costs £10. Tangier is four and a half hours from Gibraltar, and the

fare is 8s.

Tangier rises in a semicircle from the head of its bay. The flat-roofed white-washed houses, the tall fort, and the towers of the minarets at once tell the traveller that he is in a new land, and has left Europe behind. The bay is crowded with large boats with negro crews and quaint lateen sails; long light-coloured pleasure boats, pulled by swarthy Arabs in white flannel suits and red caps, dart about on the sapphire water, and the scene is delightfully bright and sunny. The traveller who has breakfasted at an English hotel at Gibraltar finds himself almost at a step in the heart of

¹ By my brother James Maclaren, F.R.C.S.E., Medical Superintendent of the Stirling District Asylum.

the East. He is rowed ashore by a negro crew, each with a knife in his belt, and who talk and gesticulate in a fashion rather discomposing to ladies. As he leaves the landing-stage he passes through a room where there are three or four handsome, grave-faced Arabs in turbans and spotless robes, who are seated on divans. They look like Eastern princes, but are only Custom-House officers. The luggage is examined by the servants of the Custom-House, but this is a mere form, and is done with much

courtesy.

As the traveller makes his way to his hotel he meets women muffled to the eyes shambling along in bright red slippers, and darting from the folds of their robe one sharp look at the strangers as they pass. A loud sharp cry of valāk falls on his ear, and a small and very active donkey with water barrels on each side, and a negro perched between them, pushes its way between him and the wall. A clatter of hoofs is heard, and a stately Arab on a richly caparisoned mule trots surely over the uneven street, with two half-naked negro runners panting after him. A tinkling bell is heard, and a swarthy, ragged water-carrier, with distended goatskin bag resting on his hip, stalks by with long, swinging step. A loud hum, which somehow seems not unfamiliar, attracts his attention, and on looking into what seems a dark cellar there are seen twenty or thirty beautiful, large-eyed, olive-coloured children seated on the floor around a venerable, long-robed, white-bearded man, all swinging their bodies in unison and repeating at the top of their voices passages from the Koran. If the hour be sunset, a weird and awful cry is heard in the air, and goes sounding over the city. It is the native priest on the summit of the minaret calling the faithful to prayer.

Outside the south wall of the town is the market-place. This is always a picturesque sight. When crowded, as it is every European Sunday, every nationality and every grade under the sun seem to be represented in the great crowd. Wild hill tribes, desperate and determined looking, jostle English tourists sauntering idly about; Arabs perched on tall dromedaries, their long guns projecting high above their heads, tower above the crowd; fantastic negro mummers, deformed fakirs, serpent charmers; dreadfullooking women from Tetuan, with straw hats, high peaked, and with brims about two feet broad resting on their shoulders, and hiding horrible scarred faces; blind beggars; families camping on the roadside, with their sick and dying exposed to view; cruellooking native soldiers, dapper Zouaves, men selling horses and mules, women selling grass and snails, weird native music, noise, heat, and odours,—these, and a hundred things besides, make up

a scene, wild, picturesque, and memorable.

Among the sights of Tangier is the native fort and governor's palace, much fallen to decay, but its great size and fine arcades of pillars testify to its ancient grandeur. Here is the prison, a

horrible place, where unhappy wretches are seen loaded with irons and stalled like beasts. The court of justice is hard by, where in a narrow cell the cadi lies prone on a mat exercising his office. He is a tall, dark, very handsome man, with a keen steely eye, His decisions are given with much abruptness, and his punishments are said to be very cruel. Flogging for minor offences, gouging out the eyes for theft, and torture for serious crimes.

The true charm of Tangier lies not so much, however, in its regulation sights as in the picturesqueness of its daily life, its glorious climate, and splendid scenery. The surrounding country is rich in fruit and flowers, and the views and walks are delightful. Living is cheap. Travellers are boarded in a first class hotel for 10s. a day. Those who have visited Cairo and Alexandria and other towns, often remark that pure Eastern life is exhibited to greater perfection in Tangier than in any of the others, and this,

remember, within about five days of where we are.

Gentlemen, I have now reached the limits I prescribed for myself in planning this address, and yet I feel that I have but glanced at the fringe of the subject. It has been said that in a promiscuous assembly of half a dozen people you could hardly get any two to agree as to which was the finest of our English lakes, and in the same way, I suppose, hardly more than two among us would be of one mind as to the best holiday; but if I have succeeded in the least in attracting any of you to fresh fields, if I have placed before you any information which will make it easier to diversify a toilsome life, or to give advice to others how to do so, my object will have been fully gained.

Part Second.

REVIEWS.

Pilocereus Senilis and other Papers. By Walter Moxon, M.D., F.R.C.P., Physician to and Lecturer on Medicine at Guy's Hospital. London: Sampson Low, Marston, Searle, & Rivington: 1887.

UNDER this quaint and puzzling title we have collected a series of fugitive papers and lectures, now out of print, by the great thinker whose death was one of the many losses the medical side of Guy's

has suffered lately.

Pilocereus Senilis—an oldman Cactus—must in some quaint familiar way have meant more to Walter Moxon than we with all our puzzling can make out; but certainly to the writer of this, that odd pantaloon of a flower will now carry friendly associations, for between the boards of this little unpretending volume we find