

And, he concludes, 'if the freezing temperature of the ice-parcels be 0° C., then the freezing temperature of the mass surrounding them must be higher than 0° C., which is what the explanation of Faraday requires.'

Such is the present state of the controversy on this interesting subject. It remains to be seen whether Professors Helmholtz and Thomson will obtain some new support for their own theory, or some fresh objections to the opposite one; but at present victory appears to lean towards the side of those who first discovered the fact of regelation, and discerned its importance to the theory of glaciers.

THE VAL DES ALLUES. By the REV. C. H. PILKINGTON, M.A.

READER, were you ever at Bride les Bains? Should your wandering steps ever lead you in that direction, pray present my compliments to madame the Doctor's wife, and I think I may safely say that she will welcome you kindly. Understand, however, on what terms you will be admitted to the select circle who rendezvous at her house for the bathing season. I am particular on this point, for madame was kind enough to explain to me the state of the case herself; 'we don't keep an hotel, sir, but we receive a few friends.' She does not however, I trust, lose in a pecuniary point of view by her receptions. She did me the honour to accept a certain amount of francs for my board and lodging. For myself, I have no complaint to make; but my guide grumbled somewhat at having to sleep on the hay, and get nothing to eat of a morning before noon, for which he had to pay three francs per diem. Still I own that the charge which is made through Switzerland upon guides, namely one franc a day, does seem to me somewhat below the mark.

My arrival there was marked by an incident which began indeed in mystery, and alas! ended there. I mention it for the benefit of the novelist, who is welcome to introduce it in any part of his forthcoming sensation novel, and to invent any solution which may be necessary to his plot. I was discussing the last bone of a chicken, which madame had kindly added for my especial benefit, to the not very substantial supper, which sufficed for the somewhat delicate appetite of those who were undergoing a course of medicinal bathing. A few late-comers entered, amongst them a young lady, one of the few unmarried ones, as I afterwards learnt, belonging to the party. 'Good evening, mamma,' said she gaily, addressing an old lady who sat near me, 'I hope you have got on pretty

well without us.' 'There is a letter upstairs,' said her mother, somewhat reproachfully. 'What is it?' anxiously exclaimed the daughter, 'bad news?' and, as she spoke, the conversation lulled, and the anxious words were uttered in a dead silence. However, the curiosity of myself, and doubtless of the others, was destined to be disappointed. The mother only said, 'You will find the letter in my room.' The daughter turned, and rushed away; the hum of conversation broke out with renewed vigour, and the old lady bent somewhat sternly over her plate, I thought, to hide a tear. I know no more, save that the young lady in question was dancing vigorously the next evening at the saloon of the bathing house.

I did not make her acquaintance, but I was very kindly received by others of the party. One of my friends ventured to air his English, as he offered me a light for my pipe, by saying, 'Will you take fire?' I suppose the habit of struggling with patois had dulled my perception of the ludicrous; I failed to see any absurdity in the expression till the next morning. Another acquaintance expounded his views upon laughter in a manner worthy of Democritus. 'You English only laugh when you have something to laugh at; we Frenchmen laugh at nothing. To laugh, when you have something to laugh at, is easy enough; but to laugh when you have nothing to laugh at, that is sublime.' There are other amusements besides conversation. Possibly you may be disposed to refresh your mind, when over-wearied with too great attention, say to the glacier theory, or the system of hotel charges, by joining in a friendly game of 'How, when, and where,' at the saloon of the baths. Whist with strangers has its drawbacks, whether you count it an advantage or not to have middle-aged dames for your partner and opponents; but if you have put your old dress-boots into your knapsack, and are not too tired with a long day on foot, you will, I am sure, be acceptable at a dance, where gentlemen are in a decided minority. A certain lack of confidence, however, in my mastery of the French tongue kept me a silent but amused spectator.

For further information on *Bride les Bains*, the properties of its waters, and its historical associations, I must refer you to a blue pamphlet of which madame's son is the author. I cannot recommend the whole of it, else I might have preserved it for presentation to the Alpine Club Library. A few hasty glances were sufficient to show that an exposition of medical theory and practice led to the discussion of things quite unmentionable. Nor do I advise you to have too sanguine hopes of gaining accurate information concerning the topography of the neighbourhood. Scarcely one has set foot on the glacier, save the

boots of the inn ; and madame, pointing out to me the beauties of the valley, waved her hand vaguely towards the distant snow, and that in front was 'the Vanoise!' and behind, 'Mont Iseran!'

On the afternoon of Sunday, August 20th, I took leave of my hostess, and started for the Val des Allues. Jean Carrier and myself had already explored some part of it ; we had intended to do the same for the Val de la Rivière ; but rainy weather, which occurred on the average about four days a week during the whole of my holiday, obliged me to spend an idle day in letter-writing and the like. We reached Les Allues about four o'clock : it is the first valley in the main plateau of the up-land valley. We were in search of a porter, and at the next village found a braggart youth, who spoke brave words about the wine he must drink, and haggled for six francs a day. I stopped him somewhat shortly, as he seemed not to be one of the useful sort, and his chattering had already detained us too long. Pride always has a fall. At the next gentle ascent, a small boy joined company, and began to compassionate me: 'It must be very hard work walking over a mountain, when you are not used to it.' We crossed to the right bank of the stream, and at 5.40 reached the habitation of one Martin Charlet, who had the reputation of being a hunter. He poured out to us good red wine, and soon found topics of common interest with Carrier. He declined to go with us himself ; but found for us a silent shortsighted youth, to be our porter. He sold us moreover, for two francs, two litres of wine, some eau de vie, and a cheese, all of which was bundled into a sack, and consigned to the youth aforesaid. A more awkward burden I never saw ; but its bearer said nothing, and trudged along gaily. The evening was drawing in fast when we halted for the night at the chalets of Rosière. The soup was warm, the welcome warmer ; and the haybarn, warmest of all, was fortunately clean. It was murky weather next morning, when we opened our eyes at 3.30 ; so we delayed our start till five o'clock. We had one difficulty at starting—namely, to pay for our accommodation. There remained of all the family but two small children, and they were in bed, and not a little sleepy. Then ensued a monologue from our porter. 'Here you, look there, there's a piece of money ; you must give it mamma ; mind you do now ; there it is on the table ; don't you touch it ; don't you lose it ; there's a good child.' A succession of sleepy grunts were considered the equivalent of intelligent answers, and we departed. Crossing shortly afterwards an oval plain, apparently the bed of an ancient lake, where two days before we had gathered shells, we reached some chalets, which were the highest up the valley that were occupied at that time. We

asked of course for cream; but I suppose the herdsmen found their occupation unprofitable, for they charged us twenty centimes a bowl. However, there was some fun for our money. An old man, eager for gossip even at that early hour, proceeded to extract what information he could about us; and nodding with a wise look in my direction, asked of Jean, 'Is that your son, sir?' We told him to guess again.

Into the geography of the head of the valley I must be excused if I decline entering. If I could have half an hour's talk over the Sardinian map, with any one desirous of exploring what I failed to accomplish, I venture to think I could throw some light upon some of the minor passes in that neighbourhood. I think I know something of the Col du Paclet and the Col de la Montée du Fond, of which the guide-books speak rather dubiously. I believe there is a possible Col du Borgne, the true col at the head of the Val des Allues, over which in fine weather any mountaineer might easily pass to Bon Villard, on the Mont Cenis route. I think the glacier down which the descent would lie is the identical bit of snow which Mr. Bonney failed to identify in his survey from the Col de la Lauze (the passage of which, I may say in passing, is among my 'Sunny Memories of Foreign Lands'). But geographical details are seldom intelligible save with a good map, and often wearisome. Let me simply say we kept to the left from the Châlets du Plan, and reached the foot of the Geborla glacier, one branch from the main nevè of the Mont du Borgne, the line of peaks which runs westward from the Col de Chavière. Mist checked our onward course; we halted disconsolately in a half-ruined châlet, the name of which defies orthography. 'Aux Sceaux,' 'Au Saut,' are the best looking conjectural readings; though I have a sneaking preference for the 'fonetik' system, and the sweet simplicity of O So! With all our patience, and heroic contentment with short rations, for we could neither buy nor beg even a mouthful of bread and cheese, the mist turned next morning to driving rain, and we had to start in quest of the Col de Chavière, by which at least we hoped to reach Modane somehow. The Glacier de Geborla does not descend exactly into the head of the valley—we left it out of sight on our right, behind a little hill; climbed an old moraine, reached a small glacier, and came out upon a little plateau, whence we could see the foot of the Geborla glacier away on our right flank; but we were separated from its main stream by a long ridge of white tufa rocks, streaked with red; such at least was the appearance of it as seen from the other side on previous days. At 11.15 we reached a col, the Col de Corneille, and looked

down into the basin which heads the valley of the Doron. It was necessary to descend somewhat, over slopes of shale, then over turf, till we reached a white lake. To our right I may mention appeared a col by which the Geborla glacier might be reached; this, I take it, is the Pas de Souffre.

Soon afterwards our porter struck work; he wanted to get home, and was afraid of the weather. I stayed a few bitter words which were on the tip of my tongue, and let him go, merely bidding him to take care and not break his neck. An ordinary peasant of the valley, and no hunter, he shared the easy temper of his neighbours, content to pasture their cows, and gather here and there a little harvest of hay and corn and wine, but unambitious of knowing the snowy deserts which lie so near their homes.

That mid-day toil over a very wilderness of stones was a trial to the temper of a hungry man; but as I thought of the proverbial 'last straw,' we climbed a patch of snow, and were on the Col de Chavière. We stayed half-an-hour studying the new scene which lay before us, and at two o'clock departed on our downward journey. There were two valleys for choice. The course indicated by the guide-books would have led us by the right-hand one to reach the châteaux of Poleset; but compass and map pointed out the left-hand one as the more direct route to Modane. It was four o'clock when we reached the end of the level pasture called the Montagne Bouget, or Bourget, and looked down upon Modane. Then at last, after having felt for the last twenty-four hours very 'leer,' as we say in Hampshire, we were able to fill up an aching void within with endless bowls of cream. Eloquence has been freely employed to express the glories of cream, the delights of the un-inebriating draughts; I am content now to give a silent vote in its favour, as I was then to 'rest and be thankful.' Refreshed, we started anew by a sort of steeplechase course with no stiff fences or heavy plough land; and at the end of an hour came out at the back of Modane, crossed the river by a wooden aqueduct, and betook ourselves to the Lion d'Or. The art of puffery is well exemplified in the road front of the said hotel. A series of neat shutters lead the passing traveller to infer a corresponding series of neat bedrooms; but as I idly explored the upper regions, I found instead one large loft, not very full of hay. Here I made acquaintance with certain manners and customs of the (commercial) gentlemen of the country, not particularly conducive to business. Why should a purveyor of silks and satins be so curious about culinary operations? Is a fowl plucked more quickly or effectually when the cook's hand is seized and squeezed once in ten minutes. Perhaps, however,

I had better not assume the office of 'censor morum;' there is room for reformation on both sides of the Channel.

Having failed to go over a mountain, I next essayed to go into one. A notification that it was necessary to get authority from some 'Head centre' at Turin of course escaped the notice of a Briton. Leaving Jean at the entrance of the tunnel (of course every one has read the account in the 'Edinburgh Review' for June '65), I marched onward slowly into the darkness alongside of a team of waggons. Unfortunately for the success of my attempt, the dim light of a lamp suspended to the side of a waggon was sufficient to make known to watchful eyes the presence of a stranger. Presently a voice came out of the darkness: 'Hullo, there, you sir with the sack, what the —— do you mean by coming in here?' and thereupon followed a storm of wrathful words enough to have blown me the whole length of a pneumatic dispatch tube. The body that belonged to the voice very quickly barred my onward progress. Really unable to comprehend the rapidly-spoken patois, I asked innocently, 'what he wanted.' 'Your immediate return,' was the answer, rendered more plain and expressive by the universal language of pantomime. A big hand laid hold of my collar, and wheeled me gently round till I faced the daylight. I rejoined my guide, and we went on our way.

NOTES AND QUERIES.

ALPINE BYWAYS. XIV.—*The Bistenen Pass: from the Simplon Road to Visp.*—On the 17th August, Mr. Hayward and I, with Kaspar Blatter, made this pass on a hint from Mr. Ball, 'Western Alps,' p. 344. We had slept at Isella, whence it took us $4\frac{1}{2}$ hours to walk by the carriage-road to the Old Spital. The pass, though quite new to us, appears to be well known to the country people on the E. side as leading to Visperterminen, whither many parties of pilgrims travel every year.

Arriving opposite the Old Tower of the Spital, we descended into the bottom of the valley, and after crossing the stream, mounted by a regular pathway. The views were of no great interest—the range ending in the Glyshorn shut out everything on the N.; on the S. there was only the small Rauti Glacier, remarkable for a very distinct medial moraine, but on looking back, the Kaltenwasser Glacier presented itself finely, with the New Spital below, and Monte Leone above. Two tracks across the broad level down, which succeeds the ascent, are marked on the Federal map; of these we must have taken the southern, as we saw nothing of the little lake marked on the northern, but on approaching the brow above the Nanzertal, we soon discerned upon the opposite ridge the tarn near which our route lay. In descending, the views became magnificent; first towards the N. where the Great Nesthorn was the first to show itself, the eye travelling straight along the Nanzert-