

ALPINE NOTES.

MEMORIAL TO THE LATE MR. W. F. DONKIN.—A brass will be placed in Eton College Chapel, by permission of the Provost, Dr. Hornby, to the memory of Mr. W. F. Donkin. Any personal friends of Mr. Donkin who wish to join in erecting the memorial may communicate with Mr. D. Freshfield, 1 Airlie Gardens, W.

A NIGHT ON THE ELBRUZ SADDLE.—We take the following from the February number of the 'Proceedings of the Royal Geographical Society':—Baron Ungern Sternberg, a German physicist at present in the Caucasus, forwards the following account of an adventure which well-nigh proved fatal to himself and his companions.

The recent experiences of M. J. Vallot on Mont Blanc,* when a party of four spent three days and nights in a tent on the actual summit, have suggested a physical explanation of the fact often observed by mountaineers, that mountain sickness, at any rate up to 20,000 feet, can, in the majority of instances, be overcome by training. The following passage (pp. 33–34) gives the result of M. Vallot's experience:—

Par quel mécanisme d'accommodation les habitants des hautes régions du globe peuvent-ils s'habituer à l'air raréfié des grandes altitudes? Là encore mes expériences peuvent donner la clé du mystère. Trois journées d'habitation au sommet du Mont-Blanc ont suffi pour modifier entièrement le régime de ma respiration; le dernier jour, ma capacité pulmonaire avait notablement augmenté et mesurait 250 centilitres; le nombre des inspirations était de 17 par minute, au lieu de 14 dans la plaine. Quant à la profondeur des inspirations, elle avait doublé, étant devenue de 100 centilitres. Ainsi, l'air était deux fois moins dense que dans la plaine, mais il en entraînait deux fois plus dans ma poitrine, ce qui rétablissait l'équilibre; aussi je ne ressentais plus aucun des symptômes du mal de montagne.

Dr. Marcet had previously written,† 'As a person ascends beyond a certain height above the sea-level he breathes less air, reduced in volume to the freezing-point and seaside pressure, to burn a certain weight of carbon or produce a certain weight of carbonic acid, than he does at or near the sea-level.'

Physicians must be left to decide between these explanations. Meantime it is a remarkable fact that no sensation of discomfort from the rarity of the air should have been recorded among a party of seven during a prolonged stay at a height about 1,000 feet above Mont Blanc, and only 500 feet below the highest recorded bivouac of the Schlagintweits on Ibi Gamin.‡ A similar absence of any such affection was noted in the first ascent of Elbruz, whilst in the second (Mr. Grove's) most of the climbers suffered severely. In 1868 and 1888 there was a high wind, in Mr. Grove's ascent none; and, so far as my observation goes, still fine weather appears to predispose to mountain sickness. I throw out this observation, however, only for confirmation or contradiction by the experience of others.

* *Annuaire du Club Alpin Français*, 1888, vol. xiv. pp. 13–40.

† *Alpine Journal*, vol. xiii. p. 9.

‡ *Alpine Journal*, vol. xii. p. 31.

The following is an abbreviated translation of the Baron's graphic account:—

On August 23 last I started from the camp of the Survey officer, M. Golombievsky, with him and nine Cossacks. My object was to take magnetical observations on the saddle between the two summits of Elbruz, and to examine a crater marked by M. Golombievsky on his map, of which he claimed to be the discoverer. We ascended over the Irikhtchai Glacier. At 6 P.M. we reached the snow and breccia or lava crags which rise out of the névé. The night was clear, with a cold wind. The Cossacks were badly supplied with provisions, and M. Golombievsky and I shared ours with them. (Bar., 38·39°; temp., 1½° R.) We started late on August 24. We crossed the névé plain; the slope began to steepen. Ice necessitated step-cutting, and the Cossacks, who had no nails in their boots, roped themselves. M. Golombievsky and I had Steigeisen. We came to a very steep ice-slope (28°), which, after some 300 steps had been cut, led up to a snow plateau. We spent a stormy night on rocks, at a height of 14,700 feet. (Bar., 35·01°; temp., 3·75° R.) On August 25 we started about 11 A.M. Four of the Cossacks knocked up and all wished to return, but finally five agreed to accompany us. About 5 P.M. it became less stormy, and fine snow began to fall. To return by the difficult route we had come was impossible; we were all too tired. I hoped to find shelter on the north side of the mountain, as we could not be far from the crest. The storm and snow-wreaths ceased for a moment—we saw our goal before us. We were soon above. A broad expanse opened out; we crossed this, and a "Hurrah!" in honour of the Czar echoed from the andesite crags. We quickly crossed the summit ridge and began to go down. About 100 yards below the saddle we found at 6.30 P.M. miserable night quarters, under the shelter of some isolated small crags, exposed to hail-storms, snow, and hurricane. The cold was frightful; we had no tent: I and M. Golombievsky huddled up together, and both felt that our camp might well be our grave. In the night the storm only increased. I have been in a hurricane on the island of Dago in the Baltic; I have been surprised by a snowstorm on the Aletsch Glacier in the Alps; but I had never even imagined a tempest of such violence. It was clear to me that we must wait where we were till the weather improved. Probably the storm extended low down, and should we start the danger of losing some of our party in the numerous crevasses would be greater than that of freezing where we were tolerably sheltered. I must be pardoned for hurrying over the descent; it is too painful a subject: it was a fight, and a disorderly, reckless one. In the end I remained in the rear with a sick, exhausted Cossack. It was not I who found the descent in the storm, it was God alone who led us two unhurt through the innumerable crevasses. On the evening of the 26th I found myself safe, but with frost-bitten feet and hands, at the Kosh (shepherd's hut) you know well in the Terskol glen. For the exact accuracy of the foregoing account I pledge you my word as a gentleman. We spent sixteen hours at a height of 17,840* feet, according to M. Golombievsky's measurements.

The attempt recorded above is the first occasion on which Elbruz has been approached by a route the practicability of which I pointed out in 1869, that is, by the eastern glacier, which flows from under the eastern peak into a glen, the stream of which joins the Baksan above Urusbieh. This route is shorter in distance, but doubtless longer in time, owing to

* According to the latest official map in my hands the height of the saddle is apparently given as 17,570 feet, but the figures may possibly refer to a point below it. The two summits of Elbruz on the same map are marked as 18,470 and 18,347 feet, but until the exact points measured and the method of measuring have been fully ascertained it will be prudent to adhere to the figures of the five-verst map.

the extent of snow and ice to be traversed, than that by the Terskol glen, on the south-east, previously adopted.

The crater mentioned in this account evidently lies on the eastern flank of the eastern peak of Elbruz. It has apparently no connection whatever with either of the two craters, described respectively by Mr. Grove and myself, which form the actual summits of the mountain. It seems, however, that this fact has not been universally recognised, and some doubts, which I conceive to be uncalled for, have been consequently cast on the survey officer's claim to its discovery, on the ground that it had been previously noted by Mr. Grove or myself. So far as I know, M. Golombievsky was its discoverer.

From the above account it is obvious that the climbers committed a grave imprudence in pushing on in spite of more than doubtful weather on a mountain at once so lofty and so exposed as Elbruz. That they survived sixteen hours' exposure to storm at such an altitude, and that their desperate descent did not end in disaster, was better fortune than could have been anticipated. It is greatly to be desired that Russians should take a leading share in the thorough exploration of the glaciers and peaks of the Caucasus. But it is only a due return for much courtesy to warn emphatically Caucasian explorers of every nationality that, unless they approach the great mountains with a strict observance of the laws of mountaineering, frequent disasters must inevitably ensue. Elbruz, in particular, is at once a very easy and a very dangerous mountain. Only tyros in mountaineering will find any paradox in this statement, which I desire to recommend earnestly to the attention of all whom it may concern.

Baron Ungern Sternberg further enquires whether his expedition can be correctly described as an ascent of the summit (*Gipfel*) of Elbruz. The answer is clear. An ascent of a mountain is an ascent of its highest, or one of its highest, peaks. In the case, for instance, of the well-known Wetterhörner, in the Bernese Oberland, an ascent of the Mittelhorn, or of the Hasli Jungfrau, may be properly described as an ascent of the Wetterhorn. The case of Elbruz is an exact parallel. Again, a *Gipfel*, or summit, is a prominence, as distinguished from a *Sattel*, or depression, in a mountain crest (*Kamm*).^{*} Baron Ungern Sternberg's expedition may be most correctly described, therefore, as a 'Besteigung des Elbruz Sattels,' or Ascent of the Elbruz Saddle. In geographical literature generally, however, and particularly in Germany, the word 'ascent' or its equivalents have been commonly used with unscientific and regrettable laxity, with the natural result that errors and confusions have arisen, and have been necessarily followed by contradictions and explanations. It was on this account that I qualified my reference to the expedition in question in the preceding volume (p. 762) by the words 'according to the newspapers.' Geographers will be indebted to Baron Ungern Sternberg for affording a convenient opportunity for a public statement of the principle long ago recognised and adopted by the Alpine Club.

An apt illustration of what I have written above comes conveniently

^{*} See Von Sonklar's *Lehrbuch der Geographie*, part ii. p. 4.

to hand at the last moment. In the number of the 'Globe,' a deservedly popular German geographical magazine, of January 7 last will be found an article entitled 'Besteigung des Kasbek,' and signed by Herr von Seidlitz, of the Statistical Department at Tiflis. It is, in fact, an account of the adventures of some Ossetians who made two plucky attempts to ascend Kasbek from one of the northern glens west of the Dariel Gorge, but were on both occasions driven back by bad weather at the foot of the final peak. Some years ago I ventured to extend or particularise a well-known epigram by asserting that 'Caucasian critics are climbers who have failed.'* Herr von Seidlitz is at pains to prove again how thoroughly I was justified. He adopts and enlarges on local reports in order to prove that I and my companions set up a false claim to have climbed the peak in 1868. He grossly misquotes me to the effect that our party only took the incredibly short time of four hours in climbing the mountain, whereas I stated that we took four hours in ascending from 11,000 to 14,800 feet, and 5½ hours in climbing the further 1,800 feet to the top. An answer to all his arguments is to be found in my 'Central Caucasus,' which he might have read in the museum at Tiflis.

Further reply to so unconscientious a critic would be thrown away. It may be serviceable, however, to any Russian or Caucasian climbers who desire to verify the advantage of the route discovered in our descent in 1868 if I repeat the following simple directions. Follow the Tshach, the chief tributary of the Devdoraki torrent, to its source, then climb the easy slopes on the (true) right of the Atchieretchi Glacier to the ridge separating it from the Devdoraki Glacier. Bivouac for the night under a rock tower above the icefall of the latter, visible from the spot whence the Devdoraki Glacier has been photographed. From this tower (marked 'Volgichki, 13,454 feet,' on some maps) it is easy to enter the great névé plateau at the northern base of the two peaks of Kasbek, which was apparently attained from a more westerly valley by Herr von Seidlitz's Ossetian friends. From this plateau the ascent of the peak offers no greater difficulty or danger than that of Mont Blanc from the Grands Mulets. And when a hut has been constructed at the sleeping place the only hardship will be avoided. A direct ascent from the station by the eastern or southern face will, however, always be a more or less difficult or dangerous expedition, according to the state of the snow on the very steep upper slopes. Doubtless before many years have passed the ascent from the north will be frequently made, and tourists of all nations will look back with mingled amusement and surprise to the lucubrations of the learned men who were unfortunate enough to find 'able editors' ready to exhibit to the world how little they understood, or were able to appreciate, the details of mountain climbing, the configuration of Kasbek, or the ordinary veracity of Englishmen. D. W. FRESHFIELD.

CONGRESSES OF THE FOREIGN ALPINE CLUBS.—According to a recent decision, the Swiss Alpine Club holds its festival every two years only. The next will take place in 1889, under the management of the Uto

* *Alpine Journal*, vol. xii. p. 338.

section, in the town of Zürich. The delegates from the several sections, however, are bound to meet every year for the discharge of current business. They assembled on September 17 at Olten, to the number of fifty-four, besides the central committee. The most interesting subject was a report presented by the Central Committee relating to the project of requesting the Federal authorities to consider the advisability and possibility of executing a relief of the mountain regions of Switzerland. The report laid stress on the military and educational value of such a relief, roughly estimated the cost at 250,000 francs (10,000 francs per sheet of the Federal map), and the time it will require at twenty years. It recommended that the Club should not undertake any financial responsibilities in connection with it, though occasional small grants might be made. In the debate that followed it was urged that the S. A. C. was quite wealthy enough to make an annual grant of 1,500 to 2,000 francs to further such an excellent object, and the scale of 1/25000 was suggested, but Herr Simon inclined to make it 1/10000 (as the Swiss Scientific Society desired also), though allowing that in that case the Siegfried map would have to be supplemented by minute local investigations, and pointing out that the cost would far exceed 10,000 francs per sheet. Eventually the original report was accepted by 29 votes to 23. The central committee was requested to ascertain whether in the clause of the will of the late M. Bétemps, by which 3,000 francs were left to the S. A. C. for the construction of a club hut in the Monte Rosa district, it would not be possible to strike out the limitation as to the district. (M. Bétemps' executor has since agreed to waive this limitation, and there now seems no hindrance in the way of constructing the long-wanted club hut at the very head of the Val de Bagnes). The proposal of the Neuchâtel section that an attempt should be made to draw up a tariff of guides' fees, which should be uniform throughout the Confederation, met with very little favour, owing to the extreme difficulties in the way, and was rejected by a large majority. It was further resolved not to alter the existing badge worn by members of the Club. The accounts for 1887 showed a balance of 26,000 francs in favour of the Club.

The twentieth general assembly of the Italian Alpine Club took place at Bologna on September 15-16, more than 250 members taking part in it. The prize of 500 lire offered by the King to that one of the sections of the Club which had done the best work in making its district known by means of guide-books, or by promoting improvements in order to attract more visitors, was awarded to the Varallo section, which is the second oldest of the Club, having been at work since 1867. The announcement of the Queen's expedition to the Col du Géant was received most enthusiastically, and it was resolved to present an address to her Majesty, in honour of whose ascent the Turin section has decided to place a tablet on the wall of the hut on the Col. It was decided that the 1889 congress should take place at Ascoli Piceno, in the Monti Sibillini, not far from the north extremity of the Abruzzi range. The banquet was, as usual, very successful. Excursions were made on September 17 to Rimini, and that 'freak of freedom' the Republic

of San Marino; and on September 18-19 to the summit of the Cimone (2,165 mètres) in the Pistojan Apennines.

The delegates of the various sections of the Italian Alpine Club met on June 29, 1888, in Turin. In the report on the general position of the Club we note that the warmest thanks were given to the Alpine Club, for its splendid contribution of 7,627 francs to the fund for the relief of the districts to which the avalanches of the past winter had done so much damage. The formation of four new sections (Laghorn, Cremona, Carrara, and Chieti) was announced. The number of sections on December 31, 1888, was 34, and of members 4,517. The total income of the Club for 1887 was 34,423 francs, and the outgoings 33,398 francs, thus showing a surplus of 14,227 francs, just 1,000 francs more than the surplus of 1886. Among the subjects mooted in the general discussion was the question of how best to reward the contributors to the 'Bollettino' (whether by a medal or by an honorarium), and the difficulties in the way of taking books out of the Club library. It appears that in the latter case it has been proposed that the demand for a book should be made by the section of which the applicant is a member, and that the section should be responsible for any damage done to the book; whereas at present the borrower has to deposit double the value of the work taken out, even though only one volume or part is wished for, and many works are 'confined' to the library. The Central Committee promised to take these grievances into consideration, and we shall be curious to see what remedy is suggested for them. Signor Grober moved a very hearty vote of thanks to the Alpine Club for its noble contribution to the avalanche fund; this was carried unanimously, and amid cheers. The Italian Club seems to be in a very prosperous condition, and the perusal of the report (to be found in the *Rivista Mensile* for July, pp. 237-247) is to be strongly recommended, as it proves that the Club and its sections do far more than merely build huts and improve paths.

The German and Austrian Club held its fifteenth congress from September 7 to 9, at Lindau, on the shores of the Lake of Constance: 548 members were present besides guests, but the bad weather spoilt nearly all the excursions which had been arranged. The indoor festivities were brilliant and successful. On the 8th there was a fête on the lake, followed by splendid illumination of the banks. On the 9th, 350 persons were present at the grand banquet.

The meeting for business was held on the morning of the 9th. It was announced that the Club consisted of 21,661 members, distributed among 164 sections, a great increase in both points since 1887. Fifteen new huts had been built, making a grand total of 112 huts erected by the Club. The seat of the central committee of the Club is to be at Vienna for the three years 1889, 1890, and 1891, Herr Carl R. von Adamek being the First President. The meeting in 1889 will be at Botzen, in the Tyrol. It was resolved to institute observations as to the rise or fall of the level of Alpine lakes and streams, and to appoint a committee to consider and report on various questions as to the maintenance of huts and paths, ownership of huts, revision of the Club hut rules, &c. Grants in aid of huts and paths were made

to the amount of 33,500 marks. The 'Mittheilungen' are to appear henceforth on the 15th and 30th of each month, and not, as at present, on the 1st and 15th. The accounts for the year 1887 showed a surplus of 4,411 marks.

The French Alpine Club has lately elected M. Jules Janssen, the famous astronomer (Member of the Institute, and President of the Académie des Sciences), as its President, in the place of M. Xavier Blanc, who has now twice resigned the presidential chair. In June the Club numbered 5,497 members, distributed into 42 sections. The summer congress of 1888 was held from August 11 to 22 in and around the great manufacturing town of S. Etienne, not far from Lyons. The banquet took place on August 16 at S. Etienne, and a great number of excursions on all sides were organised, to the Mont Pilat (4,802 feet, the highest point of the Cévennes), Le Puy, the gorges of the Loire, of Semène, and of the Allier, &c.; but the attendance is reported to have been less numerous than usual at the summer meeting, owing no doubt to the great success of the congress held at Nice last April. The 1889 Congress will meet in Paris in the month of August.

ALPINE CLUB RELIEF FUND IN AID OF THE SUFFERERS BY THE RECENT AVALANCHES IN THE ALPS:—

	£	s.	d.		£	s.	d.
Amount received as per particulars 'Alpine Journal,' vol. xiii. p. 546, and vol. xiv. p. 66				Sent to Italy . . .	300	0	0
Received subsequently .				„ Randa . . .	40	0	0
	534	12	3	„ Saas . . .	40	0	0
	2	0	0	„ other parts of Switzerland .	145	13	1
				Advertising, printing, &c.	10	19	2
	536	12	3		536	12	3

THE NEW ROUTE UP THE JUNGFRAU FROM THE ROTHTHAL.—As from the various notes that have appeared in the 'Alpine Journal' with reference to the ascent of the Jungfrau from the Roththal by the new route there seems to be some difference of opinion as to the character and difficulty of the route, I send a few notes of an ascent made on August 14 last.

Two parties (Messrs. Bayley and Hodgkins with old Christian and Johann Almer, and myself with Johann Kaufmann and Gottlieb Meyer) were the first occupants of the new Roththal hut on the night of August 13. This is quite a new hut, and is a detached building facing west, at the back of the huge boulder against which the old hut was built. The new hut is commodious, having two rooms, and is well supplied with cooking utensils and coverings, but when we were there had not yet been provided with straw in the bed-place. As none of the parties, guides or travellers, had been up the mountain by this route before, it was thought to be as well not to start till daylight, so we did not leave the hut till 4.15 A.M. on the 14th. Our route led us at first almost at a level along the base of the wall of precipitous rocks forming the northern boundary of the Roththal, back in the direction of the valley of Lauterbrunnen, until we

reached the point where the wall falls precipitously to that valley. Here the wall was low, and we were able to wind upwards round its end to a sort of gently sloping plateau of rock above it. We then doubled back in a north-easterly direction over this plateau towards the foot of a steep ridge of rock, running up towards the Silbergrat. At 6.20 A.M. we reached an arête, separated by a small snow-saddle from the main mass of the mountain, and put on the rope. At 6.55 we halted for breakfast beyond the snow-saddle at the foot of the great buttress leading up to the Silbergrat. At 7.15 A.M. we started again and tackled the buttress, mounting mostly by the rocks, but sometimes by snow-beds which this year filled the gullies. We could see two ropes hanging to the rocks above us, and directed our course towards them. The climbing was interesting but not difficult, the rocks being sound, with plenty of hand- and foot-hold, until we reached the lower and longer of the two ropes fastened to the rocks. This rope led up a shallow flat trough or gully, steep and with not very much foot- and hand-hold. The rope certainly facilitated the ascent of this gully, but I think we could have got up without it. Above this the rocks were again fairly easy till we reached the second rope. Here a boss of rock swelled out and rather overhung, and on it there was no hold; so we caught hold of the rope one at a time, and, putting our feet against the rock, walked up with our feet and climbed hand-over-hand on the rope till we could get a hold above the boss. Above this easy rocks again led us to the top of the ridge. We then stood on the snow-covered ridge which runs in a south-westerly direction from the peak of the Jungfrau. Before us as we topped the ridge was a gigantic hollow, beyond which and below us was the Silberhorn. In this hollow lies the Hochfirn, and its head is enclosed between two ridges, one to the south, on which we stood, and the other that joining the Silberhorn with the Jungfrau. These ridges, both abut at the foot of the final peak, and at that point our route I fancy joins that from the Wengern Alp. Behind us lay the Roththal; on our left the ridge dropped steeply to the Lauterbrunnen valley, and on our right led up to the Jungfrau. We turned along the ridge, and, the snow being in very good order, had no difficulty in following it to the final peak, and, clambering up a rocky rib, we joined the track from the Roththal Sattel only two or three hundred paces from the highest point, which we reached at 11.15 A.M., having gone very easily. Here I parted company with Bayley and Hodgkins, they going to the Bergli, while I went down to the Concordia hut, and next day to the Bel Alp. This ascent appeared to me by no means difficult. The two places where the ropes are fixed are the only ones that are not quite simple, and even those ought not to be very troublesome to a competent party, unless the rocks were covered with ice. We fortunately found very little ice on the rocks. The route also seems to be quite safe. The rocks are firm, and I saw no sign of avalanches.

On August 17 I left the Bel Alp at 3.5 A.M., with the same guides, to return to Lauterbrunnen and Grindelwald, by the Beichgrat and Wetterlücke, intending to sleep a night in the Lötschthal. We reached the Beichgrat at 8 A.M. and the Gletscherstaffel huts, in the Lötschthal, at 10.45 A.M., after some glorious glissades down the steep snow-slopes

below the pass. The weather had begun to look threatening for some little time, and on the way down from the pass I had asked Kaufmann what he thought of it and what we could do, as I did not relish the idea of being weather-bound in the Lötschthal. He suggested that, if I liked, we might go on and try and get over the Wetterlücke also. I jumped at the idea, but as we got to the Gletscherstaffel it began to rain, and the guides said they did not like the idea of going on. So I suggested we should stop and lunch. During this the weather got somewhat brighter again, and the guides said they would go on. So at 11.30 A.M. we started again up the proper right bank of the Inner Pfafflerthal. At 1.50 P.M. we reached the glacier and put on the rope, and at 4 P.M. reached the col of the Wetterlücke, the going having been rather heavy through soft snow. Snow had come on shortly before this, so we did not halt, but made our way straight down. The Breithorn glacier was very broken and intricate (Johann Kaufmann said more so than he had ever seen it before), but Kaufmann led with great skill, and we got off the glacier at 6.10 P.M., and reached the Steinberg Alp at 7.20 P.M., wet through, as the snow had turned to rain lower down, but delighted with the success of the expedition.

The next day my appearance going down from the Steinberg Alp to Lauterbrunnen must have been edifying, with an ice-axe in one hand and a huge gamp in the other, which I borrowed at the chalet, not liking the idea of getting wet through before driving from Lauterbrunnen to Grindelwald. I became a full convert to Mr. Ball's faith in the virtues of umbrellas.

E. CLAYTON.

THE MATTEN LIMMI.—With Hans and Melchior Kohler, of Meiringen, as guide and porter, I left Rosenlauri at 2.30 P.M. on July 29, and reaching the Dossen Hütte at 6.15 P.M. passed the night there.

Starting next morning soon after sunrise, in cloudy weather, and descending slightly to the left over patches of snow, a few rocks, and flowery pastures to some chalets, we turned sharply to the right across the stream of the Renfen Glacier, and, keeping high above the Urbach, rounded the ridge from the Tellengrat, and arrived at the Matten Alp at 8.30 A.M. Here hot coffee was obtained; and as clouds hid the spot at which it was necessary to strike the ridge, and the proposed pass was unknown to Kohler, it was thought desirable to take a herdsman as far as the col. Crossing the main stream, and bearing to the left up very steep grass slopes, succeeded by several stony gullies on the right, the Matten Limmi, just south of and perhaps identical with the spot marked 2,761 mètres (9,059 feet) on the Siegfried map, was easily gained, the time occupied from the chalets, now immediately beneath, being about two hours.

The mists had cleared away, revealing a gap so narrow that one person alone could pass through at a time, thus recalling the early descriptions of the Trift Joch from Zermatt to Zinal. The view of the Gauli Glacier and its moraines, of the Ewig Schneeorn, Wetterhörner, and of the Hangend, Renfen, Dossen, and Stellhörner was extremely interesting. Far below, on the side of the Hasli Thal, Guttannen, with its new road and green pastures, seemed within a stone's throw. A jagged ridge rose up to the Ritzlihorn; whilst a steep pinnacle, of

which the eastern face descended in a sheer precipice to a snow couloir, shut out all view to the north.

This couloir proved impassable, so roping up and clambering round to the right, the descent was commenced amongst overhanging rocks, the broken state of which rendered progress very slow. It was evident the pass was seldom if ever used; large masses had to be dislodged to gain foot- and handhold. At last the slope became less steep, all difficulties ceased, and a short halt was made. Starting again and bearing northwards, numerous ridges and gullies were crossed: these led the party to steep beds of very hard avalanche snow, requiring some little care and step-cutting. Stones kept falling, and on arriving at the lowest slopes they were found entirely covered with recent *débris*.

Guttannen was reached about 4 P.M., the entire passage thus having occupied about eleven hours. It is thought nine hours should suffice. I had intended to mount to the Gelmer Limmi the following day, but snow and heavy rain, lasting forty-eight hours, prevented this extension of the expedition.

This pass, combined with the Furtwang Sattel and the Stein Limmi, offers a pleasant route from Grindelwald to the Stein Alp, and thence by the Wendenjoch to Engelberg.

J. B. CARRINGTON.

WINTER MOUNTAINEERING.—The splendid weather which prevailed in the Alpine regions during the months of December and January—a marvellous contrast to the gloom and cold of the preceding summer—naturally induced mountaineers to undertake ascents, which were carried out under unusually favourable circumstances. On December 5, Herr Diamantidi, with Peter Dangel and seven other Sulden guides, went up the Ortler Spitze in 4½ hours from the Payerhütte, without any great difficulty, the ascent being repeated on December 12 by Herr H. Petermann. Herr Schöllhorn climbed the Gross Watzmann (December 9), and the Dachstein (December 26); two ascents of the Zugspitze (December 26 and 28), as well as one of the Gross Venediger (January 2), and of the Fleckistock (Uri) being also recorded. On January 10 a tourist was killed on the Hohe Kästen Appenzell.

The principal winter ascents of which we have heard were those made from Grindelwald by certain energetic members of the merry party which enjoyed this winter again the hospitality of the 'Bear'—or, rather, of the Bosses in the new house known as the 'Little Bear.' On January 2 Messrs. Cornish and Lefroy, with Ulrich and Hans Almer and Christian Jossi, made the third winter ascent of the Schreckhorn, and on January 8 the same party (except Jossi) climbed the Wetterhorn. On January 3 Mr. A. C. Tosswill, with Ulrich Kaufmann, Johann Bernet, and Johann Burgener, repeated the ascent of the Schreckhorn, and were back at Grindelwald the same afternoon at 5 P.M. A third party aiming at the same peak on January 10 did not get further than the Schwarzegg hut, for that day the weather began to break, and on January 11 a heavy snowstorm raged. A few days later Mr. Littledale made up for his enforced retreat; for on January 16, with Ulrich Almer and Christian Roth, he climbed the Schreckhorn, and on January 19, with the same guides and Hans

Almer, the Mönch, in both cases returning to Grindelwald the same evening. On January 16 an English gentleman, with Christian Jossi and Johann Kaufmann, starting from the Schwarzegg hut, attempted the ascent of the Finsteraarhorn by way of the Agassizjoch. Intense cold and bad snow in the great couloir of the Joch compelled the party to retreat, after having climbed a few hundred feet up the arête above the Agassizjoch.

Less adventurous members of the 'Bear' party contented themselves with ascending the Faulhorn, crossing the Wengern Alp, and making the other ordinary excursions from Grindelwald. The weather was most magnificent, and the heat often oppressive in the day-time. 'Tobogganing' and sleighing were the order of the day, while the flooding of the lawn-tennis ground induced an energetic and well-known climber to organise and daily lead most exciting games of hockey on the ice, in which the most prominent performers only were equipped with skates. The thrilling adventures of the players were watched with the greatest interest by the villagers, to whom this game was an entire novelty, and who were particularly delighted by the performances of a celebrated Saas guide then making his *début* as a skater and a hockey player. The merry incidents of the hockey ground and toboggan slide will long remain in the memory of those who beheld them—longer even, perhaps, than the cheering beverage called 'Gletscherthee' (perhaps because tea was the least of the many ingredients which it contained) provided by the ever-thoughtful hosts of the 'Bear,' who, as usual, devoted all their powers to amuse and entertain their guests. The dogs, as on a previous occasion, took part in many of the minor ascents, 'Hunter' again bearing away all the chief honours as a reward for his pluck and perseverance, though scarcely for his beauty.

The marked feature of the Grindelwald winter season was the small quantity of snow. Up to January 11 the village was reached by wheeled vehicles only, sleighs being quite useless. The parties who went up to the Schwarzegg hut took the summer route by way of the Bärenegg, Zäsenberg and 'Enge,' while the one Bergli party having reached its sleeping quarters by way of the Zäsenberg came back over the Kalliberg. A party which crossed the Wengern Alp to Lauterbrunnen on January 15 took 6 hrs. 40 min. walking from one village to another, following the summer path throughout, save in one bit near Alpiglen, and finding very little snow between the Bellevue and Jungfrau hôtels.

DEATH OF ULRICH KAUFMANN.—On January 11 last, there passed to his rest one of the older generation of the Grindelwald guides—Ulrich Kaufmann, (who must not be confounded with a younger man of the same name, known by his ascents in New Zealand and the Himalayas). Kaufmann, and his brother-in-law Christian Almer, were the two chamois hunters who joined Mr. Wills' party on the way up the Wetterhorn during the famous ascent of September 17, 1854. He was also with Almer on the first ascents of the Mönch (1857), and of the Gross Viescherhorn (1862), as well as on the first passage of the Jungfrauojoch (1862).

SIGNOR SELLA'S DAUPHINÉ PHOTOGRAPHS.—Signor Vittorio Sella is among the very few mountaineers who were in luck last year. He had made up his mind to climb and photograph the great peaks of the Dauphiné Alps, and his fortnight's sojourn in the district included that wonderful week (August 8–15) which was the one bright spot in the long gloomy summer. Consequently, he was enabled to take many magnificent views in the clearest weather. His collection (now numbering 534 views) has thus been enriched by no fewer than fifty-eight large photographs (16 inches by 11½ inches), which are of the greatest beauty and of the highest value. They include complete panoramas from the summits of the Ecrins (3 bits), the Meije (5 bits), the Pelvoux (5 bits), the Pic Coolidge (4 bits), the Grande Ruine (4 bits), and the Sommet des Rouies (5 bits). Amidst so many splendid representations of the ice and snow regions it is hard to pick and choose, and everyone will have his own favourite views. Several good judges are however unanimous in adjudging the palm to a most superb view of Les Bans from the Col du Sélé (No. 530), which is certainly a most impressive portrait of a single great peak rising beyond a great crevassed glacier. Next to this, perhaps, comes a most delicate representation of the final cone of the Sommet des Rouies (No. 484), the fluting of the snow slopes being most admirably portrayed. A view taken on the way up the Ecrins, and looking north (No. 512) is remarkable for the harmonious and artistic treatment of four ridges, rising gradually in height one behind the other, the eye being insensibly, yet irresistibly, carried up to the loftiest peak of the Meije. No. 488 is a most successful representation of a most difficult subject, the wall of the Meije from the Vallon des Etançons, for, as it is taken from a point some way above the level of the valley, the real height of the great wall comes out extremely well, whereas in ordinary views it is generally dwarfed and foreshortened. The sight of the Pic Bourcet from near the Col de la Casse Déserte (No. 494) will make ambitious peak climbers regret that they had not seen it before Mr. Swan conquered the peak in 1887. There are two most startling views taken from the Pyramide Duhamel on the Meije (Nos. 501 and 503), and the well-known, but none the less marvellous, appearance of the Pic Central of the Meije from the Grand Pic, with the four great teeth between (overcome by the Zsigmondy party in 1885), may be studied at leisure in No. 497. Among special views we may note further those of the Olan from the Rouies (No. 482), of the Pelvoux from the Refuge Tuckett (No. 511), of the Ailefroide from the summit of the Ecrins (No. 514), of the Ecrins from the north and from the south (Nos. 516 and 491). An admirable view of the typical valley of Dauphiné, the Etançons Valley, is afforded in No. 487, while Nos. 518, 485, and 486 are charming studies of crevasses. It may be affirmed without fear of contradiction that Signor Sella's artistic skill and taste have never been better shown than in this marvellous series, which will be the joy of all who know Dauphiné, and a revelation to all who do not yet know it, while for topographical purposes its value is simply inestimable. The price of forty of these wonderful photographs is nine francs each, the eighteen others being

only six francs apiece. Such a complete and *cheap* set of views of a limited district of the higher ice and snow regions has probably never before been offered to the public, and I trust that Signor Sella's skill and taste may meet with the reward which they so fully deserve.

W. A. B. COOLIDGE.

STATE INTERVENTION IN ALPINE MATTERS.—The truism that Continental Governments interfere with everyday matters far more than English officials would venture to do has recently been illustrated by two incidents—both amusing and instructive—which have lately taken place in Austria and in Italy.

It seems that about the beginning of September certain persons conceived the idea of erecting a monument in honour of the 40th anniversary of the accession of the Emperor of Austria, and proposed to erect it on the summit of the Ortler Spitze—the highest point in his dominions—where, too, it was proposed to have, on the joyful day itself, a festive gathering, bonfires, &c. This design seems to have been promoted with blissful ignorance of the obvious fact that the practical difficulties of raising the monument (a stone pillar nearly 50 feet high, and weighing over 3,000 pounds) on such an elevated snowy peak were well-nigh insuperable, but also of the not less important fact—and one certainly not less obvious—that on December 2, the day in question, a festivity by night on the Ortler Spitze meant a night spent in the open at a great height. It is impossible to imagine that anyone possessing the merest smattering of mountain experience was on the committee charged with carrying out this remarkable scheme, and, indeed, we believe that the Alpine societies and club sections which have their headquarters in Vienna and Innsbruck discountenanced it to the best of their power. However, the difficulties above indicated were not after all encountered, for on arrival of the monument near the foot of the peak, early in November, the Meran local officials forbade its further transport. The monument committee appealed in turn to the Governor of the Tyrol and to the Austrian Minister of the Interior, but in vain. Hence it has been decided to postpone the erection of the obelisk till August 18 next, the Kaiser's birthday. It is worth noting that the President of the Innsbruck section of the German and Austrian Alpine Club refused to countenance the scheme in a very emphatic letter written on behalf of the section, and correcting many misstatements of the monument committee as to Alpine matters. The reasons assigned by the Governor of the Tyrol for the rejection of the appeal addressed to him are the excellent ones that the transport of the monument to such a spot in December would be attended with serious risk, if not loss, of life, and that the public opinion of the district, apart from the interested advocacy of certain guides, was opposed to the scheme. An attempt was ultimately made to set up a wooden replica of the obelisk on the peak, but it snowed hard all day on December 2, and on December 4 the caravan of forty persons gave up the project after having attained a point but a little further than the Payerhütte. The honorary president of the obelisk committee, Herr Diamantidi, made the ascent on December 5, and hoisted an Austrian flag on the summit, but, we understand, immediately resigned his office on his return to Meran. It may be hoped

that the last has now been heard of this obelisk project, which could only have originated with persons entirely unacquainted with practical mountaineering.

The foreign system of requiring all workmen to possess recommendation books issued by and controlled by the local government applies, as is well known, to guides in all parts of the Alps. The Italian Chamber of Deputies in the course of last November debated a law respecting the public safety, which dealt among other professions as to which police registration is necessary, with that of guides, under the heading, 'Mestieri girovaghi,' which one might English literally as 'vagabond professions.' Signor Brunialti, a well-known member of the Italian Alpine Club, and also of the Chamber of Deputies, secured from the Government the concession that 'guides' should be named before 'valets de place,' but failed in his endeavour to procure the insertion of a clause providing that in the case of a professional person, in whose charge the lives of other persons were placed, the certificate of registration should be issued by the Prefect or some other high official. It was explained, however, that this refusal was based solely on the ground that the code of regulations to be issued in order to carry out the statute would contain a clause dealing with this point, and this explanation induced Signor Brunialti to withdraw his proposal.

Who can tell if the time may not come when the question of erecting a monument on Helvellyn or Snowdon, or the licensing of guides for the Cumbrian or Cambrian districts of the British Alps, will be solemnly considered by local officials or debated at Westminster?

THE NEW SURVEY OF THE TYROL.—In No. 13, page 155, of the 'Oesterreichische Touristen-Zeitung' for 1888 (now edited by Herr Julius Meurer), we find the results (in mètres) of the most recent official survey for the new map of the Tyrol. They supplement the figures for the Dolomites given in our August number (page 61).

—	New Height	Old Height	—	New Height	Old Height
Ortler . . .	3,902	3,905	Monte Vioz .	3,644	3,631
Königspitze .	3,857	3,854	Monte Saline .	3,621	3,620
Monte Cevedale	3,774	3,795	Presanella .	3,564	3,561
Monte Zebbru .	3,740	3,740	Monte Gabbiol	3,475	3,410
Pallon della Mare	3,705	3,784	Caré Alto .	3,465	3,461
Punta di San			Tuckettspitze .	3,458	3,475
Matteo . . .	3,692	3,683	Payerspitze .	3,396	3,444
Gr. Venediger .	3,660	3,673	Marmolata .	3,360	3,494
Thurwieserspitze	3,648	3,658			

The variations in many of the peaks are, it will be seen, only such as must take place by the changes of seasons. They are real variations probably, rather than corrections in measurement. But in a few cases substantial changes have been made.

The Monte Cevedale, Pallon della Mare, Payerspitze, and particularly the Marmolata (which still ranks, however, as the highest of the Dolomites), have specially to rue this new measurement; on the other hand, the Punta di San Matteo and Monte Gabbiol gain considerably.

In No. 22 (p. 268) of the 'Mittheilungen' of the German and

Austrian Club for 1888, the new heights of two other great peaks of the Tyrol (surveyed last summer) are given :

—	New Height	Old Height
Wildspitze (N. peak) . .	3,784	3,776
" (S. peak)	3,779	3,770
Weisskugel	3,746	3,741

The new height of the Gross Glockner (old height 3,797) does not seem to have been yet made known.

The following figures relating to the Brenta Dolomites are taken from a list in No. 13 of the 'Mittheilungen' for 1888, page 157 :

—	New Height	Old Height
Cima d'Ambies	3,095	—
Bocca d'Ambies	2,871	—
Cima Tosa	3,176	3,179
Crozzon di Brenta	3,123	3,090
Bocca di Brenta	2,553	2,547
Cima Brenta Alta	2,967	3,036
Torre di Brenta	3,024	3,065
Cima Brenta	3,155	3,146
Cima Vallesinella	3,121	3,121
Cima Falkner	2,989	3,013

The long-standing feud for superiority between the Cima Tosa and the Cima Brenta is thus officially settled in favour of the former, which was generally considered to be the higher.* The Cima Brenta Alta and the Torre di Brenta lose considerably, while the Crozzon di Brenta gains over 100 feet.

AN ASCENT IN WEST AFRICA.—In the *Graphic* for September 15 last Mr. H. H. Johnston, the well-known explorer, gives a very vivid and interesting sketch, illustrated by a number of engravings, of his ascent of the highest peak of the Cameroons mountains, forming part of the German possessions on the West Coast of Africa. He started from his permanent headquarters on the green island of Mondole, in Amba Bay, in the rainy season of the year, in order to examine more carefully the wonderful flora of the district. After halts at the villages of Bonjongo (2,200 feet) and Mapanja (3,300), Mr. Johnston, with the usual retinue of native porters, started for Mann's Spring, one of the few ascertained sources of water flowing down from the main peak of the Cameroons. It is the limit beyond which few travellers penetrate, and takes its name from an English botanist who made the ascent of the peak with Captain (now Sir Richard) Burton. Mr. Johnston's descriptions of the marvellous plants then bursting into life again in the second spring are most fascinating. In one place there were countless orchids, many of them new to science; in another the party passed for 100 yards through a natural avenue of tree ferns. Birds, too, abounded.

* See Mr. Freshfield's *Italian Alps*, p. 268.

At the height of about 5,000 feet a cold, wet mist came on, and diminished the charms of the excursion. Seven hours from Mapanja they reached a majestic forest, and soon after in a clearing reached Mann's Spring, where Mr. Johnston pitched his tent on a level platform, intended for the hunting lodge of a German judge, which was never built. This is at a height of 7,350 feet, the temperature varying from 50° to 65° Fahrenheit. Here Mr. Johnston appears to have spent some time exploring the neighbourhood, collecting specimens, and enjoying wonderful views down on the sea and the island of Fernando Po from the summit of an old crater close by the encampment. The next stage in the journey was up to 'Hunter's Hut' (8,300 feet), in a narrow peninsula of forest pushed up the mountain side. On this spot four little huts were built, and provisions obtained from the mountain people of Bwea. It was from this point that the start was made for the final peak. Leaving at 8 A.M. in the rain, Mr. Johnston and his companions crossed several lava fields, and gained the spot where he pitched his tent at 11 (height 10,500 feet). His native attendants were now sent back to Hunter's Hut, as they suffered so much from the cold, Mr. Johnston retaining only two men. About noon the weather cleared, and the highest peak stood out magnificently distinguished from his brownish-green neighbours by his gorgeous colouring—red, yellow, mauve, greenish grey, gold, purple. It presented itself as a triple crater, the highest peak being in the centre. Mr. Johnston's admiration of this grand sight was broken in on by the terrors of his two companions, who stood in great fear of Ehwasu, the spirit of the mountain, and advised him to surrender his rifle if the spirit should demand it. Starting off again alone at 3 P.M., Mr. Johnston passed over grassy downs, then over loose ashes and lava beds, the walking being very fatiguing. In part, these *scoriae* were covered with mosses of various colours or dull green grass. The ascent, however, offered no difficulties, being like that of Dunkerry Beacon or one of the North Devon Hills. On the summit Mr. Johnston took a boiling-point observation at 5.45 P.M., which makes the height to be 13,508 feet, which he believes to be nearer the truth than the usually accepted height of 13,760. Two small cairns, containing the names of some previous ascenders in 1884 and 1886, a bottle and a tin case, were found on the top. Time did not allow of a visit to the western crater, which may be higher than the central one, though the latter is the one usually visited. The view was very superb, but advancing night compelled a speedy descent. The ascent of the final peak had taken half an hour, but going down Mr. Johnston took only five minutes, making a sort of glissade over soft snow, and clean, crisp cinder dust. Unluckily, however, he lost his way lower down: he had forgotten his compass on top, and also an orange, the want of which was very painful, as no water was to be found. After many hours' wanderings, during which he must have passed close to the camp, the frostiness of the air and wet clothing making it inadvisable to lie down and sleep, Mr. Johnston found himself at a height of 6,000 feet, and on the verge of the great forest. A steep descent forced him to await the dawn, but the sublime sight of the sunrise made him forget all his fatigues.

Finally, he found a path which led him back to Hunter's Hut ; but he does not tell us what became of his two companions or his tent.

The ascent seems to have been made several times before, but it is well to have it described again, that we may realise the existence in Western Africa of a peak about as high as the Jungfrau or the Aiguille Verte.

REVIEWS AND NOTICES.

Souvenirs d'un Montagnard, 1858-1888. Par le C^e Henry Russell.
(Vignancour : Pau, 1888. 8vo., pp. xx., 508. 5 francs.)

AFTER thirty years' experience of the Pyrenees, Count Henry Russell has given us an account of his ascents, going right through the chain from east to west. He professes to give mere geographical exploration, unaccompanied by botanical or geological discoveries, and in the hands of most of us a mass of dry detail would be the result, of the nature of a guide-book, which could hardly prove interesting reading when taken up at home. This, however, is not the case with the present work ; we have a vein of subjective reflections running through it, which redeems it from any dullness or monotony, and makes it delightful reading for any one who has the fortune to be acquainted with the Pyrenees and with the author. Indeed, an acquaintance with Count Russell is almost a corollary of knowing the Pyrenees, more especially since he has made his three caves on the summit of the Vignemale, besides a fourth one half way up the mountain for the 'fainéants.' In the winter the upper caves are buried beneath the snow, and it is only late in the summer that they become accessible ; but regularly towards the end of July this ardent mountaineer betakes himself to his summer chalet. Here, at a height of 3,200 mètres, cut off from the world by the largest glacier in the Pyrenees, he spends days and even weeks, alternately wooing the charms of solitude and dispensing hospitality to any friends who make the ascent from Gavarnie, and a sketch of Count Russell in his cave on the Vignemale would be an interesting addition to 'Celebrities at Home.' In these caves on the Vignemale we have the key to the spirit which has inspired Russell in his devotion to the mountains, winter and summer, for thirty years.

In the number of first ascents recorded in these 'souvenirs,' both on the French and Spanish side of the chain, and these made at a time when the latter was almost a *terra incognita*, we can trace the passion for exploring which impelled the author of 'Seize mille lieues sur l'Asie et l'Océanie.'

In these mountain ascents, often undertaken alone, the writer candidly admits (p. 281) 'l'amour propre mêlé à la passion plus noble de l'inconnu m'y fit escalader.' The ascent of Mont Perdu (p. 326), accomplished without companions thirty years ago, which was followed by a night in a snowstorm on the Brèche de Roland and a difficult descent through a dense fog to Gavarnie, with the sound of the cascade as the only guide, is a feat that few would have had the hardihood to