ter, and as yet the theory of glacier motion is not definitively laid down. I thus, however, venture provisionally to close this difficult chapter. May the future speedily correct us where we have erred, and enlighten us where we can only doubtfully grope. To round off and complete the glacier theory is still a great task which will require many a year of labour from the investigator' (pp. 336–7).

In dealing with six out of the ten sections of Prof. Heim's most interesting and valuable volume, I have endeavoured faithfully to render his views without attempting discussion of them, a task which would have added to the length of my paper. My excuse for going into so much detail must be my sense of the ability of the handling, and the importance of the facts and deductions which characterise this work, and my desire to place before English mountaineers a careful summary of its contents, in the hope that they may be induced to read the original for themselves.

(*To be continued.*)

New Tracks on the Eiger and Breithorn.

By J. STAFFORD ANDERSON.

(Read before the Alpine Club, March 31, 1885.)

I.

A Variation on the Eiger.

AFTER about forty hours' direct travelling from the Midlands, I reached Interlaken at 9.30 P.M. on Monday, August 4, last summer.

An 'einspänner' from the 'Bär,' attached to the little white horse of the father of all the Bosses, was in attendance, and we were soon on the way to Grindelwald. Nearing the mountain chain, the valley became flooded with moonlight, and the Lion of the Eiger and the impregnable Mitteleggi arête sparkled in the clear, frosty air. Recalling my experiences of former seasons in the Alps, I wondered if at last I was in for a good one.

The Eiger has always had a great attraction for me. I can remember as well as if it were yesterday, on my first visit to Switzerland, being struck with its noble outlines. To me then, mountaineering was a sealed book; my only peak, the Rigi (by railway); and the Little Scheidegg (with

the assistance of a mule), my highest and only pass. Yet, as the result of an hour or two's talk with old Peter Bohren the night before, I remember making a vow (after the fashion of a certain eminent tragedian) that, if ever I did attempt anything in the way of big peaks, the Eiger should have my first attention; and when, many years after, the opportunity came, I went up it, as my first peak in Switzerland, in fear and trembling, partly caused by the extremely boyish appearance of young Christian Almer, who led the way. There is also, I think, a great fascination attached to the as yet unsolved question of the success or failure of an attempt by a direct route from Grindelwald.

Under the circumstances I chimed in at once with Ulrich Almer's suggestion of a new, or partly new, attack on the mountain, with the Bergli hut as a starting-point; and in the summer of 1883, whilst in the vicinity of the Schreckhorn, we closely examined the proposed route, and laid our plans for an attempt in 1884.

We were at the 'Bär' at the unearthly hour of 1 A.M., Emil Boss turning out to welcome me so quickly as to give the impression that his sleeping posture was a standing one; and in five minutes nothing short of an avalanche would have had a disturbing effect.

Turning out into the courtyard the next morning, I found Ulrich Almer, Pollinger, and the weather in good condition, and fit for anything. After the usual greetings came the interrogation, 'Well, Almer, what is it to be?' A guide never answers a question of this sort without first consulting the heavens; then came a whispered consultation with Pollinger, and, 'If the Herr is not tired, the weather is very fine' (another appeal to the oracle), 'and I think we had better start for that Eiger to-day.' The Herr said nothing would please him better, with the proviso that 'langsam vorwärts' was to be the order of the day, and at 2 P.M. we were grinding along the never-ending route to the Bergli. As usual, we were much too late in starting, and by 4 P.M. were conscious of the fact that, unless the word 'langsam' were knocked out of our vocabulary, we should probably spend the night in our roosting on the glacier, or in futile endeavours to hunt up our sleeping-quarters. As usual, too, the daily thunderstorm came down upon us, but, as we have never yet succeeded in reaching an Oberland hut in a dry condition, the occurrence lacked even the charm of variety.

Almer began to spurt most unmercifully, and soon drove out the little breath that, as a rule, I carry with me on a

mountain side. At such times I always think of the man who went up the Schilthorn with a corpulent frame and one German word in his possession. It was 'schnell,' and he had been told it meant 'slowly.' As the ascent began to tell upon him, he gently insinuated 'schnell' into the ear of his guide, who followed his instructions with a slight appearance of astonishment. The repetition of 'schnell' and the pace increased together, till at last the tourist stopped breathless in his tracks, and gasped out, 'Confound it! if you don't go "schneller" I shall turn back. Can't you see the pace is killing me?' To return, however, to the Bergli hut, which, by dint of great exertion, we just managed to reach at nightfall, and found tenanted by a party for the Mönch Joch.

The builders of this hut certainly deserve credit for its construction, and the elegant pair of stretchers it contains are a great aid to reflection. Whether it was the luxuriousness of our surroundings or the result of fatigue I cannot say, but we were all frightfully lazy the next morning, and, I am ashamed to confess it, were not on the move till nearly five o'clock—a most absurdly late hour for a new expedition.

Our idea was, if possible, to find a way up the rocks facing the Viescher Glacier to the crest of the S. arête, to gain the summit, and by this ridge, and Mr. G. E. Foster's route from the false Eiger Joch.

We had examined it rather closely, and it always seemed to us that, if practicable at all, it might turn out to be an interesting climb, and a short one. Following the route to the Mönch Joch for a short distance, we reached the ice by a lateral descent of a snow slope to our right hand.

A prolonged scrutiny of the lower rocks on the far side of the glacier showed them to be ice-worn and out of the question from a climbing point of view, and even higher up, where they were interspersed with snow, their appearance was very uninviting; but up towards the Eiger Joch a fan-shaped slope of snow and avalanche *débris* seemed to afford a way over the difficulty, so we made for this by a semi-circular route to avoid crevasses. When at its base, about 5.30 A.M., a glance upward showed a couloir leading from the summit of the slope some distance towards the arête, and ten minutes' work brought us to the foot of this. Later in the day I do not think this slope would be free from falling stones in considerable numbers. Even before six o'clock we had a few showers, consisting, fortunately, of very minute specimens of their race.

The couloir, which was of solid ice, also showed signs of stone-raking; but at this early hour the rocks on the right-hand side kept us well in shadow, and the necessary step-cutting was the only thing that detained us. Twenty minutes' hard work saw the end of it, and another hour and a quarter's steady plodding over steep ground with alternate bits of rock and snow brought us to a little col just to the S. of the highest of the rock pinnacles on this ridge.

Looking to the N., we had a clear view of the arête. 'No less an authority than Mr. Leslie Stephen describes this ridge as "sharp as the blade of a knife, playfully alternated with great rocky teeth striking through their icy covering like the edge of a saw," and says that six hours to traverse it as a "calculation of time was below the mark."' Between us and the Eiger Joch to our rear there was nothing of any moment. Looked at from the South, the ridge seemed neither difficult nor long, so we took things easy, and rested fully forty minutes before making a move again. As we expected, the whole way to the false Eiger Joch took us only an hour and a half's easy going. We kept to the crest of the arête till the higher part of the large pinnacle became too jagged and needle-like, forcing us on to its western face, along which and a few feet below its crest we felt our way slowly and cautiously, as the ledges were small, and the rocks below us rather steep.

Here shortly came our first, and, I may almost say, our only difficulty.

Some few yards in front the face we were on came to an abrupt termination with an almost unbroken profile, which put a stop to Pollinger's further progression. We waited expectantly while he first looked down, then up, shaking his head after each operation, and finally paying his attention to what lay beyond and behind the *gendarme*. After a careful inspection he turned round to me and said, 'Kommen Sie, Herr, ich muss springen.' Why, where, and how he must spring I had not the faintest idea, but closed up to him, and, acting on his instructions, passed the rope over a handy rock, leaving him about ten feet to play with. From where I stood my view was limited to the steep slope stretching on our left to the Eiger Glacier below, a few yards of rock above, and Pollinger's massive frame in front. I am getting used now to his feats in the way of springing, and if he were to say he was going to jump down the Matterhorn shoulder, I should probably let him have as much rope as possible, and await the consequences without remonstrance.

Having fixed his right foot and right hand on the extreme edge of the rock wall, to enable him to follow the 'look before you leap' principle, with a swing or two of the left leg to gain momentum, off he went out of sight. By the falling of numerous bits of rock, and the general clatter that ensued, he had evidently damaged a considerable portion of the arête. Beyond this, as the rope remained stationary, I imagined things were all right; and, as soon as he had supported this belief by saying so himself, I stepped into his vacant place, and soon saw what had become of him.

The northern side of the *gendarme* was a straight piece of rock some 20 feet or so in height, which joined the face we were on almost at right angles. A gap of about a yard in width separated the *gendarme* from the continuation of the arête, which was also some six feet below our standing ground. Over this gap, and on to the rocks of the arête, Pollinger had jumped in a 'round-the-corner' sort of style, and was now looking at me and saying how very easy it was. No doubt it was; when you had done it, that is to say; but by the time Almer had reached me, I had come to the conclusion that I should be more likely to miss it by a foot than six inches.

Just at this moment, however, a strikingly brilliant idea came into Pollinger's head, and, asking me to wait a moment, he descended a little way into the gap between us, fixing his heels on the rocks behind him and resting his hands firmly against those in front, and, bending down, his broad back formed an excellent substitute for a bridge. Not giving him time to consider his idea a bad one, I jumped on to the small of his back (if he has such a thing), a tendency on my part to fly off in the direction of the Bergli being frustrated by a frantic clutching of his ponderous frame, somewhat after the style of the man in one of 'Punch's' hunting puzzles.

From his back to the rocks of the arête was only a step. Almer followed suit, first passing on his ice-axe. To help him to preserve his balance after landing, I bent forward a little, and, in stepping back, with an amateur's carelessness, put my foot on the ice-axes which were resting peaceably on the rocks, and they all prepared for an immediate and rapid descent to the glacier below. I somewhat retrieved my character by stopping two of them, but my own went off at lightning speed, bounding down the slope with joyful leaps of liberty, and not resting until it was out of sight.

Of the many disagreeable things connected with moun-

taineering, losing one's ice-axe in the early part of an expedition is, I think, one of the most disagreeable; and though I *had* picked it up for a few francs at St. Niklaus, and it was probably the shabbiest axe in Switzerland, and though a few days before it *had* been described in unflattering terms as 'the hoe' by a railway porter, yet it was a tried and trusty friend, and its loss caused the rise of very unholy feelings within me—the necessity for moving on, and the extremely narrow limits of our standing ground, alone preventing their adequate expression.

A short scramble brought us on to the hard snow again. Near the arête the slope was rather steep, and step-cutting became necessary. I soon found that digging my fingers into the hard crust was a very inefficient substitute for an ice-axe, and, as might have been expected, my foot slipped out of a step, starting me in the direction of the Eiger Glacier by a short and expeditious route. Turning round instinctively on my face, I just succeeded in anchoring with a hand in each of the two nearest steps, and Almer's readiness with the rope prevented all risk. The next *gendarme* we skirted by the western face, and after ascending and descending a snow peak with a cornice, at 9.30 exactly, we were at the foot of the last snow slope, and on the col from which Mr. Foster made his ascent.

A desire for the repossession of my axe, coupled with the offer of a reward, sent off the two men at racing speed in search of it, illustrating very forcibly by contrast the drag that an amateur is upon first-class guides. During their absence I first took a rough sketch of the route we had followed, then spent a minute or two in the concoction of claret-punch by the insinuation of sundry lumps of sugar into Pollinger's wine-barrel, with the aid of a pencil, and nearly half an hour in unavailing effort to fish the latter out again. I believe the pencil is there still, and is likely to remain so, but the flavour it gives to the wine is not at all bad. In something like forty minutes the guides were back again, and the ice-axe with them, rather shabbier than before, but otherwise undamaged. Leaving the col at 10.30, at 11.55 we reached the summit of the Eiger.

After a short rest for refreshment and examination of the N.E. arête, which we all agreed was not in fit condition for an attempt by sensible men, we began the descent by the usual route at 12.10. Coming down the rocks we had our only mishap. We had been resting for a few minutes, and Almer and I moved on without attracting Pollinger's atten-

tion; the pull on the rope detached him from his perch, and down he came, making a great dust, and leaping from ledge to ledge. Almer and I turned round, taking hold of the nearest thing handy, when just at the limit of the rope Pollinger sprang on to a wider ledge and managed to come to a standstill. His leg was very much bruised, and he had to limp down to Grindelwald, though he would not confess that there was anything the matter.

By 6 P.M. we were at the 'Bär' again, having thoroughly enjoyed our variation. I can strongly recommend it as an interesting climb, with just enough difficulty to make it enjoyable. Of course I do not for a moment imagine that anyone with designs on the Eiger would go 'fooling round' by the Bergli hut for their fulfilment; but for climbers coming from the Eggischhorn it would make, by stopping a night at the Bergli, an agreeable route to Grindelwald; and if there is any satisfaction in traversing a fine peak like the Eiger, they could attain it at the cost of about eight hours' walking to the Little Scheidegg.

II.

The Breithorn from the Schwarze Thor.

In these days of daring ascents and Himalayan and Caucasian mountaineering, an account of an expedition up the Breithorn seems like the chronicling of very small beer. At the same time the mountain is higher than many with a name, and the description of a route needing sixteen hours to the summit may perhaps be of some little interest. After all, it is more a matter of position than anything else, for if the rocks overhanging the Schwarze Thor looked down on Zermatt instead of on the Twins, the ridge would probably be much talked of and often climbed. Like the man in front of the mad bull, one almost wishes it were possible to change ends.

We had often looked at the long arête, and discussed the possibilities of success or failure of an attempt by it. Almer declared emphatically and succinctly that it was 'der Teufel.' Pollinger was not quite so pronounced in his opinion, but generally finished up by adding satirically that it would not matter much if we *had* to descend to the St. Théodule after midnight. With the superior wisdom of ignorance I asserted that once on the arête the rest would be plain sailing. We were all unanimous that we would

at any rate give it a trial in 1884, so after a successful passage of the Stalden Joch from Saas, we turned up at Zermatt on August 13 for the purpose.

The weather still remained good, and the necessity of hanging about whilst the guides were indulging in a special Fest was a little galling, but the evening of Friday, the 15th, found us on our way to the Riffel Hôtel. As usual, it was crowded, those who had rooms wearing an air of superior indifference, contrasting very strongly with the aggrieved look of those who had not. I had taken the precaution of wiring two days before, and was rather staggered when the *fille de bureau* said I could not have a room, even though I showed her the telegram hanging at her elbow. I had entered the hotel with the conscious satisfaction attendant upon justified precaution, but immediately joined the ranks of the aggrieved. Why a mountaineer will cheerfully lie on planks slightly covered with straw, packed amongst garlic and, occasionally, brandy-impregnated guides, with just enough room to show he hasn't room enough, and yet has the greatest objection to sleep in a fair bed in a passage, or with a few fellow mortals in a large and airy *salle*, is an inexplicable mystery.

Young Seiler, turning up in the nick of time, rescued me from a dilemma by rigging up an insignificant bed, trying to lose itself in the corner of the salon of some distinguished foreigner, who was engaged at the time in the vicinity of the St. Théodule.

One has often read of the great benefit to be derived from starting for an expedition from such comfortable quarters as the Riffel. I have never yet solved the question, 'How to sleep satisfactorily in a hut before an expedition?' but I slept still less this night, and was heartily glad when the porter knocked me up.

Irritation 'deep but unexpressed' is generally considered to be the frame of mind of mountaineers at this time of the morning. With us this was entirely overshadowed by a feeling of extreme virtue at such an early start, which was quite a novelty to us. What its effect would be on that party who were the first to leave of the six or seven already *en route* I can hardly imagine.

The morning was a perfect one, clear and cold, with an unclouded moon just risen in the east, as we turned down the little path leading to the glacier. Below us in the distance, scattered over the ice, were the lanterns of the groups in front, looking like so many errant glow-worms. They

were probably carried for effect, or in obedience to some tradition of the Riffel; for, as Pollinger remarked, the moon was of much greater service, and extremely easy to carry. We watched them for more than an hour, and they were still to be seen as we turned off towards the Schwarze Thor, and I have a strong impression, from the position of the leading one some way up the first slopes of Monte Rosa, that it reached the summit, like the sacred lamp of Burlesque, still alight.

After crossing the ice we struck straight up the centre of the Schwarze Glacier, but soon came to a halt before a crevasse too wide to jump, and too deep to circumvent. A trial to the right only resulted in further discomfiture, and we had to retrace our steps. Pollinger gave expression to an insane idea of cutting down one perpendicular side and up the other. Having explained to him that getting over a crevasse was not the only object of our rising at 2 o'clock in the morning, we proceeded still further to the left, and, finding the necessary bridge, were shortly afterwards among the séracs. I need not describe them. They are well known, and we have most of us read the thrilling descriptions of them in the early records of our Club. We did the usual amount of interesting, if occasionally hazardous, work under such circumstances. In an hour's time we came on to the hard snow above, and turning west to the rocks of the Breithorn, a steady plod, with half an hour's rest, brought us to the summit of the pass.

During the last thirty minutes we had scanned the rocks to our right very carefully. In many places they seemed quite possible, but the cornice on the arête had a decidedly unpleasant look, and we knew that failure would mean the abandonment of the expedition for that day at least.

The precipitous termination of the arête overlooking the pass was in many places overhanging. Five minutes' inspection failing to show any reasonable route up it, we walked on towards Italy, giving Pollinger the opportunity of working in a joke, which I think had been in preparation for a month or two. It had something to do with the association of coffee and cholera, and was somewhat involved; but as he and Almer were highly amused with it, I suppose there was more in it than appeared to the casual hearer.

A few hundred yards brought a considerable portion of the southern side of the mountain into view. It runs in a sort of wedge to the Schwarze Thor, widening out towards the west, with lateral spurs of rock on the Italian side. A

short distance away a snow slope strewed with avalanche blocks seemed to afford the means we wanted to get near the arête, and up this we went to the base of some steep icicle-covered rocks. While resting here for a drink a shower of ice rained down upon us, showing that the rocks above must have plenty of ice about them, and be at a steep angle, though we did not stay long enough to come to this conclusion before making a move.

As we walked higher, we saw that above the rock face at whose base we had rested the slope was steep, and for some distance consisted of smooth ice-covered rock. A glance was quite sufficient, and we cut our way to a rocky rib running above and below us, and a hundred yards or so in front. For a few moments we considered the question of trying to find a way up this, but the inequalities and ledges were so few that we could see no chance of success beyond a few yards, so we hung on whilst Almer crept carefully along in a horizontal line to see if he could find a way down the other side of the rib. We watched him peering about, but there was no forward movement on his part. The rocks were very good, he said. No doubt they were, and as specimens of rocks as good as any I have seen; but, as he had taken a minute or two to go the length of the rope, and could evidently get no further, they were not of much service to us as a means of progression. There was no help for it, so we retraced our steps as quickly as possible down the slope —not quite to our former level, but low enough to enable us to turn the obstacle on easy ground—and a quarter of an hour after we had a view of nearly the whole length of the Italian side of the peak.

It was now nearly 10 A.M., and, according to all the rules of mountaineering, we should have been on the summit, or within appreciable distance of it, but we seemed to be very little nearer it than when we had left in the morning.

Considering the matter seriously, we saw that there were the proverbial three courses open to us:—

First, to give up the expedition altogether for the day, and after sleeping somewhere near the Schwarze Thor make another attempt next day. Not entertained.

Second, to make a short cut along the level snow to the west, to the foot of a couloir leading up to a little col at the base of the rocks abutting against the final peak. Rather tempting, certainly. I myself was beginning to look upon the Breithorn as a fraud, and a very little support would have inclined me to listen to the tempter. As usual, Almer

came to the rescue, and said *he* had come out to get up the mountain by the arête, and meant if possible to do it; so the third course was adopted, and setting our faces to the north-east we mounted steadily up the slope in front. The snow was just too hard to allow of our walking up it without working, and Pollinger cut multitudinous steps. As we proceeded the sun shone down fiercely upon us, and for a time one almost felt how extremely foolish it was to be grinding up a slope of this sort in a broiling sun instead of enjoying the flesh-pots of Zermatt.

Working steadily upwards, we struck on to a second rocky rib running a considerable distance down the slope and ending in a peak on the ridge above us. To save time we tried to cross this rib and attain the arête on the further side, but its western face overhung, so we kept on our way; and at 10.30 we were on the ridge, and looked down on the smiling valleys and alps between us and the Oberland.

We had now been out about eight hours, and the summit of the Breithorn seemed as far away as ever. As we looked along the interminable arête, with its snow peaks and *gendarmes* culminating in an apparently impossible barrier of rock, my opinion of its character very speedily altered. We were, however, fairly in for it now, and resting for a few minutes commenced the real work of the expedition. A short scramble landed us on the top of the little peak before mentioned. On its western side it descended steeply in a broken face of rock and ice to the ridge again. We paid out the rope as Almer carefully and cautiously made his way down, winding in and out, at one time cutting a step in solid ice, at another finding a way from one jutting piece of rock to another. Down to the right the northern face of the mountain stretched in view from our feet to the Schwarz Glacier. There was no serious difficulty, but each movement required care, and the climbing was a welcome change after the previous eight-hours' grind. On regaining the ridge we kept well down on the Italian face, as a cornice of considerable size ran unbroken along the arête. In front of us the next peak was entirely snow-covered on the side facing us, with the cornice increasing to at least fifteen feet, and curling over in the most fantastic of shapes. Adopting the same precautions as before, we slowly cut our way up and down this peak, as near to the cornice as we dare, the snow lower down being in rather a bad condition. Near the western base of this peak the cornice came to an end, and

for a short distance we were forced on to the northern face of the mountain, the nature of the work being very similar to that on the descent of the former peak.

As we cut our way slowly along, many anxious looks were cast at the two final rock buttresses. Would they go or not? Neither Almer nor Pollinger would give any opinion on the matter. From our position in front of them they had a decidedly wall-like and impregnable appearance, and between them and us were still several peaks, some of them appearing about as high as the summit itself. We struggled along, cutting step after step with unvarying monotony, having the cornice to our right the greater part of the way.

I need hardly describe this part of the climb in detail, even if it were possible to do so. We all know what it is like. When not cutting a level course just below the cornice, we were either going up or down one or other of the various peaks and *gendarmes* on the ridge. They were all easy on the east or ascending side, but steep and broken on the western, and in the descent we had generally to move one at a time with the rope thrown round jutting pieces of rock for security.

After more than five hours spent in this tedious manner we reached, at 2.55 P.M., the little col at the foot of the first of the final rocks, and saw that another hour or so would determine the possibility of ascent or not. Almer would allow no resting here except to decide the question of trying straight up the rocks in front, or on to the S. face first and afterwards up it to the arête. The former seemed the shorter, and for some little distance we could trace a way; but higher up the appearance was very bad, so we chose the latter, and scrambled round on to the Italian face. To our surprise the rocks were of the very best, bearing a striking resemblance in colour and nature to those on the Zermatt side of the Rothhorn. The ledges, which were numerous, sloped the right way, and as we made more rapid progress with only the occasional necessity of climbing singly, our spirits rose in proportion, and we began to think that after all the previous thirteen hours' work was not to be regretted.

The first pause occurred at a little couloir of rock which ran down from a break in the ridge, and involved turning a rather nasty corner of rounded slabs. We both held on whilst Almer worked his way carefully on a narrow ledge round the obstruction. Once round he found good holding again, so that I was soon over the difficulty, conscious that nothing short of the rope breaking could be disastrous in my case, though an over-abundance of zeal for my welfare

on Almer's part nearly pulled me off my feet. Pollinger was about six feet away on the other side of the couloir whilst we were getting round. Instead of wasting valuable time in the same manner, he coolly asked us to hold on fast whilst he sprang across, glueing himself in some unaccountable manner to the rocks as he landed. After this the going became easy again, and we ascended laterally at a fair speed till stopped again by a much wider couloir of snow in bad condition. We did not like the looks of it at all, so Almer turned up sharply to the right, almost at right angles to our former course, and at 4 P.M. we were on the crest of the ridge again, with nothing between us and the final slopes but the last rock buttress, though there was still some hours' work to be done. Some ten feet below us was a tiny gap, a few feet in width, and about the thickness of a good-sized table knife, with a feeble cornice hanging as in the last stages of disintegration.

Having let Almer down first, he cut a step or two in the ice for standing ground, and then I followed suit, leaving Pollinger on the rocks above, as the col was barely wide enough for two.

To the right the northern face fell precipitously; to the left was the treacherous-looking couloir; and in front of us the wall of rock of considerable height rose very steeply from the col at our feet. Straight upwards no holds of any sort were visible, and overlooking the couloir the rocks were quite as difficult, but a little to the right was a sort of chimney running up the buttress for 20 feet or so in a slanting direction. By placing the left foot on the narrow gap, and striding out, Almer could just get his right foot on to the farther side of the chimney. If he had missed it a straight fall on to the rope would have resulted, as just underneath was nothing but the free air. As soon as he felt that his extended foot was securely placed, he gave a spring off with his left, catching hold of a suitable grip with his right hand, and at once began to mount up the chimney. Before the rope was paid out he was 'ganz fest,' and held on whilst I followed his lead, finding that the difficulty was much worse in appearance than in reality; but Almer is so short in the leg that he had very much the appearance of a hen trying to balance itself on the outer bars of a gridiron. I held on at the foot of the chimney till Pollinger had descended to the gap, and then worked up to Almer, who, in his turn, moved on to the top of the gully, and made himself secure till Pollinger had left the ridge. From the

top of the chimney we turned off to the left a few feet, and up another running straight up the face. It was exceedingly steep, and just in the centre a good-sized piece of stone was firmly wedged, the scramble over which caused us to assume, one after the other, the attitudes of a tortoise in convulsions.

A little more easy work, and we were at the foot of the last snow ridge, and began to feel that nothing short of accidents could prevent the success of the expedition, though to be still going up a peak at 5 P.M. was an entirely new experience. The snow arête in front rose up to a narrowing point with a nasty cornice, so we cut along the Italian side, and a few minutes after encountered the only part of the day's work which had a spice of danger in it. Difficulties we had had in plenty, but never at any moment anything approaching to the dangerous. The afternoon sun had made the snow in some places very treacherous, and one wide shallow couloir was decidedly shaky. Strips of solid ice, from which the snow had apparently lately vanished, alternated with bands of heaped up snow in the very softest condition. On the ice it was all right, as Almer's steps were good enough for anything, but on the snow patches he had the greatest difficulty in giving them anything like the requisite solidity. The angle of the slope was so steep that, with the addition of the huge holes that did duty for steps, the snow rested against our right shoulders as we proceeded; and it was a matter of considerable difficulty to get enough *strike* on the ice-axe to be of service without overbalancing. Once a stone rattled down on the rocks below, and I shall not easily forget the way in which Almer immediately prepared himself for the worst, and the slightly scared look with which he turned round to us, and the tone of his 'What's that?' Some time before he had playfully alluded to the anticipating cries of the Alpine crow—if there is such a bird—and two of the species were now hovering about us, uttering discordant shrieks.

Of course we only moved one at a time, and while Almer paved the way our axes were dug in as far as possible with the rope wound round them, so that probably a slip or even a partial giving way of the snow would not have been attended with disaster in any shape; but I think we were all intensely relieved when we got on to the solid rock again.

Soon afterwards we turned up to the arête, and, resting a short time for refreshment and change of leaders, pushed on rapidly to the summit, though we had still some step-cutting to do.

Walking up the final ridge an icy wind came whistling up from the north, blowing the surface ice into our eyes and faces, and freezing the very marrow in our bones. The rope stiffened rapidly, assuming an unbending attitude, and for the rest of the way obstinately refusing to do anything but form two sides of an equilateral triangle. Pollinger led the way at a rapid pace; but it was quite impossible to increase the circulation, and our relief was great when, at 6.45 P.M., we reached the summit, after sixteen hours' hard work. Thanks to the glorious weather and the unflagging energy of the guides, we had succeeded. The usual shake round brought to our remembrance the fourth 'Esel' who had shared our former triumphs, and who ought to have been with us. Alas! he has gone the way of many good mountaineers before him. Will he ever tread the mountain side with us again, or the rocks re-echo the ring of his Alpine boot? Where were now the meat lozenges he used to bestow upon us, and live upon himself, or his share of the provisions which we always came in for at the finish? Even his occasional fits of what may be called morainal irritation were remembered with regret, as they were more than compensated for by his skilful manipulation of the 'pot au feu.'

However, 7 P.M. and a height approaching 14,000 feet were not the time and place for unavailing regrets, and we only allowed forty-five seconds for their indulgence before bolting down the well-trodden track to the St. Théodule. There was, I believe, a most brilliant sunset going on at the time, but we hardly looked at it. Our wine was all gone, and ditto the eatables; so we pushed on at racing speed, reaching the hut at 8 P.M., just as dusk was turning into dark. News had somehow reached the inhabitants that a party was still out on the Breithorn, and we were expected. The presiding genius of the gentler sex, evidently looking upon me as an object of pity, and probably thinking me half dead with fatigue, insisted upon placing me close by the stove, and occupied herself in taking off my boots and wet stockings, replacing the latter with some dry ones of her own. I let her do just as she liked—it seemed to please her, and did me no harm. I have heard her described as 'that old hag at the St. Théodule.' To me she appeared in the guise of a ministering angel, even if of a somewhat earthly nature. The damp sheets that night were delightful, and we slept soundly, undisturbed by the solitary Italian soldier who, pacing up and down the whole night, personified the imbecility of a grandmotherly government.

At six the next morning we turned out, and by nine were in Zermatt, the first person to greet us being Melchior Anderegg.

As to the expedition itself, candidly I cannot recommend it except to those who like variety before everything, and do not mind a long day in getting it. We had done very little but prove that there is one way up the Breithorn, which is eighteen hours from Zermatt.

I have more than once dilated on the merits of my guides in this room. It was a most trying day for them. At the lowest estimate from two to three thousand steps must have been cut between them, and we changed leaders fully half a dozen times. As a rule, Pollinger smokes like a furnace during an expedition, but from the time we left the Gorner Glacier to the St. Théodule he never had his pipe out; a sure sign that his energies were being fully taxed. Almer seemed to have quite recovered from his accident on the Dent d'Hérens, and I consider that it was almost entirely owing to his indomitable pluck that we took the expedition in the way, or very nearly so, that we had intended when planning it.

NEW EXPEDITIONS IN 1884—*continued.*

Monte Rosa District.

Pass near the Weisshorn (4,161 metres=13,651 feet). *August* 18. Mr. G. S. Barnes and the Rev. R. Chesshyre-Walker with Joseph Imboden and J. M. Schanton ascended the peak in 2½ hours from the Col de Tracuit by gentle snow slopes. The descent was made to the upper névé of the Bies glacier by rather steep rocks and a very steep snow slope, and occupied 3¼ hours. Randa was reached in 12 hours from the Tracuit Alp (including all halts) by way of the Biesjoch and the Bruneggjoch. The name Bieshorn might fitly be given to the peak.

IN MEMORIAM.

KARL VON SONKLAR.

General von Sonklar, for many years an Honorary Member of the Alpine Club, died at Innsbruck on the 10th of January last, in his 69th year. Born at Weisskirchen in the Banat, he was brought up in a military school, and entered the Austrian army in 1839. He first showed his literary power in pamphlets on military subjects. In 1845 his regiment was transferred from Graz to Innsbruck. There he found opportunities for exercising his natural taste for mountain exploration