But here a new difficulty arose; our boots were frozen as hard as cast-iron, and for some time by no manner of means could we get our feet into them. After infinite struggling we got under weigh, and crawled down on to the glacier, looking rather like phantoms of the men who had left the Allée Blanche some four-and-twenty hours before. But the exercise refreshed us, and we reached the Pavilion de Trélatête without any incident worth mentioning, at about seven o'clock, in a state of ravenous hunger. We had been seventeen hours without food, but some hot wine and omelettes soon revived us, and, after dozing for a few hours on the grass at the foot of the Pavilion, we walked through the underwood and the cornfields to Contamines, and so on to St. Gervais.

We were fortunately provided with a photograph of Mr. Reilly's manuscript map, and by the kindness of that gentleman I am able to append a sketch of the col, taken by him from the summit of the Aiguille de Béranger, some months previous to the excursion I have just described. He and his guide Charlet carefully studied the position from the Béranger, but concluded that the col was impassable from the great steepness of the icefall. When we joined our guides again at Chamouni, we found they entertained a modest estimate of the value of their services. The price of a guide for Mont Blanc, they said, was 100 francs; the new col was ten times harder than Mont Blanc, and consequently they expected ten times the pay. A serious discussion took place on settlement. We ultimately satisfied Balmat, but Carrier, who had been more than useless to us, refused to be comforted by any offer—consequently, as Mrs. Gamp observed, we 'did not part as I could wish, but bearin' malice in our 'arts.' This system of extortion will sooner or later work its own ruin. Two days afterwards, with a man strong enough to carry our provisions, and competent to make a third on a rope, but without guides, we again crossed the chain of Mont Blanc by the beautiful glacier of Argentière.

Ascent of the Dent Blanche. By John Finlaison, B.A.

THE idea that it might be not beyond my powers to ascend one of the few still unconquered peaks of Switzerland, first occurred to me when I was descending the Aletsch Glacier. I had just effected, under circumstances of exceptional difficulty, the passage of the Jungfrau Joch, and had ascertained that my guides, Christian Lauener and Franz Zurfluh, appeared to be capable of facing every danger, and of dragging me up any

inclination, however steep or treacherous. The chain of the Pennine Alps was now passing before my eyes from west to east in the gorge between the Æggischhorn and Aletschhorn like a beautiful diorama, and Lauener pointed out to me the Gabelhorn, Dent Blanche, and Matterhorn; '*zwei Kaisern*,' as he said, '*und ein König*,' meaning to imply that the two former never had been conquered and the latter never would be. A half-formed resolve to attempt the Gabelhorn then flitted across my mind, and I proposed it when we reached Zermatt; but it snowed incessantly for some days, and after that my guides threw such a flood of cold water upon the suggestion that I abandoned it, and on the 9th of September set out by the Col d'Hérens to Evolena, intending to undertake nothing more adventurous than the ascent of Mont Blanc.

The day was lovely, and as we descended from the Col by the gentle snow-slopes of the Ferpècle Glacier, the grand peak of the Dent Blanche stood out in relief without a cloud to hide from us its majestic outline. Seeing that my guides were inspecting its rugged sides with minute attention, I inquired the cause, and was informed that they thought they could make out a route by which it might be ascended. I knew that many excellent mountaineers had tried in vain to reach the summit, and I understood from Lauener that earlier in the year he had tried it in company with Messrs. Hornby and Philpott, but had been baffled by the state of the snow and the length of the arête, which Lauener considered to be, from this cause, impracticable. My dormant aspirations therefore revived with full force; I arranged at once to undertake the expedition, and we proceeded to discuss the proposed route. This was, to set out from the neighbouring chalets of Abricolla, advance up the glacier which runs along the south-western face of the mountain, till we should have worked our way through its intricate séracs, and then, selecting a convenient spot, climb straight up the cliffs by one of the numerous ridges of rock with which that face is fluted, until we reached the arête at some point very near the top, which would then be easily accessible.

We had, however, one grave cause for anxiety in the doubtful appearance of the sky. This circumstance made time of the greatest importance, while it unluckily happened that we had no provision of any kind for such an expedition. The hotel which once stood at Abricolla had been burnt down, and nothing remained but a few pigstyes, a filthy hovel, and the charred rafters and blackened walls of the hotel. Neither food nor covering for the night were to be had nearer than Evolena—a matter of four hours' journey from Abricolla. It would in that

case be impossible to commence the ascent on the following day, and the chance of two more fine ones seemed 'dubersome.' I made a feeble effort to persuade the guides to stop at Abricolla, but their representations of the consequences of going without dinner and sleeping without covering, awakened such a kindred chord in my own breast, that I regret to say glory kicked the beam and blankets prevailed; we took our chance of the ascent, and slept comfortably at Evolena.

At noon next day we set off, well equipped, the good people of the village blandly smiling after us and saying, 'You will never reach the top.' As we strolled up the hill towards the Abricolla chalets, we met the shepherd who tenants them, and intimated to him our intention of sharing his quarters. 'Mais certainement,' he replied, 'I will sleep in the pigstye.' We found however that the sacrifice, though ostensibly imposing, was in reality infinitesimal.

It was a glorious sunset. I think I have never beheld a more beautiful scene than that which, as I stood on the cliffs overhanging the Ferpècle Glacier at Abricolla, spread on three sides of me, and of which I will endeavour to give the reader just so much idea as is material to my narrative. As we face the SE., two glaciers rise in front of us; the nearest, which is at a higher elevation than the other, is separated from it by a fine perpendicular black cliff, over which it towers in a magnificent wall or escarpment of ice; fragments of this, from time to time breaking away, fall upon the lower glacier in massive avalanches splendid to witness—*from a distance*—and cover it with blocks of ice and stones. This lower glacier, along which lies our route, runs in a long corridor towards the SE. On its eastern side rise the tremendous cliffs of the Dent Blanche, a mountain in shape not unlike a triangular pyramid, having one of its edges much longer than the others, and running towards the SE. The NE. slope which rises out of the upper glacier, and faces the Grand Cornier, is smooth and quite unassailable, but on the SW. slopes are a long series of nearly parallel ridges of contorted rocks, with intervening couloirs of ice or frozen snow, which show the traces of frequent avalanches. On the whole this side bears a faint resemblance to a fragment of a fluted pilaster, fit for a door-post of the gates of Heaven. I gazed on its snowy peak with that feeling of admiration mixed with awe, which man cannot but feel in contemplating the mighty fastnesses where Nature still holds out, and I scanned its cliffs to see whereabouts the battle might be hardest tomorrow. Already the grim giantess was gathering her clouds and arming herself with terrors, and, not without a foreboding

that our chance of an easy victory was but small, I turned in to supper and to sleep.

Alas no! not to sleep. Had Dante ever been in a mountain chalet he would surely have given it a place with the ice in his Inferno. The nervous wakefulness induced by the anxious desire to get one's quantum of rest; the presentiment of a wet to-morrow; the fear of oversleeping oneself; the freezing in the extremities combined with stifling in the lungs; the craving to scratch one's nose, which cannot be gratified because of the herring-like way in which one is packed up with a guide on each side; even the snoring of these worthies, all combine to murder sleep. And then the fleas! Come, thou dull god, and steep my senses in forgetfulness!

Shortly after 1 o'clock we bestirred ourselves, and crawling through the little chink by courtesy denominated a door, we stood in the chilly morning air. The weather was still doubtful, and a few stars were making a fight of it with the scudding clouds. Stumbling along in the dark to a noisy little rill hard by, I made a sort of toilet, using icicles instead of soap; then, after some excitement consequent on my nearly losing my clothes down the stream, I made my way back to the chalet, and found there a good fire and breakfast. We had brought with us a supply of eggs, which we boiled. Lauener, who is a universal genius, carved me a wooden spoon, and we set to work. And here I may remark that an egg in judicious hands may serve the purpose of a barometer, for it is notorious that at a great altitude it needs to be boiled much more than the 3½ minutes known to our grandmothers, who thus, if in Switzerland, would really have to be taught how to suck eggs.

At 3.30 we started along the hillside with a lantern (an infamous method of progression), and as morning advanced, looked anxiously round to see what might be our prospects of a fine day. These were not reassuring; heavy clouds hung to windward, or sailed sluggishly over from the western hills to the Dent Blanche, where they hung lingering for a while, and then rolled unwillingly away. The east was hidden from us by the mountain, but the rising sun cast a dull red reflection on the western sky, which I could remember to have been the precursor of a terrible day on Monte Rosa. At times every pinnacle of ice was lit with rosy splendour; then the clouds rolled up again and all was obscure. I was not however despondent, for as far as my experience went, bad weather formed no invincible obstacle.

At about 4.30 we stood on the moraine at the base of the lower glacier, having skirted and left behind us on the left the

higher one. We here deposited our lantern, and halted for a few minutes while we scrutinised our enemy before commencing the battle. A very steep moraine led straight up towards the hill; beyond this a large and nearly level plateau of ice spread under the overhanging ice-wall of the first glacier, and ran for a considerable distance to the south till it united with the before-mentioned corridor, and ran up to the arête of the Dent Blanche. On the eastern side of this plateau and corridor, the Dent Blanche reared her nearly vertical walls in sullen defiance, seeming to offer along their whole range no vulnerable spot. We now addressed ourselves to our task; Lauener singing *Langsam voran, immer langsam voran,* and illustrating his meaning by stalking along *μακρὰ βιβάντα.* We mounted the moraine, and crossing the plateau of ice, wound our way among the crevasses towards the séracs of the glacier, giving a wide berth to the ice-wall aforesaid, with whose missiles the plateau was plentifully strewn, though at this hour in the morning there was but small risk on that score. Soon the ice gave place to snow, and I was warned, by finding myself sticking in the mouth of a concealed crevasse, that it was time to adopt the precaution of roping. We did so, the two guides leading and I myself bringing up the rear, and in this order reached the séracs.

These stretch completely across the glacier in a steep but short series of walls lying NE. and SW. one above the other, now rising in solid perpendicular ramparts, now broken into intricate shapes, or sometimes lying in fragments at the bottom of some huge chasm. We assaulted them in the middle, cutting our way up the walls, balancing ourselves on knife-edges of ice, tempting the frailest of snow-bridges, and not unfrequently having to beat a retreat from some intricate network of crevasses and try again. On the whole we found that though some demands were made on our steadiness of foot and eye, yet the séracs were by no means so difficult or dangerous as some of those on the Jungfrau Joch. This difficulty was overcome by 5.30, and we found ourselves at the foot of the corridor. Here we sat upon a flat rock, opened a bottle of wine, and drank each a cup. Each as he did so looked at his neighbour with a face of profound disgust, for of more execrable stuff I believe no mortal gullet ever admitted the passage.

Having thus won the barbican, we now, greatly encouraged, formed our plans for the assault on the main cliffs. The highest peak now lay behind us on the left, but the wall of rock had lost none of its steepness, nor was there any trace of a passage over a bergschrund which separated us from the hill, and ran, so

far as I could see, completely up the glacier. I have said that this face was fluted by parallel ridges of rock, separated by couloirs of ice, whose general elevation was I think steeper than that of the steep part of the Jungfrau Joch. The outline of the ridges was very varied, consisting sometimes of little plateaux, sometimes of very steep rocks, and sometimes being vertical, or even overhanging. The rocks therefore offered a very difficult climb. To ascend entirely by the couloirs, on the other hand, would be very slow and not a little dangerous, from the frequency of avalanches and showers of stones. The remaining alternative was to ascend the glacier to where it met the arête, and mount by that. This Lauener negatived on the strength of his previous attempt. We both rejected with coldness, not to say disdain, a praiseworthy but scarcely practical proposition of Zurfluh's to ascend by the nearest ridge, which appeared to be somewhat overhanging, not to mention the bergschrund. Finally we decided to push close to the hill, and avail ourselves of the first ridge which presented a reasonable access; having so concluded we set off again.

At this time our hopes of a fine day were rapidly sinking; a snowstorm was evidently coming on, and the wind was rising. On we went, however, till we reached a couloir at whose base an enormous pile of frozen snowballs gave token of a recent avalanche. This, if any, was the place by which to cross the bergschrund. We scrambled up to it among the snowballs, and cutting our way up a steep ice incline found it bridged over in a practicable though somewhat insecure manner. Quickly crossing it, we cut our way along the ice to the ridge of rocks on the left, which we skirted for a little while, using the rocks as a balustrade and keeping our feet in the snow; and when this became impossible, quitting the couloir, we commenced our scramble on the rocks. This was by far the most difficult ever attempted by me. The rocks were smooth, very steep, and covered with a thin coating of ice, which made it excessively difficult to get a footing. They were moreover very friable, and kept breaking away under our feet and hands, causing us to slip and stumble in a manner that, when we looked at the formidable inclination and the stones which we dislodged bounding away for thousands of feet, made us prefer the ice. We bore again to the left, and falling into another couloir cut our way up for some time. During the whole of this process, however, we could not but observe that a thin film of ice and snow was perpetually dancing down the surface, and singing like a large kettle in full boil. This phenomenon suggested such highly unpleasant thoughts of avalanches, that, after enduring

it for a little while, we worked our way on to the next ridge—still keeping to the left. In this way we went on for two hours, taking to the rocks and ice alternately, as in succession the material on which we were seemed to be the worst—the process being somewhat analogous to the dancing of a bear on hot plates.

At about 8 o'clock we reached a little plateau on a ridge, and contriving to sit on it, we drank another bottle of the so-called wine. Just then the snow, which had been falling in light flakes for some half-hour before, burst suddenly upon us in a storm. A hurricane of wind swept over us, blinding our eyes with snow, and hiding everything from us except the little rock on which we sat. It is in such a moment that one feels a sense of isolation that is almost terrible. Below, a tremendous precipice, seeming vaster from the fog which conceals its depth; above, a region abounding with unknown dangers; around, a sharp peak here and there emerging like a phantom from the boiling and eddying mist, and then again disappearing into obscurity. At this time my guides began to talk about going back, for they said that as we could see no trace of the route either up or down, it was probable enough that if we went on we should lose our way, and if that happened we should run no little risk of never getting back at all. I was unwilling to return after we had got so far, but I doubt whether I should have prevailed on them to go further if I had not been aided by a transient gleam of sunshine, and I had sufficient confidence in their courage and skill to feel sure that nothing short of very considerable danger would make them turn. Our short council of war, however, ended in a resolution to push on at all events for a little further. On we went accordingly, taking the precaution to build up little cairns of stones at intervals, to serve as landmarks for our descent.

We now kept almost entirely to the rocks (the heavy snow having greatly increased the chance of an avalanche), only taking to the couloirs when the rocks became impossible. On we went in impenetrable mist, not having the least idea of how near we might be to our consummation, not even feeling sure that we were approaching it at all. Suddenly the sun gleamed out again, and we saw ourselves, to our delight, not far from the arête, over which, as it ran sharply down to the south, we could even see into the valley of the Schönbuhl Glacier. On our left we could see the summit, not more than an hour's climb from us. We saw also that the rocks in front of us were very rapidly becoming impassable. We therefore turned over more to the left, and had just got on to the ice, when down came the clouds and snow again, and the hill was wrapped once more in

thick darkness. My guides, however, had taken the bearings, and we went boldly on, cheered by the knowledge that we had a fair prospect of success. The sight of the arête too had had a wonderful effect upon our spirits, and nothing more was hinted about retreat. As the arête had appeared to consist of a series of miniature Matterhorns, we still maintained our diagonal course till we reached a little cluster of rocks, where we were induced by a violent gust of wind and snow to pause once more. Once more the clouds broke away as if by magic, and we saw the summit close to us, but separated by a very steep wall of ice. Lauener now became so excited that he cut his steps with the most reckless disregard of the known laws of gravitation, and as for Zurfluh, he found a passage along some little diagonal crack in the ice, which seemed to offer a footing to nothing but an athletic fly. I believe these fellows could crawl along a ceiling, but my powers being more limited, and this being the steepest part of the ascent, I preferred to cut steps suited to such a dangerous inclination before putting my foot into them, rather than risk a slip which must have brought us all down. At last we reached the arête, which was a mere bank of snow; Lauener climbed to the edge, but quickly scuttled back again, saying that it overhung the precipice on the other side. We therefore descended a little way to some rocks, from which we worked laboriously along the side, cutting steps till we got within twenty yards of the summit. We then ventured once more on to the arête, and at 10.30 stood victorious on the topmost peak.

Lauener and Zurfluh now broke forth into portentous yells, while I gave a hearty cheer, an example which Lauener, who is not above taking a hint in anything tending to the increase of noise, soon followed. Then we sat down on the snow and drank our champagne, and then we collected stones wherewith to build a cairn that might prove us to have reached the very top. Lauener set to work to build, while Zurfluh and I furnished the stones. These we threw to him unceremoniously, for time was short and our footing precarious, but he received them with imperturbable composure on his legs, feet, or elsewhere. The summit is a long ridge of snow not two inches broad at the top, having at one end a very little flat piece where we built the cairn. I scrambled along to its northern extremity, where it descends sheer, and looked down into the valley, but could only catch an occasional glimpse downwards.

From this I was recalled by the warning voice of Zurfluh, who had reluctantly acquiesced in our building up the cairn, and allowed us time to write our names on a piece of

paper, and, putting it inside the champagne-bottle, to build it into the cairn; but as for any observations, geographical, meteorological or otherwise, he would not hear of them, but insisted on our starting at once, unless we wished to pass the next hundred years in the bowels of some avalanche, with the consolation of reflecting that we might then furnish a possible New Zealander with data for calculating the velocity of the glacier. Our zeal for science stopping short of this, we started at once, Zurfluh first devoutly crossing himself and the cairn, and saying solemnly, 'In nomine Patris et Filii et Spiritûs Sancti.' Then he took the lead, Lauener bringing up the rear, and we started down the ice-slope with great rapidity. Well was it for us now that I had improved the tracks, even the large holes I had cut were filled with snow, smaller ones would have been quite obliterated. We reached the rocks again, and now the powers of axe and rope were tested to the utmost. At one time we scrambled down by hands and feet; at another, we hooked the axe into some cranny and let ourselves down by it; sometimes two of us were lowered by the rope and the third was propped up by our axes while he descended. Sometimes Zurfluh lost his footing, sometimes Lauener, much more frequently myself, while a running accompaniment of stones which we dislodged kept clattering down upon us, and bounded away to the glacier below. We always took care, however, in the most critical places not to let more than one of us be in motion at a time, so that if he fell two were ready to support him—a precaution to which each of us owed his life a dozen times that afternoon. In this manner we clambered, slid, and tumbled down, keeping to the rocks as much as possible. The feeling of satisfied ambition which usually renders the early part at least of a descent so highly agreeable, had now given place to fatigue and irritation at what seemed to me our unnecessarily severe pace, and combined with a blow from a stone which damaged one of my legs, to damp my spirits. Besides, for many hours we had been occupied in incessant climbing and had eaten scarcely anything. I therefore hailed the opportunity of a sudden precipice which arrested our progress on the rocks, to call a halt and insist on something being produced to eat—a motion which Lauener seconded with unfeigned satisfaction, though his flow of animal spirits and immense good-nature had not been in the least affected by our headlong course. After a hurried luncheon we set off again, and further progress on the rocks being here impossible, we turned to the left and crossed a couloir of ice with a film of snow upon it. Zurfluh dashed across this, trusting to the snow to bear him up, and disregard-

ing my remonstrances. I followed, but when halfway across the snow-film broke away, I slipped down with a jerk and pulled Zurfluh after me. Fortunately Lauener had not yet left the rocks, and he supported us for a second, till, driving our axes into the ice, we recovered our footing. Shortly afterwards we reached the bergschrund, in the very spot where we had previously crossed it, an admirable example of the skill with which Zurfluh had piloted us down in the fog and blinding snow. Cautiously we made our way over the chasm, for it was of great width, and the snow-bridge was very soft and insecure. Yet we went as rapidly as we dared, for this was the most likely place for Zurfluh's hypothetical avalanche, whose immediate fall the heavy and continuous snow had rendered by no means improbable. We reached the other side without accident, and glissaded or tumbled rapidly down the snowfields in no further anxiety about our safety. We avoided, however, the broad crevasses which we had crossed in the morning, where everything was frozen, keeping under the cliff, though at some slight risk from falling stones and ice. Having quickly passed over the glacier we soon reached the moraine, every stone of which was now disintegrated and lay loose upon the ice. Tumbling wearily down these, and execrating the natural laws which produce moraines, we reached at last the solid ground, and in due course arrived at the Abricolla châlet once more.

How welcome now seemed its filthy interior! There, safe from snow, rain, and wind, we sat round the fire, drank some mulled wine, and (for the first time for more than twelve hours) ate a hearty meal and began to feel more easy in mind and body. The cold or the jolting had broken the spring of my watch, but I guessed the time of our expedition to have been between 12 and 14 hours. Nothing, however, would persuade our honest host that we had reached the top. 'I know that mountain well enough,' said he, 'and in such weather as this it is impossible.' I could only reply, 'Si monumentum quæris, circumspice' (alluding to our cairn), an observation of which I fear he did not quite catch the drift.

Early Ascents of the Orteler Spitze. By F. F. Tuckett, F.R.G.S.

THE earlier attempts to ascend the Orteler Spitze are detailed with considerable minuteness by Schaubach ('Deutsche Alpen,' B. IV. pp. 19–26), and in the second volume of the 'Mittheilungen des Oesterreichischen Alpen-Vereines,'