there are many advantages, besides the superiority of the views gained, on the side of the winter mountaineer. But it would be affectation to deny that a winter climb involves very serious drawbacks. First and foremost, an almost insuperable objection arises in the increased, the enormously increased, chance of frostbite. I am obliged, rather reluctantly, to testify to the force of this objection. Secondly, as of course you know as well as I do, the days, the time wherein you can work with safety, are in winter terribly short. If any hitch arose or any accident delayed a party, one trembles to think of the possible consequences. The rocks too, where they are bare, are of course very much glazed with ice, and this means slow progress. The huts are indescribably uncomfortable. If you think the game worth the candle you must be prepared for all this, and you must go thickly clad. '*Nudus ara, sere nudus*' may do for agriculture, but it is not a wise maxim for winter climbing. Above all, take plenty of gloves.

In conclusion, when fresh from an ascent I feel inclined to preach caution and dissuade from mountaineering in winter; but it has a charm of its own; distance of time and space throw a glamour over its difficulties and dangers; one is apt to ignore or try to forget them, and, after all I have said, I do not feel at all sure that the winter of 1891 will not see me again disregarding my own croakings and again essaying some Oberland peak.

Leaves from the Diary of the late Mr. A. T. Malkin.

1856.

Zermatt and Saas, with Reminiscences of former Visits.

August 19. *Monday.*—Visp was wonderfully knocked about by the earthquake last year; half the houses are more or less damaged, and the church is evidently the worse, but, like the Phœnix or an old coat, it is reviving—better than new. Indeed, throughout the country much improvement and activity are visible, and the click of the mason's hammer is heard everywhere. . . .

At St. Nicolas there is now a comfortable little inn . . . .

To good walkers bound down the Valais from Zermatt I recommend a lofty and laborious pass [Jung pass, about 9,843 feet], north of the great Weisshorn group, direct from St. Nicolas to Tourtemagne. The first climb up the

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mountain-side behind St. Nicolas, past a series of pilgrimage stations, is highly picturesque; higher the pass becomes very wild, with grand views, then over snow slopes, but no glacier to cross. The ascent took me near 5 hrs., and the descent to Tourtemagne about 4. It is remarkable that in the whole Turtmanthal there is (as I was told) no permanent habitation till you reach the sides of the Valais. There are summer villages, but all in the upper part of the valley; the lower part is a mere gorge, very long, very narrow, very steep, and very grandly wooded. This route is almost unknown. I walked, in 1843, in a day from Zermatt to Tourtemagne, but it is 13 hours' heavy work. Now that there is an inn it is better to sleep at St. Nicolas.

To Zermatt—4 hrs.—the valley widens and shows more of the mountains. . . . One interesting object—the hotel on the Riffelberg—is visible far down, but I was slow to make it out. Indeed, I took it for a stone; nor was the mistake a very foolish one. There is a bigger hotel at the Mattmarksee, and a stone lying hard by which is bigger than it. . . .

Zermatt, when I was there 17 years ago, was just rejoicing in the dignity of an inn—*chez* Madame Lauber, who had tacked on to her wooden house a wooden outhouse, accessible to expert and strong-headed climbers. There I made my tea in a shaving-pot, and washed my hands in a slop basin, and, as in the days of the patriarchs, had a sheep killed for my refection. Sore displeased was madame that I did not stay to eat it out, so little did she anticipate a succession of guests. But she was good-tempered and obliging, and I hope that she retains a profitable interest in the 'Hôtel Mont-Rose,' which now stands on the site of her humble tenement. There is another larger hotel, the 'Mont-Cervin,' and between them they probably make up 100 beds, which are often all full. As the valley produces nothing eatable by Englishmen except meat, dairy produce, and potatoes, everything else has to be brought on horseback from below. This should be an excuse for high prices, did they exist; but at our quarters, the 'Mont-Rose,' everything was cheap, and good, and comfortable, as far as the exigencies of a limited establishment would allow. The service is performed by women—one of them a very pretty girl from Sion—and that with a grace and courtesy which should reconcile anyone to such tardiness or slight deficiencies as may occur. The small inn on the Riffelberg is an annex of this hotel.

August 20.—By making a détour of half an hour we all

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visited the foot of the Gorner Glacier on our way to the Schwarzsee. It is a singular and beautiful spot; the ice is advancing, so there is no waste and ruined ground; trees, turf, and ice are in immediate contact. . . .

We had not mounted far above the St. Théodule road when rain drove us home . . . and I lost the opportunity of refreshing my recollection of the difficult pass across the Col d'Hérens and the great Zmutt Glacier, by which I crossed from Evolena to Zermatt in 1843. Travellers should descend from the Schwarzsee on that side, so as to return by the Zmutt ravine, which is unsurpassable in its kind.

August 21.—Clear and bright; ascended the Riffelberg and went on to the Gornergrat, the middle portion of that subordinate chain of hills which, springing out of the great sea of ice between Monte Rosa, the Weissthor, and the Saasgrat, divides the Gorner and the Findelen Glaciers. Ladies can ride nearly to the top, 2 hrs. beyond the Riffel hotel. An hour farther of pretty hard and rough walking is a higher point, the Hochthäligrat, probably near 10,000 feet above the sea. . . . The two views are substantially the same; the Hochthäligrat nevertheless commands the grander and more perfect panorama; and it is one unequalled in its kind. . . . it is a perfect specimen of a view, not over, but in, the mountains. There is no valley visible, and no distance; the circular sweep of the main chain from the Cima di Jazi to the Cervin, the lateral chain thence to St. Nicolas, and the Saasgrat form a complete enclosure of snowy peaks from 13,000 to 15,000 feet high. We slept on the Riffel, intending to reach the Cima di Jazi next day. Weather prevented us, but I may recommend the excursion as involving little difficulty beyond fatigue. The view towards Italy is of extraordinary sublimity, and for a point exceeding 13,000 feet in height [according to the Swiss map it is 12,527 feet, and according to the Italian 12,300] it is singularly easy of access. This I know, having formerly made the excursion from the Findelen chalets, before the Riffel hotel was built [in 1854].

August 22.—At 9.45 A. and I set out for the St. Théodule, and in 20 min. reached and descended the rocks to the Gorner Glacier. . . . Crossing the trough of the glacier, which lies in large and beautiful waves of pure ice, we mounted the opposite slope towards a chain of rocks which here maintains the glacier descending from the St. Théodule, at a much higher level than that which we were on, which descends from the Little Cervin, and after a good stiff climb

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entered for the first time upon the névé. New snow fallen in the night rendered it laborious; otherwise the upper part of the route presents no difficulties; formerly I had ascended with horses and ladies from Zermatt. . . .

Mr. Wills, in his charming volume of Alpine adventure ['Wanderings among the High Alps,' pp. 210–213], tells a touching story of an old man whose great aim in life was to build a little hospice on this his favourite pass. He had got together some money, and was travelling to collect subscriptions, when he disappeared—murdered, it is supposed, for his little treasure. Some one, more fortunate, has accomplished his wish, for here, on the top, 11,000 feet high, is a snug little stone cabin with a stove, not the less welcome to me for the recollection that 17 years before, when I accompanied the first two ladies (as I believe) who ever mounted the St. Théodule,* they had to sit on a rock and eat a cold luncheon on a day not much warmer than this. As we had no view to Italy we kept comfortably by the stove. There is no water within many hundred feet perpendicular; if you want any you scoop a saucepanful of snow and set it on the stove to melt. I suppose there must be a man in the establishment, but we saw only two lasses from the Val Tournanche; they sang merrily with our guides, and more merrily as we passed round a jug of hot kirsch and water, which seemed to be received with an enthusiasm like that of the young Chinese who discovered roast pig, described by Elia. Backward as these valleys are, surely it was not left for me, A.D. 1856, to introduce toddy! in that case I deserve to be deified as the Caledonian Bacchus. After an hour's stay we all returned together to Zermatt in 2 hrs. 45 min.—very fast. While we were yet in the wilderness the sun broke through a rift in the dense clouds, with a singular and beautiful effect; it was a sepia landscape, touched with gold.

August 23.—Short day to St. Nicolas. Met there and warmly greeted by Victor Tairraz, now one of the best guides of Chamounix, with whom Paccard and I last passed this way.

August 24.—Short day to Saas. . . . Note half-way a

* [Herr C. M. Engelhardt—the chief frequenter of Zermatt in the thirties and the forties—gives a detailed account of an excursion to the St. Théodule from Zermatt and back which he made with his wife and her sister on July 28, 1836 (see his *Naturschilderungen*, pp. 228–243). But Mr. Malkin's ladies were undoubtedly the first English ladies to reach the pass.]

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superb group of two or three old larches, which grow out of the precipice between the road and the river; their position has saved them from the axe. They bear the same relation to the larch of our plantings, despised of Wordsworth, that a Scotch fir on Icklingham Heath bears to a Braemar pine. . . . Pass a large church, which, however, is not the church of Saas; there is a solidity and sumptuousness of internal decoration, and superfluity of number, in the churches of this sequestered valley which testifies both to the piety and wealth of its inhabitants.

There are now two inns—the old one, formerly kept by Moritz Zurbrücken, and a handsome, new, unfinished hotel built by a company. I believe there is some community of interest between the two houses.*

August 25. *Sunday.*—A glorious morning, and a great concourse of people at Mass, well dressed and well-looking; the women's caps were gorgeous, and the music and singing very good. We sat outside the church, which was crowded, for a long time, looking and listening. Afterwards I walked to the little valley of Fee, distant half an hour, a lateral glen recessed in the Saasgrat; it is another half-hour, or rather more, to the foot of the glacier, beyond the village. There is not a lovelier spot in Switzerland—emerald meadows set in frosted silver; for the valley is almost encircled by a brilliant amphitheatre of glaciers descending from the Alphubel- and the Mischabelhörner, which rival Monte Rosa itself in height. Returning, I varied the way by a steeper and more picturesque descent; it leads past a series of pilgrimage stations.

August 26.—In the afternoon we all went up the valley to a new-built [1856] hotel at the head of the Mattmarksee. To Almagell the ground is level and the scenery cheerful; higher it grows ever wilder up to the Allalin Glacier, which, like the Brenva, crosses and blocks up the valley, and rising high against the opposite hill, which has to be scaled, by an excessively steep and bad path. Our Visp attendants and horses had never been so far up, and were considerably disgusted. . . . Nothing can be drearier than the head of the valley. The inn is cold, half-furnished, and incomplete; but it is a privilege to have an inn in such a place.

Our purpose was double in quitting the fleshpots of Saas for the howling wilderness of the Mattmarksee. L. and A.

* [See Mr. Wills's humorous account of this community of interest, 'Wanderings among the High Alps,' 1st edition, p. 119.]

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were bent on a great exploit—the ascent of the Strahlhorn, a mountain point at the southern end of the Saasgrat, above 13,000 feet high [13,751 feet according to the Swiss map], commanding one of the finest views in the Alps. . . . Besides Christian we took for the Strahlhorn the Saas innkeeper, Andenmatten, a first-rate guide, and his brother; but they only arrived in the night, having been engaged all day in climbing with the curé and a party of English a peak called the Fletschhorn, between Saas and the Simplon. [This was Mr. Ames's ascent of the Laquinhorn (see 'Peaks, Passes, and Glaciers,' 1st series, pp. 209–221).]

August 27.—At starting we rounded the head of the lake, passed the chalet where Mr. Wills slept before he crossed Col Imseng, as he has named ['Wanderings,' p. 157] what seems usually to be called the Adler Pass, and followed his route first up a very steep buttress of the mountain, then along a precipitous path high above the Schwarzenberg Glacier. We then turned up a steep stony slope towards the north, at the top of which we should have overlooked the upper basin of the Allalin Glacier and commenced the glacier work of the day; and we were already among the lower snow patches when the guides, who for some time had been ill-disposed to proceed, insisted on going no farther. We had started before sunrise in a lovely morning, but mists soon began to creep up the valley, and gradually rose and increased so as to preclude all hope of a successful ascent. Having done one half, and that perhaps the most laborious, certainly the least interesting, and reached a height of perhaps 10,000 feet, we had to return, and before we reached the bottom our mist converted itself into a drizzle, and we got cold and damp to our cold, damp inn. . . . The weather being very unpromising, we faint-heartedly returned to Saas in the afternoon.

August 28.—A most brilliant morning, suitable above all others for the Strahlhorn.

By advice of the curé A. and I started for a point called the Latelhorn [10,526 feet according to the Swiss map, 10,480 according to the Italian], as yet unknown to travellers. At Almagell we began to ascend the hillside towards a lateral valley, the Furggthal, through which a mule path formerly led to Val d'Antrona, below Domo d'Ossola. The highest chalets are 45 min. above Almagell, at the entrance of the Furggthal, which is bare, dull, and uninhabited. From these to the foot of the glacier is about 1½ hr., pretty level. At the moraine we began to ascend rapidly, crossing and recrossing

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the ruined zigzags of the former mule road, one of those early passages, formerly maintained with much cost and labour, for commercial intercourse with Italy. There was a similar road over the Moro, which has also fallen into decay, but the Saas people talk of re-establishing it. Nothing but a practicable mule road to Macugnaga is needed to make the Saas valley one of the most attractive in the Alps.

After reaching the level of the glacier we kept northwards, not on the ice, but over gently inclined snow-beds, to the rocky ridge of the Alps, and looked down into the depths of the Val d'Antrona. The mountain-side is so nearly a precipice that but for the evidence of the old paved road it is difficult to conceive that mules can ever have passed this way. We continued mounting along the crags to the foot of the horn, which was our destination, and this, perhaps 200 feet in height, is the only part of the excursion which approaches to difficulty; but the rocks are sound and good and there is no danger.

In climbing up there is not much view; your back is turned on Monte Rosa, and your attention is likely to be engaged in the choice of hand- and foot-hold; not to say that there is a natural tendency to keep away from the side which commands the view and at the same time drops 4,000 feet into Antrona. So it came to pass that I saw but little until I reached the narrow summit, and then I literally screamed. From the Simplon to the Ortler Spitz, in the distant Tyrol, every peak in the Alps was in clear and distinct view. Close to us on the north the Weissmies hid the high points over Saas and the Bernese Alps, and the Monte Leone the nearer and lower portions of the Valaisan chain. Next came the heights of the Gries, the Grimsel, and St. Gothard; behind them ridges which we could not identify, but conclude to be the heights of Uri, Glarus, and the Grisons. Eastward the serrated chain of pale blue hills and snowy peaks swept round, enclosing a nearer but indistinct and shadowy mass, consisting of the inferior mountains which divide the valleys of the Italian lakes, above which rose, brilliant and clear in the sunshine, two great glacier groups, those of the Bernina and Ortler Spitz. To the south shadow and darkness on the horizon. I believe the rugged chain between Antrona and Anzasca conceals more distant objects in that direction, but the eye rests not there, but sweeps westward to Monte Rosa, the many-crested, the Weissthor, Cima di Jazi, Strahlhorn,

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Rympfischhorn, and all the horns of the magnificent Saasgrat, which in their turn disappear behind the nearer ridges of the Weissmies. Such is the horizon. The middle view is filled up by the desolate Furggthal to the west, to the east by the broad, deep glen of Antrona, less sterile, and relieved by a blue mountain pool. Far away, a long straight stretch of the Simplon road, a village, and a glittering reach of the river Tosa; no part of the Lago Maggiore is visible. I have tried to fix the impressions and preserve the details of this wonderful view while fresh in my memory; but it is hardly credible to those who do not know it by experience how imperfectly, even with an hour's earnest attention, the observing powers take in and retain the features of so vast a scene. The day was almost perfect—bright, calm, and warm. We lay for an hour in the nooks of the stones, for the top of the horn is only just large enough to hold four or five people comfortably. This and the Strahlhorn (which must command substantially the same view) are to the Eastern what the Mont Vélan is to the Western Alps; he who has ascended both has seen, in two views, the entire chain from Mont Pelvoux, in Dauphiné, to the Ortler Spitz, which appear to be distant from each other about 250 miles in a straight line, and much more, following the sinuosities of the mountains.

Exclusive of stoppages our ascent took 4½ hours of moderate walking, the return to Saas rather more than 3. I know no point so commanding that can be reached so easily; the height probably does not exceed 10,000 feet, and horses can go at least to the foot of the moraine, which is within 1½ hour of the top.

One cannot but observe the peculiarity of the names of the district—Almagell and Zumécran [? =Zermeiggern] of villages; Allalin, Alphubel, Mischabel of mountains. The Moro itself gives some colour to the notion that there was in early times a Saracen settlement in the valley.* On the following day I was obliged to return to the Lower Valais, leaving much unseen. The adjoining valley of Almagell appears to be more picturesque than the Furggthal; there is a pass [two; Portien Pass and Mittel Pass] through it to Antrona, the descent of which looks extremely steep and difficult; and another to Gondo by the Zwischbergen Pass, which, as seen from the Simplon road, promises scenery of the grandest character. North of the Fletschhorn there is another

* [See *Alpine Journal*, vol. ix. pp. 208–213, 277–285; vol. x. p. 274.]

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route to the village of Simplon, also, I believe, of much interest [Rothhorn Pass or Rossbodenjoch]. In short, the environs of Saas are little inferior in interest to those of Zermatt, and may be most strongly recommended to the leisurely pedestrian.

Ascent of Mont Vélan.

Two or three days after my return to Bex from Saas M. [Gottlieb] Studer, the distinguished savant of Berne, arrived, on his way home from a tour in the Savoyard and Piedmontese Alps. He mentioned the view from the Mont Vélan as one of extraordinary magnificence, and in such terms as made me greatly desire to ascend the mountain. [See his narrative of his ascent of August 30, 1856, in 'Berg- und Gletscherfahrten,' first series, pp. 65–105.] Unluckily a fall of snow took place, followed by cloudy weather, which put a stop to all excursions among the high mountains, and on Tuesday, September 9, after a day of heavy rain, M. and I set out to cross the Simplon, sleeping that night at Martigny. The evening turned out so fine, and so like settled weather, that I could not resist the temptation of engaging a Chamounix guide, named Edward Tournier, and walked up the Entremont valley the next morning.

Each of the four great glens which lie on the S. side of the Valais—the Val d'Entremont, the Eringerthal, the Einfischthal, and the Vispthal—forks into two large and principal branches, divided by a spur (itself a mountain chain of considerable extent) projecting northwards from the Pennine Alps. I do not know whether geologists have found anything to notice in this; it appears remarkable that this similarity of structure should prevail over so large a tract. On the Italian side there is nothing like it, nor, indeed, as I believe, throughout Switzerland, Savoy, and Piedmont.

September 10.—Our way lay up the western branch of Val d'Entremont; the eastern, called the Val de Bagnes, is long, dull, and very little visited. It contains, however, two practicable passes across the main chain in the Valpelline. The Col de Fenêtre, 9,213 feet in height [9,226 feet according to the Italian and 9,141 according to the Swiss map], though two glaciers have to be crossed before reaching it, is not itself, properly speaking, a glacier pass. The other, called by M. Studer, in his excellent map of the S. side of the Valais, Col des Crêtes Sèches, crosses the great glacier

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of Chermontane [Otemma or Hautemma], and, as I conjecture, is of great height, great interest, and some difficulty; but I never saw any account of it, nor conversed with anyone who had crossed it. [Mr. Malkin crossed it himself in 1860. Its height is 9,505 feet according to the Italian map and 9,476 according to the Swiss.] There are also glacier passes into the Val d'Hérémence [the Col du Mont Rouge and the Col de Seilon], the western portion of the grand Eringerthal. The Mont Combin, the giant of this portion of the chain (14,200 feet high) [it is 14,164 feet according to the Swiss map], is said to have been ascended—this year, for the first time—by two Englishmen, guided by two chamois hunters of the valley, named Felley. This I read in a Lausanne newspaper. [The report was erroneous, for on August 18, 1856, Messrs. W. and C. E. Mathews did not reach any point of the Grand Combin proper, but the lower summit to the north, called the Combin de Corbassière, 12,211 feet (see 'Peaks, Passes, and Glaciers,' first series, pp. 91–6).] It is also said that a hotel has been established at Chables (proprietor, Perrodin), and it is probable that, notwithstanding the reported dulness of the lower part of the valley, many of the hardier class of pedestrians may be henceforth attracted into this seldom-visited region.

The junctions of the Val de Bagnes at St. Branchier and Val Ferret at Orsières are the most striking portions of the route to the St. Bernard; it is inferior in interest to most passes. At Liddes, 1½ hr. above Orsières, there is good hotel accommodation; at St. Pierre, 1 hr. higher, there is also a hotel, but rougher; still 1 hr. higher is the Cantine, a house of refuge, where a family is maintained by the Government throughout the year, situated in the Plan de Prou [Proz], a sterile mountain basin. This is the last dwelling: it is still 2 hrs. below the Hospice, and about 6,400 English feet above the sea [5,909 feet according to the Swiss map]. Rough as it looks it gave me coffee, a good bed, and in the morning excellent chocolate, which is a good breakfast before hard work. Here and elsewhere the sérac, which is something between curd and cheese, may be advantageously taken instead of butter, which is almost always bad.

De Saussure says ['Voyages dans les Alpes,' vol. ii. p. 474] that in the early times of Alpine exploration, in 1779 [August 31], the Mont Vélan was ascended 'avec des peines, et à travers des dangers difficiles à imaginer,' by M. Murith, a scientific monk of the St. Bernard. [See M. Murith's original account in Bourrit's 'Description des

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Alpes Pennines,' 1781, vol. i. pp. 81–93.] This seems to have been forgotten; at least according to the traditions of the Cantine the mountain was supposed to be inaccessible until the present landlord discovered a practical way about the year 1825, since which he himself or his sons have acted as guides in every ascent. The father is now aged; he made six ascents; the elder son has made five, mine being, according to his statement, the 11th that has been accomplished. He was born and has always lived on the spot, is a keen chamois hunter, and for several years performed, winter and summer, the daily service of the post between the Cantine and the Hospice. The other son has also ascended, and would no doubt be an efficient guide; it is, however, the elder who takes the lead, and no better need be desired. Familiar with every kind of mountain difficulty, good-tempered and obliging, he had a helping hand always ready, and materially lessened to me the heavy labour of the ascent. Twenty francs is the sum demanded for the day's work, and compared with the Chamounix tariff it may be called reasonable. He was reluctant to go without a third guide, but consented on the assurance that I was accustomed to glacier excursions. His mother was more strongly opposed to our going without two guides of the country, and intimated that Tournier's two or three ascents of Mont Blanc were no qualification for Mont Vélan. However we overruled the opposition, which was probably dictated by maternal care more for the pecuniary interests of her second than for the neck of her eldest son. Two guides ought to be enough, for the principal difficulty is on rocks, where more than two can rarely be of any use.

The name of the family is Dorsot [Dorsaz]; the son's Christian name is, I believe, André, but 'le fils de la Cantine' is the appellation under which he seems to be best known. The promise of settled weather, which tempted me from Martigny, was not kept. Wednesday afternoon became suspicious before we reached St. Pierre, and the night was not encouraging. However we started on the morning of Thursday, September 11, at 3.15, after a good chocolate breakfast, by the path to the St. Bernard, which we soon left to strike across the pastures to a path leading up to a chalet on the Montagne de Prou. As the night was dark and more than an hour elapsed before twilight began, our progress at first over the stony pastures was slow. Above the chalets the ascent became steeper and more direct until, passing under a bluff rock which forms the summit of the Mon-

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tagne de Prou, we traversed nearly on a level a large rocky corrie and then mounted by zigzags the shoulder of the hill, retracing to the south our course, which had been northerly from the time we quitted the plain. This part of the ascent is rendered easier by traverses cut by the old Cantine-keeper to enable mules to ascend, but the path has not yet been made practicable below, so that the labour is wasted. By this time it was light, for 2 hrs. had been occupied in ascending leisurely. Quitting the pastures we traversed a stony slope to a slight depression which separates the rocky top of the Montagne de Prou from the Vélan, and passed at once into a new scene, a deep and sterile basin filled by a glacier which descends towards the plain of Prou. Filing eastward along the precipitous hill-side, we reached the edge of this glacier, near its upper end, in 3 hrs. from the Cantine.

Until we reached the little col just mentioned the way had been tolerably dull; the view was not very fine to the north, while the Montagne de Prou hid all the south and west. But at the col a wonderful view burst upon us, wonderful even encumbered with clouds, as it was that morning. The whole Chamounix chain was seen in profile, the Aiguille d'Argentière and Aiguille Verte most prominent to the north and east. More distant, and above everything except Mont Blanc, the Grandes Jorasses stood up, a pyramid of black rock, beautifully set in the snowy background of Mont Blanc itself, which rose still higher behind and to the left; while the mass of the Dôme du Gouté stood out over nearer objects on the right. The Piedmontese mountains were in mist. A single tall silver peak rose in view, which Dorsot called the Mont Iséran, but which I conjecture from its form to have been either the Chaffe Quarre [Mont Pourri] or Aiguille de la Vanoise [Grande Casse]. Deep in front lay the glacier, encircled at its head by a mural precipice, which is the Mont Vélan itself, and bounded on the side opposite to us by a ridge of rocks, which is the crest of the Alps, the boundary between Switzerland and Italy. In that direction a short cut might be found towards Etroubles and Aosta; the height of the col most probably exceeds 9,000 feet [Col de Mouleina or d'Annibal, 9,859 feet]. Three couloirs of snow streak the black wall of the Mont Vélan; but these are too steep to be ascended, unless by the tedious process of cutting steps, after which, indeed, there might probably be impassable obstacles in the rocks and glacier above. Our way lay straight across the glacier to the foot of the farthest

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couloir, then up the rocks between it and the ridge of the Alps. Dorsot asked me, as we entered on the glacier, how long we should be in crossing it. I said a quarter of an hour. He laughed, and answered that it would be more like an hour, and so it proved; so easily may an eye, not unpractised, be deceived in distance where surrounding objects are at once so simple and so vast. The slope is easy, and the glacier only moderately crevassed and free from snow; so that no difficulty occurred till we reached the *Bergschrund*, as the German-Swiss name the dividing crevasse which almost invariably occurs between the ice on a steep mountain-side above and the comparatively level glacier below, and which often presents considerable difficulty, especially to the descending traveller. Here it was broad and deep, but choked at the foot of the couloir by old avalanches, so that we passed quite easily. But the friendly avalanche, once we were over, turned into an enemy; it was a mixed mass of stones, earth, and snow, steep and smooth, and at this hour frozen as hard as a brick. Neither the foot nor the *bâton* could make impressions, and even the axe would scarcely touch it; so freely was slaty rubbish intermingled with the snow that to cut a staircase was hardly possible. How Dorsot got up I don't know, but he did; it must have been by something like the naval operation of hanging on by the eyelids. The distance was something like 100 to 150 feet, double the length of our rope; beyond were rocks with good foothold. He stopped halfway, sent down the rope, and pulled up first me and then Tournier, after which he went on to the rocks and repeated the operation. From this point to the top of the rocky wall was 2 hours' hard climbing, winding gradually round to the Italian precipice, along the edge of which the crags are easiest of ascent. About halfway is a small point of overhanging rock, giving something like shelter, which Dorsot calls Aiguille du Déjeuner. Here we stopped 15 min. and refreshed accordingly. Before quitting the ice below Dorsot had carefully fitted us with strong gaiters, to keep out the fresh snow; an attention, I may observe, which I never received from any other guide; in truth, especially earlier in the year, it is rarely necessary. In spite of this, however, Tournier suffered much from the cold; his feet had been partially frozen in a recent ascent of Mont Blanc, and were still very tender, so that he gladly availed himself of the halt to put on a second pair of thick socks, which I had brought in case of need. This may help to show that the ascent of the Chamounix lion is rather

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different from the walk along Cheapside, to which people who have not been up have compared it; in truth, after forty, though they may be tempted by the pay, the guides are not anxious to undertake it, not from fear of danger, but on account of the fatigue.

Shortly after resuming our route there was a hog's back to cross, resembling, except in length, the celebrated *mauvais pas* on the Weissthor—on one side the precipice into Italy; on the other the glacier, many hundred feet below, and not more than room to set foot on the top of the ridge. Here, however, the length, as far as I recollect, does not exceed 20 to 30 yards, and the fresh snow was serviceable; in ascending the rocks it had added much to the difficulty and fatigue. Dorsot, always careful, threw the rope round me as we crossed, and my head stood it well. The rest of the ascent presented no special feature; it was stage after stage of almost perpendicular rock to climb, or be pulled up by the guide's *bâton*; for Dorsot went first, and as he got a good resting-place above stretched down his pole for me to catch hold by. And in truth I made free use of it; for I was thoroughly blown, long before we got to the top of the rocks at 10 A.M. Here is the 'bureau,' a small rock projecting out of the snow, where we left our names in a bottle. The top of the mountain is a plain of snow, somewhat saddle-shaped; we took 20 min. in crossing it, very leisurely, to the highest point, which is at some distance to the east. M. Plantamour, the astronomer of Geneva, ascended a year ago, and determined the height at 3764·3 mètres, equal to 12,339 English feet—a greater elevation than is assigned, trigonometrically, to it by De Saussure.*

Unfortunately the clouds, never down on the mountain so as to impede our progress, were so thick as to shut out all distant views in the latter part of the ascent and during our stay on the summit. To the E., separated only by a narrow valley, rose the Mont Combin, a dark mass, streaked with snow and partially veiled with cloud; no glacier of any size was visible on his sides. To his right the Pennine chain, as far as Monte Rosa, should have been seen; but this, and the adjacent mountain ridges and plains of Piedmont, were lost in vapour. Below us, to the N.E., a brilliant and extensive glacier, which we were to descend, swept down from our feet; its rock-fringed edge

* [According to the Swiss map it is 12,353 feet, while the Italian map makes it 12,294 feet.]

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cut sharp against the pastures of Val d'Ollomont, which, with the lower part of the Valpelline, were visible nigh 10,000 feet below. Westward the lake and white Hospice of St. Bernard glittered in sunshine, between the dark Mont Mort and the Pointe de Dronaz. To the N. we saw only the mountains on the other side of Prou, of no great height or beauty, which divide the valley to St. Pierre from the Val Ferret. A small instalment this of a view which should have extended from Mont Pelvoux, in Dauphiné, the monarch of the French Alps, to Monte Rosa, and from the Apennines to the Jura. In fact it is the complement of the view from the Latelhorn, near Saas, which I had seen a fortnight before, in perfection. That extended from the Ortler Spitz to Monte Rosa, this from Monte Rosa to Mont Pelvoux and Monte Viso. M. Studer, who ascended ten days before me, on a perfectly clear day, stayed four hours on the top, and made a panoramic view of the entire horizon, which I had the pleasure of seeing at Bex. It is to be desired that it should be engraved and added to the number of published Alpine panoramas. [This wish expressed by Mr. Malkin does not seem to have been fulfilled, so far as we can ascertain.] It was a great feat for a man advanced in life; for the wind, Dorsot said, blew strong from the N. and it was bitterly cold.

As we had it pretty cold also, and our case was hopeless, we only stayed 20 minutes; a drift of hail came on and the guides were fidgety. Our descent was to be by the Valsorey, opposite to the side by which we mounted. The first three-quarters of an hour, like the ascent, was still on the sharp backbone of the Alps, between the glacier and the precipice, the ice being always nearly on a level with the edge of the rocks. So close to the precipice and so steep was our way that a case of eye-preservers which I had lent Tournier, falling out of his breast pocket as he craned over an ugly bit, took a journey into Val d'Ollomont, far beyond recovery. A thousand feet, perhaps, below the summit, having passed the first great fall of the glacier, which sweeps, steep, smooth, and glittering, from the mountain-top, we left the rocks, traversed obliquely up a slope of snow inclining towards Italy, and having crossed the ridge struck downwards diagonally across a glacier, which for purity and grandeur of feature is not surpassed by any which it has been my good fortune to see. Our descent was rapid and easy, the névé only moderately crevassed and in good walking order; the direction transverse, to reach the

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opposite bank a little higher than the second great icefall. At first we had below us, on the right, between the Vélan and Combin, two beautiful sugar-loaf hills, white and sparkling as sugar, about the bases of which a practicable pass, as I conjecture, might be found from St. Pierre to Val d'Ollomont.* On the opposite side, towards which our course lay, the glacier is enclosed by a lofty shoulder of the Vélan, a mural precipice crested by pure ice cleft into huge cubical masses, in the manner they call at Chamounix *en sérac*. A more magnificent object I have hardly seen.

This stage of the glacier occupied 1½ hour, without difficulty, except that just before reaching the rocks we had to cut steps for a short distance along a rapid slope of hard ice. Dorsot had intimated that there was a *mauvais pas* here; it did not seem much after what we had done. However the descent of the rocks parallel to the icefall, from the second to the lowest basin of the glacier, is very steep and long, and the footing shaly, slippery, and rotten—very bad to ascend. But there are no precipices, and it is only needful not to slip and go down with an undue velocity.

I believe it took near half an hour, during which I was often glad to get hold of Dorsot, who maintained his perpendicularity with a steadiness which, I regret to say, I was far from equalling. We then had the usual slight difficulty in returning to the glacier, and found ourselves below the névé and with a good hour's walk still before us on the solid ice. This was easy and pleasant, the footing good and the crevasses rarely too large to leap. In the lower part of the glacier there is a remarkable reservoir, visited and described by De Saussure† under the name of Gouille à Vassu. It fills in the winter, and usually discharges its contents through fissures in the ice about the beginning of July. When this takes place suddenly and rapidly much damage is sometimes done by inundation, the contents being calculated at more than 18,000,000 cubic French feet. M. Bourrit speaks‡ of the extraordinary beauty and extent of the ice galleries at the foot of the glacier, produced, probably, by these rushes of water. I had not, however, heard of these phenomena; and, in truth, the day's work was sufficient without long deviations. Half a mile or

* [This is probably the Col de Valsorey, crossed on July 14, 1866, by Messrs. C. E. Mathews and Reilly (see *Alpine Journal*, vol. ii. p. 364).]

† [*Voyages dans les Alpes*, vol. ii. p. 466.]

‡ [*Nouvelle Description des Glacières*, vol. iii. pp. 284, 285.]

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more above the foot of the glacier we crossed the moraine, and after 9 hours on ice and rock stepped gladly on a beautiful green knoll. Rounding this, we stood above a precipice, through a couloir of which a rough steep staircase, rather than path, connects the upper and lower pastures, and soon reached the first chalet. From it there is a good view of the foot of the glacier, which is of great height, and too steep to be descended.

Another hour of rapid descent brought us to St. Pierre. The footpath is good, the scenery not particularly striking. In places the course of the river is grand, and near St. Pierre there is a fine waterfall, visible from the path.

Our excursion had occupied 13¼ hrs., of which about 1¼ hr. was spent in meals and on the summit. Dorsot's estimate was 5 hrs. to ascend and 3½ to return to the Cantine, exclusive of stoppages. The descent by Valsorey is much longer; it is also much more interesting, except that it does not command the distant view; in truth, though the ice-fields of Chamounix, Monte Rosa, and the Oberland are much larger, I have never traversed any glacier where the objects are better disposed for picturesque effect. We were obliged to go slow in the first 1½ hr. of darkness, and for the last 2½ hrs. the fresh snow added much to the fatigue; between the steepness and the elevation I was pumped out long before I got to the top. But that kind of exhaustion soon goes off. We arrived fresh and merry at St. Pierre, and after swearing eternal friendship with Dorsot over a couple of bottles of bad wine Tournier resumed my knapsack, which, to save fatigue, had been sent down from the Cantine by a child, and we walked briskly for another league to Liddes, where we found comfortable quarters at the 'Hôtel de l'Union,' well pleased with our day's work—I because, though the view had failed, the scenery was magnificent and the excursion something of a feat for an elderly gentleman; Tournier because no Chamounix guide had ever been up the Vélan; he thought it important enough to obtain a certificate of his having made the ascent. He said more than once, after we were down, that, except as to fatigue, he would rather go up Mont Blanc, but then his theory, like many Chamouniards', is that you can come to no harm on the ice. Dorsot, like the Saas men, had a decided preference for the rocks. I believe Tournier, if ever he goes up again, would rather stick to the steep snow slopes all the way from the summit than redescend that first 1,000 feet of arête, as to which I entirely disagree

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with him. To those who are not equal to the ascent of Mont Vélan the Valsorey glacier offers a very charming day's excursion; the adventurous may take local counsel and try for a new route to Aosta. Either Liddes or St. Pierre furnishes accommodation; the latter, though inferior, should be good enough for pedestrians. I heard that there was *one* guide there *up* to the Vélan, but as his name also was Dorsot I am in doubt whether the 'fils de la Cantine' be not the person meant. Of the hundreds who pass to and from St. Bernard probably nothing like one per cent. visit the Valsorey, which, except for the dogs, is infinitely more interesting. Between Liddes and the Val de Bagnes the mountains are entirely undescribed, at least in English books; they are very lofty, abound in glaciers, and can hardly fail to contain very interesting excursions.

ALPINE NOTES.

ALPINE RAILWAYS.—We take the following from the *St. Moritz Post*:—

'Now that the railway from Landquart to Davos is on the eve of completion, the promoters are concentrating their attention on the extension of the railway to the Engadine. To connect Landquart with Chiavenna by railway, via Davos, Samaden, and Maloja, has always been part of the scheme, which, as a whole, is to cost 43,000,000 frs., or nearly $1\frac{3}{4}$ millions sterling.

'There are, of course, as in all mountain railways, certain natural difficulties to be overcome. In the present instance the Scaletta Pass has to be pierced by a tunnel five miles long, and the blocking of the line from snow or avalanches has to be avoided. The first, we presume, is more a question of money than of engineering difficulty. On the second point the engineers, who have surveyed the proposed route, assert that, with snow-galleries and sheds and a sufficient rolling-stock of snow-ploughs, the line is perfectly feasible. We understand the present position to be that the company find a difficulty in accepting the conditions insisted on by some of the Engadine Communes through whose territory part of the line must pass.'

'Long life and stiff necks to the Engadine Communes,' most mountain-lovers will say.

We further learn that the Swiss Federal Council have granted the concession for the Jungfrau Railway to the engineer who built that up the Pilatus. He proposes pneumatic tubes, by which he intends to blow seventy persons to the top in *fifteen minutes* from Lauterbrunnen.

THE DOM FROM THE KIEN GLACIER.—In the account of the meeting on March 4 I am made to say, in reference to this route, that 'under certain conditions the rocks above the Kien Glacier would be found impracticable.'

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