

occupied by the ascent, and six hours from the top to Vor Auen.

Of course, Herr Webber came to greet us as we traversed his meadow, and seemed perfectly prepared to sympathise with us at our failure of getting to the summit. Indeed, the idea that we could not possibly have got up seemed so fixed in his mind that for a long time he would not believe that we had reached the top. At last he did, or said he did, for I have my doubts as to the perfection of his faith, and then and not till then did we leave him and enter the house to feed.

THE MISCHABEL-JOCH. By COUTTS TROTTER, M. A.

OF all the previously little known mountain masses which have been explored during the last few years by English and Swiss mountaineers, there are few, if any, more interesting than the remarkable spur of the Pennine Alps which, under the name of Saas-grat, stretches from Monte Rosa to the Balferinhorn, separates the valley of Saas from that of St. Nicholas, and finally dies away at Stalden. It was long reckoned almost, if not quite, impassable, at any rate between the Balferinhorn and Monte Rosa. Forbes was told of only one passage, apparently identical with that modification of the New Weissthor, by which it is possible to descend by the Schwarzberg Glacier to Distel Alp and Mattmarksee. The Allelin Pass and the Adlerjoch or Col Imseng were however soon afterwards discovered, the latter by the well-known Curé of Saas; they were crossed by Mr. Wills in 1852 and 1853 respectively, in company with Herr Imseng, and first described in his 'Wanderings among the High Alps,' in 1856. These passes, especially the latter, became rapidly popular: but though the Strahlhorn, Allelinhorn, Rympfischhorn, and Dom were all ascended, nothing further was done in the way of exploring passes till 1861, when Mr. Stephen crossed the ridge over the summit of the Allelinhorn, and afterwards ascending the Alphubel explored both sides of the Alphubel-joch lying between the latter mountain and the Allelinhorn. The real pass, however, was not actually crossed till the following year, though it now bids fair to become the most popular of them all. Another passage, still further to the northward, forms the subject of the present paper, while on the very day of the expedition here described Mr. Ll. Davies followed up his former victory over the Dom, by a most

successful ascent of the scarcely less imposing summit of the Täschhorn.

While passing the Alphubel-joch in the summer of 1861, it had struck me that it might be possible to cross from Saas to Zermatt by a new and still more direct passage to the north of the Alphubel, between the latter mountain and the Täschhorn. Finding ourselves last summer at the hotel on the *Æggischhorn*, and wishing to reach Zermatt from thence, we determined to go to Saas, and, at any rate, take a look at the eastern side of the supposed col. We accordingly left Stalden on the morning of Wednesday, July 29, the party consisting of my brother and myself, and our old guide Peter Bohren. On arriving at Saas, our first enquiry was for Franz Andermatten, who had accompanied me over the Adler in 1860, and the Alphubel-joch in 1861; we were, however, told that he was away from home, so we strolled up the slopes which rise on the east immediately above the village, and soon got high enough to look over the ridge which hides the valley of Fée and the central mass of the Saas-grat from one standing in the village itself. The glaciers up which our route lay looked formidably steep and crevassed, and it was with no small anxiety that we took out our telescopes and sat down to reconnoitre.

Right in front was the magnificent basin of the Fée glacier, divided in its lower portion into two parts by the Fée Gletscher Alp. Immediately above this rose the rounded summit of the Alphubel, from which stretched to the south the long and nearly level ridge which connects it with the Allelinhorn, and over the northern extremity of which lies the Alphubel-joch. To the north was a somewhat more lofty col, connecting the Alphubel with the steep rocky wall which forms the eastern side of the Mischabelhörner, the ridge ascending steeply and at a nearly uniform angle to the sharp peak of the southern summit or Täschhorn. Our route obviously lay up the Gletscher Alp, over the rocks called *Langenfluh*, which form its upper portion, and thence, instead of inclining to the left, and rising gradually to the Alphubel-joch, turned to the right, and ascended more steeply to the col north of the Alphubel. The seracs in this direction looked very unpromising, but a large patch of rocks protruding from the snow was pronounced by Peter, after a careful survey, to be probably practicable. This would bring us above the worst seracs, and from this point it was evidently possible to wind among the crevasses to the bottom of a rather formidable-looking *bergschrund*, above which was a steep slope leading to the col. On the whole, the Saas

side of the pass seemed decidedly practicable, though by no means easy. Of the Zermatt side we knew nothing, except from my very vague recollections of its general appearance from the lower part of the Täsch valley. We determined, however, to make the attempt, and returned to our dinner at Saas. The Rev. W. S. Thomason, who had been travelling with us, had been unwell for two or three days, and remained at Stalden, fearing to be obliged to go to Zermatt by the valley; however, in the afternoon we were delighted to see him arrive ready for work. With him came Mr. George, accompanied by Christian Almer, of Grindelwald. He had intended to cross the Alphubel-joch, but was easily induced by the prospect of a new pass to join our party. We had had some thoughts of leaving Saas in the evening, to sleep at the châteaux on the Gletscher Alp, but the beautiful day had ended in a stormy evening, and we went to bed in great fear as to what might be the intentions of the weather. However, the storm passed by, and we started after the usual delays, at 4 A.M. on a perfectly cloudless morning. We were eight in all, as we had engaged two men in Saas to come with us—one as guide, the other as porter. We were not favourably impressed by their looks, and suspected, as we afterwards found, that they were of no use except in the latter capacity, the professed guide being decidedly the worst of the two. However, with two such guides as Peter and Christian, we cared little who were our other men.

We took the usual path through the village of Fée to the Gletscher Alp, and after a short halt at the châteaux mounted the steep track which leads to the top of it, turning round every now and then to admire the wonderful view of the noble cliffs of the Mischabelhörner on our right, and the grand masses of the Fletschhörner and Weissmies behind us on the other side of the valley of Saas. We crossed the rocks of the Langenfluh at the usual point, and reached the snow about 7.30. After a short halt to put on our masks and spectacles, we walked for some distance along gentle slopes. We had hitherto kept to the track of the Alphubel-joch, but now bore away more to the right, the glacier becoming steeper and more crevassed, till we reached the patch of rocks which we had seen the day before from Saas. We had obviously to get on to these, but it was more easily said than done. The rocks sloped steeply and smoothly down to a projecting angle, below which they retreated, leaving a sort of cornice overhanging the glacier. The space below this had been filled up with snow, which had, however, partially melted, so as to leave a narrow and insecure-looking ridge immediately under

the projecting angle, separated from the rock by a wide and deep chasm. Peter trampled down the top of the ridge, and fixed himself as securely as he could, while Christian, standing on his shoulders, managed to scramble on to the upper slope of the rocks, and after a few struggles gained a comparatively secure footing above. It was of course much easier for the others to follow, aided by the rope; and last of all Peter was drawn up to the rest of the party. The rocks were steep, and in places unpleasantly smooth, but firm, and on the whole not particularly difficult, so that about 9.30 we reached the top of them, and, finding water trickling under the snow, sat down to attack the provisions in our knapsacks before beginning the final snow-climb. From this point the view was of exceeding grandeur; the cliffs of the Täschhorn and Dom, now close at hand, looked more imposing than ever. We examined them carefully, in order to see whether it appeared possible to climb the at that time unascended Täschhorn from the east side, and came to the conclusion that it was probably not impossible, though the climb would doubtless be very long and very steep.* We were now above the most broken portion of the glacier, but found the use of our reconnaissance of the day before, which enabled us to choose the best direction among the still somewhat intricate maze of crevasses, and so to reach without difficulty the point we had before noticed just below the col. The bergschrund did not detain us long, and we were soon clinging to the steep ice-slope above it. I measured the slope a few feet above the bergschrund, and found it 58° ; we had about 180 steps to cut, mostly in very hard snow, scarcely to be distinguished from ice. This was rather slow work, but we reached the top about 12.30. We were evidently above the Alphubel-joch (12,575). I got a boiling point observation, which by comparison with Zermatt in the evening, gave a height of 12,850 feet; judging from the appearance of the Alphubel, which rose immediately on our left, I do not think it can have been much lower; so that it ranks probably next after the Sesia-joch, Lys-joch, and Zwillinge-joch in height. Just before reaching the top, we had a glorious view of the Bernese chain. The most conspicuous summits were the Finsteraarhorn, the Schreckhorn, and Aletschhorn. From the col we saw a magnificent sea of peaks and glaciers to the east, from the Fletschhörner and Weissmies on the opposite side of the valley to the distant mountains of the Tyrol. Further south, stretching

* The eastern side of the Mischabelhörner could never be climbed, unless when the rocks were denuded of snow, which very seldom happens.—Ed.

away to the far-off horizon, came the blue hills and plains of Italy, seen to-day to rare perfection, varied here and there by faint grey mists, and dotted over with numberless towns and villages. We could not identify any of these, but a large stretch of the Lago Maggiore was plainly seen. We looked for Milan, but could not make it out; it was most likely hidden by the shoulder of the Alphubel. We found ourselves, as we had expected, at the head of the small glacier (marked, though not named, by Studer, but called, I believe, Weingarten Glacier in the new sheet 23 of the Federal map) which fills the head of a small lateral valley lying between the Täschhorn and a shoulder of the Alphubel, and opening into the Täsch valley near its lower end. On one side rose the steep and jagged rocky arête leading to the Täschhorn, on the other the snow arête of the Alphubel. In front were the Matterhorn and Dent d'Erin, the Monte Rosa chain on the one hand, and the Weisshorn on the other appearing a little further on as we descended.

Our course evidently lay over the above-mentioned small glacier, which sloped gradually for a short distance, after which it became steeper, so that we could see but little of what lay between us and the Täsch valley far below. After a halt at the top we proceeded down the glacier. We found at first no difficulty, but before long came upon a great crevasse stretching almost completely across the glacier. To turn it would have obliged us to go back some distance and make a long détour; luckily, however, some twelve or fourteen feet below the edge was a rather wide projecting ledge, while on the other side was a similar one, not too far off for a jump or long step. To this Peter scrambled, held by the rope, cutting foot holes in the névé wall, and sticking in at intervals a number of our alpenstocks and axes into the snow. Holding on to these, and supported by Christian with the rope, we all descended, crossed to the other ledge, and followed Peter up the opposite wall by means of a similar ladder of steps and axe handles. Lastly, Christian followed, cautiously gathering up the sticks as he came. We crossed several more crevasses in various ways, but as they became more and more numerous we took for a time to the rocks on our right, down which we scrambled a short distance. Soon, however, these in their turn became awkward, and we determined to go back to the glacier, which was now a regular icefall. Christian detached himself from the rope and led the way, axe in hand, through the maze of séracs, cutting his way now down to the bottom of a crevasse, now round the sloping base of a threatening pinnacle. The labyrinth of crevasses seemed even more intricate than that of the Col du

Géant, though the whole was on a smaller scale. Christian, however, led us beautifully through its intricacies, leading us down without a single check, and seeming as much at home as on the most familiar glacier, though this one had probably never before been traversed by any human being. Once clear of the icefall, which occupied us for upwards of an hour, our difficulties were over, and we descended rapidly over moraines and stony slopes to the point where the valley we had been following opened out into the lower end of the Täsch valley. Hence we had only to follow the path round the shoulder, and to descend to the regular Zermatt road. George and Thomason pushed on, while I followed rather more leisurely with my brother, who was feeling the effects of an old sprain. We arrived at Zermatt shortly after seven, after one of the most magnificent days I have ever spent among the mountains. The pass is, I think, the grandest of all those which traverse the Saas-grat. The views are of course very similar to those from the Alphubel-joch, but the new route passes closer to the grand wall of the Mischabelhörner, and the icefall adds much to the interest of the descent. It is even more direct than the latter pass, but will probably always take longer time from its somewhat greater height, the steepness of the last part of the ascent from Saas, and the difficulties of the glacier on the other side. There is less extent of snow field to be traversed, which might make it less fatiguing when the snow is very deep. Under these circumstances, however, the final slope would probably be a serious obstacle, and the icefall perhaps dangerous. We thought it would have been possible to descend by the rocks on our right, had the seracs proved impracticable; they would, however, have been certainly very troublesome.

A few words in conclusion on the name to be given to the pass. The analogy of the Alphubel-joch and of many other new passes, both in the Monte Rosa and Oberland districts, would point to Täsch-joch, but the Allelin pass, which traverses the whole length of the Täsch glacier (which the new route does not even touch), is sometimes called Täsch Pass, and there is, I think, no objection to the adoption of the name of the mountain mass, instead of that of the nearest single peak, so as to call it the Mischabel-joch. The only other possible claimant for this name would be the exceedingly elevated notch between the Täschhorn and Dom; but though this may possibly be crossed by some active mountaineer in search of a novelty, it can hardly become a popular pass, and should it ever require a name may be called the Dom-joch.