

the only district where a large number of porters can now be obtained fairly easily is in Darjeeling, whereas heretofore the Darjeeling districts were looked upon as distinctly difficult country in which to arrange transport.

Now that mountain game has become more rare, and, as longer journeys in more and more out-of-the-way places have to be taken to obtain the finest trophies, it is hoped that greater attention will be paid to the *pleasurable* part of mountain travel and mountain exploration, quite an unexpected amount of which still remains to be accomplished within easy reach of the plains of India. I think we may safely leave the encouragement of the enjoyable side of Himalayan mountain sport in the hands of the Himalayan Club and to the ambitious members of the Alpine and other clubs who are still ever ready to aim at the conquest of the great giants as well. In other words: these clubs will undertake further campaigns in the Himalaya, and no warning of mine, however pessimistic, will I hope ever check them.

Yet another contrast. A danger to transport, although overcome without great difficulty, is the influence of the different supernatural inhabitants. Hindu races fill the snow with gods; the woods and streams with demons, devils, ghosts known as *pichās*, *Bhuts* *Masān*, *Mūtkāthā*, and so on: the Tibetans with every sort of demon, who when annoyed bring pestilence, calamity, and storm. But in the Karakoram and Hindu Kush fairies take the place of those more fearsome inhabitants, and although few of the fairies are good fairies, most of them are of unpleasant habits. Lastly, from East to West, the 'Jangli' or forest man is common property, and he is a nasty fellow too, whether he lives in Kashmir or in Sikkim. Let us leave him to his mountains!

A NEW ASCENT OF PIZ BERNINA AND OTHER CLIMBS
IN 1930.

BY T. GRAHAM BROWN.

(Read before the Alpine Club, December 8, 1930.)

OBSTACLES and disappointments were not wanting in the season of 1930. My first plan was to climb for three weeks alone with Alexander Graven before joining Herr Alfred Zürcher

and Joseph Knubel on July 27 ; but when Zürcher proposed a temporary meeting before that date, and an attack on the N.E. face of Piz Roseg, his proposal fitted very neatly with one of my own projects. In 1929 Graven had suggested that we should try a new route together—the W. face of Piz Bernina. Zürcher's proposal would let us kill two birds with one stone, and we were therefore to meet in Pontresina at the end of my first week, but here the season got to work. Bad weather made us postpone the meeting for a week, then again to our original date. Even the postponement of that for another eight days did not appease the weather ; for when we did meet at last on August 4, it had almost a free hand for another fortnight. But at the end of that time the climate was properly discomfited ; virtue was rewarded and the conventional happy ending was attained.

I would that time permitted me to describe the climbs of that preliminary month more fully ; for we made our three or four expeditions a week, and if we were sometimes compelled to try the smaller peaks, many of these were as unfrequented as all were delightful. Some of the climbs will stand out in memory like peaks out of mist ; but for our present purposes they must represent only the obstacles, the brambles of the story. They were, indeed, not without their thorns, as in seven out of our thirteen expeditions in that month we encountered hail or falling snow.

A ZERMATT DIARY.¹

Monday, *July 7*, we went up to the Trift inn.

July 8. Traverse of WELLENKUPPE and OBER GABELHORN with descent to Zermatt by the Arben Glacier. The ascent of Ober Gabelhorn occupied 6 hours of climbing time, and the snow was in such excellent condition that we decided to attempt the *Viereselgrat* of Dent Blanche as our second climb.

July 9. A fine day but a cloudy night. Walked to Schönbühl hut.

July 10. Traverse of DENT BLANCHE by *Viereselgrat* from Col de Zinal with descent by Wandfluh. The ascent took 9 hours of actual climbing, and this was the first ascent of the mountain by any route during the present season. Snow

¹ At the request of the Editor, a short account of the climbs we made in Zermatt is given here. These were mentioned more briefly when the paper was read.

arêtes were at once met low down on the ridge, and we must have traversed 20 or 30 of them. Many had a double cornice—due in some cases (but not in all) to snow-fields having avalanched from under the crest on the un-corniched side. The good conditions on Ober Gabelhorn had misled us, for the snow was too soft on the upper part of the ridge. A sudden hailstorm (light) caught us near the top and kept in action, on and off, until we were safely on the glacier. Graven and I both consider this to be the most difficult ascent we have ever made together.

July 11. Rain. Abandoned project to return to Schönbühl hut for Dent d'Hérens or Z'mutt arête of Matterhorn.

July 12. New snow lying below Riffelalp. Ascended Gorner Glacier icefall from Zermatt and climbed RIFFELHORN by 'Matterhorn Couloir,' in which we met some ice and new snow.

July 13. Raining in morning and afternoon, and very cold. Abandoned project to walk up to Z'Fluhalp. This was our only mistake. Had we gone up, we should have got our climb next day.

July 14. Very cold, — 2° (C.) at Zermatt in morning, cloudy in afternoon. Went to Z'Fluhalp.

July 15. Raining in early morning. Abandoned project of a longer climb and set out for traverse of *Schwarzengrat*. Reached summit of FLUHHORN in light hail. Proceeded for 45 minutes along the *Grat*, when the increasing severity of the snowstorm forced us to abandon the attempt. Descended to Z'Fluhalp again. Afternoon fine!

July 16. Traverse of ADLERHORN and STRAHLHORN to Adlerpass, and thence to Britannia hut. The good going to the summit of Strahlhorn, which we reached, over Adlerhorn, 5 hours after leaving Z'Fluhalp, suggested to us there that we might traverse Allalinhorn and Alphubel also, but deep and very soft snow on the E. side of the pass made us abandon this project, as we probably would not have been able to descend Alphubel by the *Rothengrat*, which I was anxious to do. The afternoon was cloudy.

July 17. Clouds low in morning and start postponed until 04.45, when we set out for the traverse of ALLALINPASS—and anything else that might be possible. Light hail began to fall during the ascent and it was very cold on the pass, so we went straight on. The hail changed to sleet lower down, and then to drizzle. Neither of us knew the pass, and, as there were no tracks, its passage in the mist was interesting. We arrived back in Zermatt at 10.30.

July 18. Heavy rain in morning and showers in afternoon. Abandoned proposal to go to Schönbühl hut for Dent d'Hérens, or Z'mutt arête of Matterhorn, and decided to climb Unter Gabelhorn from Zermatt next day if possible.

July 19. Ascended UNTER GABELHORN by S.E. ridge *via* 'Hühnerknubel'—traversing all points. The most laborious expedition we made; in heavy mist, and very relaxing weather—although light snow was falling on first part of climb. So lazy were we that we both slept several times during the ascent. A fine, sunny afternoon.

July 20. Cloudy and damp. Walked up to Tæschr Alp.

July 21. Ascent of ALPHUBEL by *Rothengrat* and traverse over FEEKOPF and ALLALINHORN to Allalinpass, whence returned to Zermatt. The ascent of the *Rothengrat* of Alphubel, which neither of us knew, took 7 hours from Tæschr Alp and is one of the most enjoyable rock climbs in the Zermatt district—far too little known. Its standard is high, and it would make a fine guideless ascent. Charles Warren later on climbed it, guideless, on my suggestion and liked it. On the rocks, a traverse must be made to the right. This we took too low, and lost time. But our line proved to be an interesting one. Much new snow was met with on traverse of Feekopf. We were caught by cloud on the ascent of Allalinhorn from the Feejoch, and descended to Allalinpass in a very cold W. wind and hail. We there abandoned a project to traverse Rimpfischhorn, and descended by Tæschr Alp to Zermatt. The whole expedition, a fine one, occupied a few minutes more than 14 hours from and to Tæschr Alp.

July 22. A good day, but cloudy in evening. Went to Bétemps hut for what might betide.

July 23. Decided to climb JÄGERHORN and traverse all points on the *Weissgrat* to CIMA DI JAZZI. Although there is hardly any real climbing on this expedition (save at the top of Jägerhorn and a little on the easy S.W. arête of Cima di Jazzi), it may serve as a typical one for uncertain weather. The expedition itself is quite a long one (it took us 10½ hours in all—Bétemps hut to Gornergrat), but descent may be made safely from almost any point should the weather become too bad. We were in and out of mist the whole time after we had left Jägerhorn, and the magnificent glimpses we had have decided me to repeat the expedition in fine weather. Snow began to fall shortly after we had left Cima di Jazzi, and the subsequent direction-keeping was an interesting exercise.

July 24. Rain off and on all day. Abandoned project of

going to Schönbühl hut. Our original plans had, of course, long been given up ; and when searching for alternatives (such as the Alphubel-Allalinhorn traverse), we found that we had climbed together the majority of the points on the watershed of the Vispthal up from St. Niklaus on both sides. It became an interesting game to plan our smaller expeditions so that they would fill the unclimbed gaps. The Jägerhorn-Cima di Jazzi traverse was one of these.

July 25. A fine day. Walked to Schönbühl hut for Z'mutt arête—or a traverse of Pointe de Zinal and Mont Durand. Powder snow on former, so resolved on latter.

July 26. Ascended POINTE DE ZINAL by S. arête ; descended to Col Durand ; thence to MONT DURAND, and traversed over point 3678 m. to HOHWÄNGHORN ; descended by Arben Glacier. A fine day, upon which a bigger expedition might have been made—but not a more delightful one. The Pointe de Zinal by the S. arête over the ' Weisse Fluh ' is interesting if all the points are taken direct (we found a good deal of new snow). It is said that a fall of rock a few years ago has deepened the gap on the E. side of the ' Fluh.' The ascent of Mont Durand from the col was up bare ice. There is a patch of interesting rock on the traverse thence to point 3678 m., and we found the subsequent descent down rock and new snow to the unnamed col W. of the Hohwänghorn quite exciting. This is another good and safe expedition for uncertain weather. It occupied 14 hours—hut to Zermatt—of a fine and sunny day.

July 27. A fine morning. Walked to Schönbühl hut for Z'mutt arête. Weather doubtful in evening.

July 28. Heavy cloud at 01.00 when we got up with intention of going at least as far as the snow arête. Wind (W.) increased greatly by 01.30. Abandoned project and resolved to start for Tête Blanche and Tête de Valpelline at 05.00. Heavy rain began to fall before that, and we resolved to stay until afternoon in case a good climb might be possible to-morrow. Rain continued, and the new snow began to avalanche. Walked down to Zermatt in rain. This was the only occasion upon which we had to descend without a climb of some sort. As fate was obviously opposed to our ascent of the Z'mutt arête, I resolved during our dismal retreat not to climb the Matterhorn until Graven and I had climbed all the other points on the Vispthal watershed above St. Niklaus.

July 29. A fine morning with a strong W. wind blowing the new snow off the tops. Walked up to Schönbühl hut for



Photo, T. G. Brown.

DENT d'HÉRENS, W.N.W. face.

("Tiefenmatten" arête to right; right-hand route taken by 1930 party;
straight track that of a party who roped down over ice wall.)



Photo, T. G. Brown.

PIZ ROSEG, N.E. face, from Pizzo Bianco.

Dent d'Hérens—or Tête Blanche and Tête de Valpelline. Afternoon clouded over.

July 30. Ascent of DENT D'HÉRENS by a [?] new variation of W.N.W. face, and descent by same route. When nearly at the top of the séracs on the ordinary route up the W.N.W. face, we were stopped by an unclimbable crevasse and ice-wall. We descended again and traversed N.E. into a steep ice couloir lying between the séracs and the Tiefenmatten arête of the mountain. From the top of this couloir—which is perhaps 570–660 ft. in height—we gained the face above the séracs and ice-cliffs. The couloir is very steep in its middle part, and its ascent is considerably more difficult than the ordinary route (practically the whole of which—as far as the top of the séracs—we had ascended before we were turned back), but it affords a line of ascent which will probably be found possible in *any* year. The ascent took $6\frac{3}{4}$ hours from the hut, but we were delayed continuously by having to help another party. The descent of the couloir was particularly trying, as the other party required much assistance. The weather was fine all day, but the morning was a very cold one.

July 31. A fine day. Went to Bétemps hut with intention of traversing Nordend and Dufourspitze to Margherita hut next day, and Lyskamm on the following.

August 1. Ascent of NORDEND and traverse of DUFOURSPITZE (etc.) and ZUMSTEINSPITZE to Margherita hut on SIGNALKUPPE—reached in 7 hrs. 25 mins. actual climbing. A fine day, but a bitterly cold W. wind on Nordend and Silbersattel. From the latter (after returning from Nordend), a slightly ascending traverse took us on to the rocks of the summit-ridge below the easternmost point (and out of the wind). The ridge was then ascended and followed over its various points to Dufourspitze, whence a return was made to Grenzgipfel. A wonderful low cloud-sea lay over Italy, but the weather seemed to be settled. On reaching the Margherita hut we made plans for next day and predicted times.

August 2. Traverse of Monte Rosa Frontier Ridge from SIGNALKUPPE to POLLUX; thence to Breithornpass and ascent of BREITHORN (4171 m.) and KLEIN MATTERHORN; thence to Theodul Inn and traverse of THEODULHORN, FURGGHORN, and Furgggrat, as far as Breuiljoch; whence a descent was made to the Furgg Glacier, and Zermatt reached *via* the Schwarzsee. Wonderful cloud-sea views were obtained during the traverses of PARROTSPITZE and LUDWIGSHÖHE. We found the condition of the snow to be remarkably good in the earlier part of

the expedition, and a quick traverse of LYSKAMM (2 hrs. 50 mins. including 30 mins. halts—Lysjoch to Felikjoch) was due to that and not to any intentional haste. CASTOR was reached, by steady walking, at least 2 hrs. earlier than our predicted time. Castor was descended by a line down the W. face considerably S. of the N.W. (frontier) ridge. POLLUX was climbed up the W. face by a possibly undescribed route which meets the summit-ridge about midway between the S.W. end of the ridge and the summit. This afforded a rapid line of ascent. The descent by the S.W. arête took us down some pleasant rock. The snow was very soft between Schwarzthor and Breithornpass. Cloud caught us on the ascent of BREITHORN, and we spent some time in searching for our sacks on the descent. KLEIN MATTERHORN was also ascended in mist, but the weather cleared when we were at the inn on the Theodulpass. Snow began to fall when we had reached FURGGHORN over THEODULHORN, and a cold wind began to blow. A sudden thunderstorm caught us on Furgggrat, and we had to leave our axes until it blew over—the ridge being repeatedly struck near at hand. After the storm had passed, we continued in mist and falling snow which turned to rain on the glacier and continued until we reached Zermatt. The day's work had occupied 16 hrs. 50 mins., of which halts accounted for $2\frac{1}{4}$ hrs.

So ended our month of probation. These falling snows and hail were but the prescribed tests. Yet the sun shone on us more often than not, and such weather has this advantage, that the effects of cloud and mist and sun add a beauty to the mountains not seen on cloudless days.

PONTRESINA.

The proposed excursion to the Upper Engadine for Piz Roseg had originally been planned to come at the end of our first week at Zermatt. Bad weather caused it to be postponed three times, the latest arrangement being that we were to meet Zürcher and Knubel in Pontresina on the evening of August 4; this was duly carried out. Next morning, August 5, was showery, and we went up to the Diavolezza inn in the afternoon. Rain began to fall heavily on our way up. Zürcher and Knubel, who wisely carried capes, went on, but Graven and I had to take shelter under a rock until the rain turned first into sleet and then into snow, when we continued on our way, reaching the inn none too dry.

On August 6 we traversed PIZ PALÜ and the BELLAVISTA by the ordinary routes in soft new snow. Mist came down on us when we had reached the S.W. point of Bellavista, and we had to abandon our plan to climb Piz Zupô as well. We therefore returned over the two middle points of Bellavista, and descended by the Morteratsch Glacier.

Rain fell all next morning, and the new snow was lying low down; on August 8 rain fell all day, while on August 9 light rain fell in showers, but the weather looked more promising. So we went up next day to the Coaz hut in good weather, and on August 11 traversed the Sella group of summits. Leaving the hut at 4.50 A.M., we reached the summit of IL CHAPÜTSCHIN and then traversed LA MUONGIA, point 3382 m.,² PIZ GLÜSCHAI, and the first point (3587 m.) of LA SELLA, to the second point (3566 m.), which we reached about midday. We then descended by the Roseg Glacier, reascended to the Coaz hut and finally reached Pontresina. The climb had been in cloud, but was graced by magnificent although transient views through shifting mists. We varied the usual procedure by ascending the W. peak (3587 m.) of La Sella direct up its W. face, by which we reached the N. arête a few metres N. of the summit. Miss Ursula Corning and the Pollingers accompanied us as far as La Muongia, and a guideless couple as far as Il Chapütschin; but one of the latter must have had a kind heart, for (as I learned afterwards) he took Graven aside before the climb and offered his assistance in the event of Graven being unable to get me up Il Chapütschin (!) without aid. Graven and I have had our only difference of opinion about this expedition. He says that our furthest summit was Ils Dschimels, while I say La Sella. In spite of the fact that he knows the district well and that I may have been blinded by the mist, I still feel that it is safer to keep to the more conservative estimate.

Next day, Tuesday, August 12, it rained again. The three idle days of last week had felt like ruin and disaster after our time at Zermatt, and I resolved at all costs to sleep the following night at the Tschierva hut. So Graven and I set off in the morning of the 13th, Zürcher and Knubel arranging to follow us in the afternoon. We had our luncheon at the Roseg Restaurant (a dangerous delay) and were caught by the beginning of a snowstorm when ascending thence to the hut, which we reached in a very wet state. But I was soon to forget

² Pizzo Cappuccino.—*Editor.*

that and to be thankful only that we had reached the hut that afternoon at all, for a woman there needed such rusty medical aid as I am still able to give. When I saw my patient (there were really two, and one had arrived into the world that forenoon!) it was clear that she needed assistance upon the spot, and that Alpine huts are not yet equipped for such emergencies. Arrangements had been made to carry her down upon a stretcher when the snow stopped; but that would have had a rapid and fatal result, so I sent down a message to Dr. Campell, of Pontresina, who came up through the storm with the necessary aids in extraordinarily fast time. All ended happily, and the woman's life was saved. We carried her down on a stretcher.

The storm had passed and it was a beautiful night when we made our trip down and up the moraine again.

Zürcher and Knubel came up early next morning from the Roseg Restaurant, where the storm had caught them and they had wisely decided to spend the night. New snow was lying far down the moraine, and we decided to ascend the N.E. branch of the Tschierva Glacier and examine the W. face of Piz Bernina and the 'ice-nose' of Piz Scerscen. This we did. On arriving close under the W. face of Bernina, it was at once evident that it could be climbed as far as the foot of the summit rocks if snow and ice conditions were good. The rocks themselves looked rather formidable and as if they might stop us. The rock-rib descending from the summit seemed to overhang in its upper part, but it looked to me as if this might be turned on the left (N.) side. As a matter of fact, the rocks were found later on to be easier than they look. We had just enough time to examine also the 'ice-nose' of Piz Scerscen, very high and steep this year, but apparently feasible; this accomplished, snow began to fall again. So we returned to the hut. During this expedition we four roped up in a single party—for the first time in three years during which we have climbed together.

The snow was still falling that evening, but the sun came out in the afternoon of Friday, and we watched the chamois, which had come far down. Snow fell again on Saturday, August 16, and we all returned to Pontresina.

Two climbs and a mild exploration in a fortnight filled otherwise with rain and snow had not been a very stimulating experience. Next morning was a brilliant one—a N. wind and a cloudless sky! Zürcher stayed on with me, and we enjoyed together a fortnight crowded with as interesting climbing as good fortune has yet put in my way. That same

day we went up again to the Tschierva hut; Christian Grass, the 'young' Grass of Wainewright's ascent of 1880 and the last survivor of that victory, came up with us, as did Miss Corning with the Pollingers.

Sunday evening at the Tschierva hut was a happy one. We had three expeditions in view—the N.E. face of Piz Roseg, Piz Scerscen by the 'ice-nose,' and the W. face of Piz Bernina. Our exploration on August 14 had shown us that the ice-slope of Piz Bernina was climbable, but there was still some doubt about the terminal rocks. As Piz Roseg was not yet in condition, decision wavered between the remaining two. Zürcher, who loves a classical climb above all things, favoured Piz Scerscen, but my own preference was for the adventure of Piz Bernina. We were still undecided; much must depend upon what was actually to be seen from the foot of the face next morning.

The sunset glow had now long disappeared, but suddenly there was an increase in the livid light on Scerscen and Bernina. At this moment occurred a great fall of ice from Scerscen on to the upper glacier which we had to cross. A cloud filled the glacier-bay for a few minutes, and then the mountains were quiet.

THE FIRST ASCENT OF PIZ BERNINA DIRECT FROM THE TSCHIERVA GLACIER.

The W. face of Piz Bernina may be described as lying between two steep couloirs—one on the S. falling from the Bernina-Scerscen gap³ to the upper Tschierva Glacier, and one on the N. descending from the *Berninascharte*. The lower part of the face between these couloirs is filled by the great ice-cliff. Above that there are three less formidable cliffs, the uppermost of which is the continuation to the N. of a crevasse which stretches far across the face. Above that again is another long crevasse; the steep uppermost ice-slope reaches up to the foot of the comb of rock forming the summit-ridge of the mountain. Our plan was to ascend what is, in effect, the couloir to the N. until we could turn to our right and gain the face above the lower ice-cliff; then to go along S. until we were immediately under the summit, and ascend to that in a direct line.

This fine face rises abruptly from the Tschierva Glacier for

³ The Fuorcla Scerscen-Bernina of the *Climbers' Guide* and C.A.I. *Guida*.—*Editor*.

about 2200–2500 ft., almost exactly the same height as is the N.E. face of Piz Roseg which we were to climb later in the week. It is impossible to refrain from comparing these two faces. They consist of great slopes of ice. Both of them are steep, but our own impression of the greater steepness of the Bernina face appears to be confirmed by the Siegfried map, where the difference is as much as 10° in favour (or should I say ‘disfavour’?) of Bernina, or an *average* angle of about 55° for Bernina as against 45° for Roseg. Each ice-slope is relatively smooth and unbroken at the top, but rocks protrude in the lower parts of each face, while above the rocks there is a great precipice of ice, the top of which forms a shelf relatively less steep than the rest of the ice-wall. The upper parts of the faces are accessible only through limited gaps in their respective ice-cliffs—but here the comparison stops. As you ascend, the W. face of Bernina becomes progressively steeper, while the abruptness of the N.E. face of Roseg appears to ease a little from bottom to top, but not very much. Piz Roseg stands grandly alone, flaunting its N.E. face openly. Piz Bernina tucks its W. face so coyly away that it is not easy to obtain a full view of it from any *near* point, although such a view may be had from the base of the ‘ice-nose’ of Piz Scerscen, and would perhaps be seen best of all from Piz Umor. But the chief point of difference between the two is one in favour of Bernina. Its great ice-wall does not end at the crest of the mountain (as does the ice of the N.E. face of Piz Roseg), but bears upon its upper edge the black hem of a comb of rock—rock which is very steep although not very high. So steep is the precipice that at first sight it looks as if this rock-rampart might prove inaccessible immediately under the summit.

Here I would like to make a short digression before touching upon the climbing history of this face. The days of bad weather at Pontresina had this compensation, that they enabled the photograph shops to be ransacked. I amused myself by collecting as many different views as possible of the Tschierva Glacier basin as seen from Fuorcla Surlej and Piz Corvatsch—and in trying to ascertain the years in which they had been taken. In this I was sufficiently successful to make it seem probable that great changes are occurring on the faces of Pizzi Bernina, Scerscen and Roseg. Details naturally vary from year to year, and there appear to be longer cycles of accumulations and dissipations of the ice; but it seems upon the whole as if the ice carried upon these faces is gradually diminishing, and as if they were becoming steeper and more formidable

than fifty years ago. Photographs taken about the time of Wainewright's climb in 1880 seem to show a W. face of Piz Bernina apparently less steep, certainly less broken, than is that face to-day. As the years pass, waves of accumulated ice pass down ; so that sometimes the upper face and sometimes the lower seems to carry the greater burthen. Such at any rate is the impression given by very limited data, and I would like to suggest that the discovery of the ice-history of the great Alpine faces might be an interesting game for winter months—if only all photographs had been dated !

An interesting climbing history attaches to the W. face of Piz Bernina. Cordier and Middlemore ascended the *Biancogrät* as far as Pizzo Bianco for the first time in 1876. It is incredible, but true, that this party considered the traverse thence to Piz Bernina to be impossible—although they had made the first ascent of the Aiguille Verte from the Argentière Glacier less than a fortnight before, and, in the intervening days, had made the first recorded conquest of Les Courtes and a new route up Les Droites. Middlemore thought, however, that an ascent of Piz Bernina from the Tschierva Glacier was not impossible : ‘ an attempt straight up on the west face would have some likelihood of success ’ ; but added the recommendation that in any case guides and travellers should be bachelors ! (‘ A.J.’ 8, 198–200.)

The attempt was made four years later, and its history provides a fascinating little problem. In 1880 Professor B. Minnigerode conceived the idea of attacking this face. His guide was Alois Pinggera, and Dr. and Frau Tauscher-Geduly joined him with their guides, Johann Pinggera and Peter Dangel, all of Sulden. The party set out on August 25 for a bivouac near the foot of the right lateral moraine of the Tschierva Glacier, but they reckoned without old Hans Grass. Hans no doubt had this possible route in his mind, and (if so) had almost certainly discussed it with Benjamin Wainewright. In any case, he could brook no rivalry in his own mountains, so these two parties set out that same evening on the same errand. Christian Grass, son of Hans, accompanied them, but was kept in the dark about the intentions of the party until they were actually at the foot of the face. They celebrated midnight at the Roseg Restaurant with champagne, and went on so quickly that they were already far ahead before the Tyrolese-led party left their bivouac on the morning of the 26th. When the Wainewright party arrived at the foot of the face, they attacked it up the couloir or edge of the slope leading to the

Berninascharte. They had gained some height before the other party in their turn arrived on the upper glacier-plateau.

The line of ascent was directly upwards, partly on the rocks of Pizzo Bianco and partly on the snow. Christian says that it was he and not his father who cut the steps, that they could see the others far beneath them, that he wanted to jodel when half-way up but was told by his father to keep his rejoicings until they were out of the wood, and that he insisted on finishing the job when his father wanted to take the lead near the top. So much for the recollection of an old guide, fifty years after the climb ; but the accounts written at the time give the credit for the lead to old Hans.

The Tyrolese-led party followed up in the steps which Grass (father or son) had made, and were rapidly overhauling the leaders when a high and cold wind arose and the mountain became covered with so thick a cloud that they could scarcely see the length of their arms. Just before this happened, they had evidently formed the project to pull out towards the right (S.) on to the face and ascend more directly to the summit than the line by the *Berninascharte* which Grass had selected—by so doing they might reach the summit first and snatch the laurels. But their guides, although they took a line more to the right for a time, did not care to abandon Grass's steps in the mist, and the Tyrolese-led party must have been to the *left* (N.) of the line taken by Grass when they had to shelter for half an hour whilst he cut up to the arête. Grass reached the N. arête of Piz Bernina either at the *Scharte* itself or at the small dip just S. of Güssfeldt's 'Felsthurm.' Then the second party moved on again—at first to rock which would not go, then up loose snow. They reached the arête—Minnigerode says at the dip S. of the 'Felsthurm'—to find that the rocks were covered with fresh snow. The ascent up the N. arête to the summit, with great depths on either hand, took about an hour under these bad conditions and was the worst part of the climb. The second party reached the summit of Piz Bernina at 10.15, or 10 minutes after the winners of the race.

Such is the history which may be pieced together out of the accounts written at the time by Wainewright ('A.J.' **10**, 100), Minnigerode (S.A.C., *Jahrbuch*, xvi, p. 517), and Frau Tauscher-Geduly (*Æ.A.Z.* iii, pp. 225, 239). But E. L. Strutt (who had designs on the same face which bad weather subsequently prevented) stood with Alois Pinggera under the face in 1903, and was shown by the latter a somewhat different route as that taken by the Tyrolese-led party. This other route passed up

more to the right and struck the N. arête near the summit. Pinggera's honesty is not to be doubted, but I think that we may mistrust the accuracy of his memory for what had happened more than twenty years before and in dense mist; because that line would be an unlikely one from where they must have stood, even had the rocks not been covered with new snow. Had they taken that line, the Tyrolese-led party should not have had to shelter from the débris sent down by Grass as he cut up to the *Scharte*, nor could they have reached the summit so soon as 10 minutes after Wainewright; and that line would not have led them to the N. arête as much as an hour below the summit. Minnigerode's statement, written at the time, that he reached the N. arête at the gap S. of the 'Felsthurm'—*an der Einsattelung zwischen Güssfeldt's Felsthurm und der höchsten Spitze*—seems to me to be the more reliable and to fit all the facts. If there was any difference at all between the two routes, it was probably a small one just before the arête was reached—Wainewright's party attaining it at the *Scharte* to the N. of the 'Felsthurm' and the others at the gap on its immediate S.

Güssfeldt ascended by the same route to the *Berninascharte* in 1884 with Hans Grass and his nephew Hans, but this party went down over the Pizzo Bianco without ascending Piz Bernina itself. In 1889 G. Gruber reached the *Scharte* for the third time by the same route, and descended by the E. face without climbing [?] Piz Bernina.⁴ But four years before, in 1885, another remarkable ascent had been made. In that year William Williams, with Martin Schocher and Moritz Arpagaus, ascended the gap between Bernina and Scerscen from the N.W.—and probably up the steep couloir on the *right* (S.) of the face under discussion. They thence reached the summit of Piz Bernina *via* the S.E. shoulder in little more than another hour from the gap. Ling and Raeburn, in 1910, started to *descend* by this latter route, but finding the snow in bad condition had to return after going down some 250–300 ft. It is said that some unsuccessful attempts to ascend the W. face direct have been made in the intervening years.

If we exclude the routes on the W. face of Pizzo Bianco, this concludes the history of the W. face of Piz Bernina. Wainewright's route is properly the ascent of the *Berninascharte* from the W.—if the *Scharte* (a gap between two triangulated points) may be regarded as a true col, while Williams's route is

⁴ This was the first and probably solitary occasion that the *Berninascharte* has been taken 'en col.'—*Editor*.

the ascent of the N.W. slope of the Fuorcla Scerscen-Bernina.⁵ These two routes meet the ridges of the mountain about an hour below the summit, avoid the final precipice and skirt the N. and S. extremities respectively of the great unclimbed face which we set out to attempt on August 18.

We left the hut at 3 A.M. that day, and ascended the right moraine of the Tschierva Glacier for about 35 minutes. An easy traverse of the glacier took us to the medial moraine, up which we went past the remains of an old bivouac to the base of Piz Umor. Here we paused for about 10 minutes, roped up in two parties and then ascended the glacier with the rocks of Piz Umor immediately on our right. Graven led (as he did to the summit of Piz Bernina, with one short exception), and found a way quickly up the glacier—here by no means simple. Our tracks of August 14 had disappeared entirely.

Soon we came level with the depression between Piz Umor and the N.W. face of Piz Scerscen, and it was still possible for us to go for the latter in preference to Piz Bernina. Graven was as keen as I for the Bernina attempt—indeed, it was his climb by inception, as it was soon to become by execution. But there was some doubt as to whether the final rocks would prove accessible. Soon we came to the great mass of broken ice fallen during the night, and although it was easy to cross, the passage occupied at least 20 minutes. At 6.25 we were at the foot of the W. face, directly under the *Berninascharte* and to the N. of the end of the great lower ice-cliff, which stretched away to our right.

Zürcher and Knubel now went up more to the left, while Graven and I crossed the bergschrund nearer to the line under the end of the ice-cliff. The snow we met was excellent, its inclination here being about 45°. But soon the angle steepened, and after some step-cutting we excavated a small platform and put on our crampons. Then we went up until, at 7 A.M., we reached a place, level with the foot of the ice-cliff, where it was possible to stand. Here we were joined by the others who now also assumed their crampons. We then moved off again, ascended direct up past the end of the ice-cliff until we were level with its top, continuing until on the same plane as the second cliff, where we discovered a possible traverse. The conditions of the snow had so far been excellent, although step-cutting had been necessary. Our traverse now took us for perhaps 300 ft. over a slope of none too stable snow. Graven

⁵ Mr. Williams's route has never been repeated.—*Editor.*



Photo, T. G. Brown.

Berninascharte with Pizzo Bianco on extreme left, taken from high up on
W. face of Piz Bernina



Photo, T. G. Brown.

"Ice-Nose" of PIZ SCERSCEN from a point on W. face of Piz Bernina.

asked for silence, which was given. In deference to his wish, we crossed the slope silently and safely. The old 'superstition' interested me, and Graven told me afterwards that he was once with a party which had laughed at a similar request and had shouted. The snow avalanched on the slope which they were about to cross. We continued the traverse until we had come under the plumb-line of the summit, and then turned upwards. The angle of the slope was progressively increasing; but the third ice-cliff presenting no difficulty, we soon came to the lower crevasse forming the southern continuation of the fourth cliff. Here Graven led rather further to the right than the line taken by Knubel, who found an easier place of crossing. We came back to it and followed the others across. A short ascent up and to the left took us to a small sérac, at the foot of which there was a platform of ice where we could sit. Here we rested for 13 minutes.

The views during our ascent had been interesting. The 'ice-nose' of Piz Scerscen had at first filled the outward view; then Piz Roseg had risen above it. Now the summit-ridge of Scerscen was well seen, the arête between it and Bernina constituting the sky-line to the south. In the middle of this was a curious cornice curling over toward us like a breaking wave. Far on our left (as we faced the slope) were the rocks of the W. buttress of Pizzo Bianco. We went on again, Graven still leading, and made straight up towards the upper crevasse. This was crossed without much difficulty and the upper slope was now all that lay between us and the rocks. It was very steep—considerably steeper than any part of the N.E. face of Piz Roseg which we were to climb later in the week—and there were about 400 ft. of it. The snow lay thinly here, and Graven cut the steps almost straight up in three steep zigzags to the rocks.

A few minutes were occupied there in taking off our crampons and in looking up into the *Berninascharte* which is well seen from this point. Then Graven went on up rocks which soon became very steep; but they afforded sufficient holds, although rather loose in places. The ascent consisted in an upward traverse to the right and then a similar traverse to the left. The end of this last traverse was pleasantly sensational and brought us to a shallow recess up which we went a little way until forced out on the left to an ill-defined rib. The rocks on our right immediately below the top appeared to be perpendicular or actually overhanging, but a steep ice-filled chimney ran up on the left of the overhang. This was narrow

enough to straddle, but its walls were loose. So we climbed out of it to the right above the overhang near the summit, and steepish rock took us quickly to the summit signal, 9 A.M. It is a fine and sensational finish. I cannot now be quite certain, but I *think* that the base of the signal itself is actually the last hold on the climb.

Zürcher and Knubel then came up and we all sat on the summit to enjoy the magnificent day. Three black specks similarly seated on the summit of Piz Roseg were, we knew, Miss Corning and the Pollingers. We shouted across to them and heard their shout in reply. We set off at 10.15 to descend by the *Biancogrät* to the Tschierva hut, where we arrived at 4 P.M., to be welcomed first of any by Christian Grass.

The climb yields to few in interest and sensation and irresistibly challenges comparison with the N.E. face of Piz Roseg. Its average angle seems to be considerably steeper than that of the latter, yet it took us less time to make the ascent. This, however, was probably due to the better conditions which we had on Piz Bernina. Under equal conditions, the W. face of Bernina would probably prove to be the harder climb; and this would certainly be the case if these conditions were bad with much bare ice. But whatever be the value of this comparison, the final rocks and the magnificently sudden finish of the climb give it a character all its own.

May a more personal thing be woven into its history? To all of us it was a matter almost of romance that, exactly fifty years (or eight days less!) after Wainwright and the two Grass had first climbed that face, Christian, the last survivor, should have watched our own attempt and should have been the first to congratulate us on our return.

PIZ SCERSCEN BY THE N. FACE.

The N. face of Piz Scerscen is complicated. The summit ridge forms one side of an inverted triangle, from the downward-pointing N.W. corner of which a steep and narrow arête or rib descends, rises again to form the small Piz Umor, and finally merges in the medial moraine of the Tschierva Glacier. The corner from which this rib descends is a right-angled one, as all proper corners should be. When you face it, a wall of rock (another side of the triangle) is seen to run to the right towards the Porta Roseg, and another to the left towards the Fuorcla Scerscen-Bernina. A great field of ice comes down to these walls from the upper part of the face, and there breaks away

into ice-cliffs—overhanging on the left,⁶ E., and but little less than perpendicular on the right, W. Their clean-cut corner above the rib forms the ‘ice-nose.’

The formation of these cliffs varies much from year to year. When Güssfeldt made the first ascent of Piz Scerscen, and by this route, in 1877 (*In den Hochalpen*, 3rd ed., p. 94), the nose must have been much less formidable than it is at present. Not only did he descend by the same route on that occasion, repeating the performance in 1887, but the difficulty of the rocks of the arête or rib below seems to have made a greater impression⁷ upon him than the nose itself. (Strutt tells me that the ‘Nose’ looks far harder now than when he first saw it in 1893, and even appeared impossible in 1929 when Oscar Supersaxo led it.) To-day nose and ice-cliffs, to either side, are almost unbroken, very steep, and very high.

We slept in our bunks all the afternoon after coming back from Piz Bernina and left the hut again next morning, August 19, to pit ourselves against the ice-nose of Piz Scerscen. Ascending in our tracks of yesterday, we reached the place where we had then made our decision. Here we turned to the right and gained the narrow snow arête between Scerscen and Umor. Going along the crest, we soon met a steep rock buttress and ascended it to the base of the ice-nose. We put on our crampons here, and I had just taken a photograph of Piz Roseg when there was a great fall of ice from its N.E. face. The ice-nose towered above us in a steep and compact wall perhaps 200 ft. high, and its base was accessible by a slope of steep snow. The wall appeared in places to be almost perpendicular and was broken only by a chimney—probably the open end of a crevasse—high up and to our right. Our plan was to ascend the ice-wall for a certain distance, and then to traverse upwards and to the right to the foot of the chimney. It was just possible that the chimney might afford a way to the top.

Graven led the nose single-handed and magnificently. Starting off, he cut at first direct upwards and then to the right across ice which must have approached 80° in steepness. The ice had to be cut down from higher than 3 ft. above the steps, while handholds were, of course, a necessity the whole way up.

⁶ This E. angle of the N. face was still feasible in 1903, while the W. angle formed until recently a comparatively convenient access to the upper slopes.—*Editor*.

⁷ Not so, however, on the *second* occasion, ten years later.—*Editor*.

When Graven arrived at the foot of the chimney, it was found to give no help whatsoever, and he therefore traversed from it diagonally to the left. This latter part of the climb was actually the steepest and hardest, but at last he arrived safely above the nose. Zürcher, Knubel and I had been the very cold spectators of one of the finest pieces of step-cutting which it is possible to conceive.

Graven now let down our two ropes knotted end to end and together 200 ft. long. The lower end failed to reach us, so we climbed up until we could tie on. Even thus safeguarded from above, I for one found the ascent sufficiently sensational. The most trying and difficult part came after reaching the foot of the chimney. Soon, however, we arrived on the top and congratulated Graven.

The remainder of the climb is not difficult. On the way up, Graven and I went over towards the left to photograph and sketch the W. face of Piz Bernina, catching up the others again at the upper bergschrund. We reached the summit, having there to modify our plans, as we had not sufficient rope for our intended return over the ice-nose *en rappel*. So we descended by the usual route on the S. side, with the intention of spending the night at the Marinelli hut. But this hut is in Italy, and whilst crossing the glacier we met a party who warned us of the fate which would be ours if we persisted. There was nothing for it but to languish in a southern dungeon or to ascend again to the N. to the Marco and Rosa hut on the Sella Crast'Agüzza. We chose the latter alternative—although there appeared little to choose between the two.

Next day, August 20, we crossed CRAST'AGÜZZA from W. to E.—the first traverse made this season, and actually the second ascent only of the mountain! Much new snow lay on the rocks and we climbed in mist. The cloud blew over from time to time as we ascended PIZ ARGIENT,⁸ and we had some fine views. But cloud and mist settled down heavily before we gained the summit of PIZ ZUPÔ. This last mountain is about to be degraded (by a few inches) from its proud position as a 'four-thousander.'⁹ We descended in deep-lying mist to Pontresina.

We knew we had been expected to return to the Tschierva hut on the previous day, and Zürcher sent up a message that

⁸ Between the Piz Argient and Crast'Agüzza lies the one unsolved problem of the Central Bernina Group, the S. slope of the Fuorcla Argient.—*Editor*.

⁹ 3999 m.—as formerly—*vice* 4002 m.—*Editor*.

we had arrived back. We found later that this removed a certain anxiety, for Christian Grass had been quite sure that a crevasse had suddenly swallowed the whole party. Had we gone on to the Marinelli hut that day, it might have turned out to be an expensive expedition for us! The news of our safe return produced a reaction (so we heard later) that lasted well into the night.

We again took the well-known path up to the Tschierva hut next day, finding on our arrival that the kindly people there had made a magnificent chocolate cake to celebrate our safe return. This, and a fine if angry-looking sunset, made the evening beautiful.

PIZ ROSEG BY THE N.E. FACE.

Piz Roseg as seen from the N. is one of the most beautiful mountains in the Alps, and the ascent of its N.E. face is among the finest of ice climbs. From the Tschierva Glacier to the summit, the height of the face is about 2200–2500 ft.; the upper edge of its great slope of ice forms the summit-ridge of the mountain. This ridge rises on either hand to form the true summit at the S.E. end with the *Schneekuppe* to the N.W. and the *Klein Roseg* to the N.E.; it dips in the middle to show a well-marked depression. Notwithstanding these irregularities in the summit-ridge, the upper half of the face is an almost plane surface of ice set at a steep angle which Norman Neruda measured as 54.5° in the lower part and 62° at the top. A shelf of ice, running horizontally across the middle of the face (and thus separating it into an upper and a lower part), naturally reduces the average angle of the whole slope. Güssfeldt estimated the mean inclination to be 50° , but the Siegfried map appears to give it as about 45° .

The outer edge of this more level (or, rather, less steep) shelf of ice falls in a high ice-cliff overhanging its base and stretching far in either direction across the face. Below this, the face, now sprinkled with rock, again plunges down at a steep angle until it reaches the glacier. Fortunately, however, neither the shelf nor the ice-cliff is continuous across the face. A gap in the shelf immediately under the N.W. peak, or *Schneekuppe*, affords what is probably the only access to the upper part of the face. There is a hanging glacier not far below the *Schneekuppe*, and in a direct line above the gap. This mass of ice is, as it were, that part of the shelf which should have filled the gap, but has remained high up upon the mountain. The S.E. end of the upper face is broken by a small hanging

glacier and three tiers of ice-cliffs. But these lie to the left of the summit.

There is no problem about the route to be followed if Piz Roseg is attempted by its N.E. face. The gap affords what may be the only way up from the lower to the upper parts of the mountain near the middle of the face. The climb is on ice or snow throughout ; when the gap has been ascended, a way must be forced to the left, E., on to the ice-shelf. Thereafter, all routes lead to the summit, for all are then the same—direct ascents of an unbroken slope of ice ; any difference can lie only in the points at which the summit-ridge is reached. But if the route to be followed admits of little topographical variation, its justifiability on any one occasion presents a nice problem. In particular, the high hanging glacier above the gap must be sufficiently stable to justify the ascent of the lower half of the face ; while the state of the surface of the upper half must be such that there is no danger of avalanches. Slow changes are altering this great face—apparently rendering it steeper and more difficult. Norman Neruda found the upper half less steep in its lower than in its higher portion. The position of the summit cannot have changed in the intervening years, yet we found the angle to alter in the opposite direction as we ascended the upper face. This indicates a diminution in the mass of ice carried on the face, and an increase in its steepness. Such an inference is confirmed by Strutt, who tells me that he is sure that the N.E. face of Roseg is far harder and steeper now than when he first saw it in 1893, or than it was in 1910. The hanging glaciers have diminished ; they used to descend lower and were less steep.

Norman Neruda, with Christian Klucker, made the first ascent of the N.E. face on July 16, 1890 (‘ A.J.’ **15**, 314, 461 ; *Climbs of Norman Neruda*, p. 74). They gained the shelf by ascending through the gap, and at once turned directly upwards—so that they reached the summit-ridge at the depression between the summit and the N.W. peak. That year, like the present one, was a ‘ bad ’ season and the conditions of the mountains were quite exceptional. Steps had hardly ever to be cut through snow into ice, and for this reason Norman Neruda attached ‘ no importance whatsoever ’ to his ascent. He thought the route unlikely to be soon repeated—as indeed turned out to be the case. The face then seems to have been left in peace for twenty years until, on June 12, 1910, Strutt attempted the ascent with Joseph Pollinger. In perfect weather, but in a phenomenally bad season, they reached the face below the gap, crossed



Photo, T. G. Brown.

Lower part of N.E. face of Piz Roseg with Porta Roseg (*Gütsfeldtsattel*)
and S.W. arête of Piz Scerscen, from N. arête of Piz Roseg.



Photo, T. G. Brown.

Hanging Glacier below SCHNEEKUPPE seen across N.E. face of Piz Roseg.

the bergschrund and proceeded. But when they were in the gap and about level with the bases of the ice-cliffs, an absolute blizzard of snow fell upon them. Here they waited for an hour, when they had to retire, as the snow above was beginning to avalanche. Fourteen years then passed until, on June 8, 1924, Rudolf von Tscherner and S. Schönenberger made the second ascent, taking a line on the upper face more to the left than that of the first and reaching the summit direct (*Die Alpen*, 1925, p. 181). In 1926 Signor Angelo Taveggia, attempting the ascent *alone*, fell and was killed ('R.M.' xlv, p. cxxiii). This, I think, closes the history of the N.E. face of Piz Roseg.

When we arrived back at the Tschierva hut on the Thursday of that crowded week, the failure of our plan to return by the ice-nose of Piz Scerscen back to that hut had cost us at least one day, possibly two. It was now a question whether the N.E. face of Piz Roseg was not past its best. Bare ice showed on the upper parts; the remaining snow might be unstable, and the weather again looked unpromising. We began to wonder if our attempt next day was likely to be successful or even justifiable. But worse was to follow. The hut was crowded, sleep nearly impossible, and when Friday morning came at last, illness forced Zürcher reluctantly to give up all thought of climbing on that day.

In view of the doubts concerning the present condition of the N.E. face, it seemed that, if we were to make an attempt on Saturday, it was best for me to spend Friday in ascending the mountain by some other route and thus make a close inspection of the face. In addition, the fleeting views of the S. side of the mountain which we had obtained from La Sella had been alluring. Accordingly, Knubel, Graven and I left the hut at 4.25 A.M. on August 22, making our way round to the back of the mountain by the ordinary route of ascent from the Tschierva hut. When we arrived at the snow shoulder by which that route attains the N.W. arête and there had our first near view of the S. face, it was clear that if we went on with our project to ascend by that face,¹⁰ we might not be fresh enough for the N.E. face next day. This would have been unfair to Zürcher, and besides if we found the conditions to be good, the N.E. face would 'go' to-morrow and to-day would have been well spent; but if the conditions were bad, the S. face would still be there for to-morrow's climb. So we

¹⁰ A considerable descent would have been necessary to attain the base of any of the S. routes except the very long S.W. arête.—*Editor.*

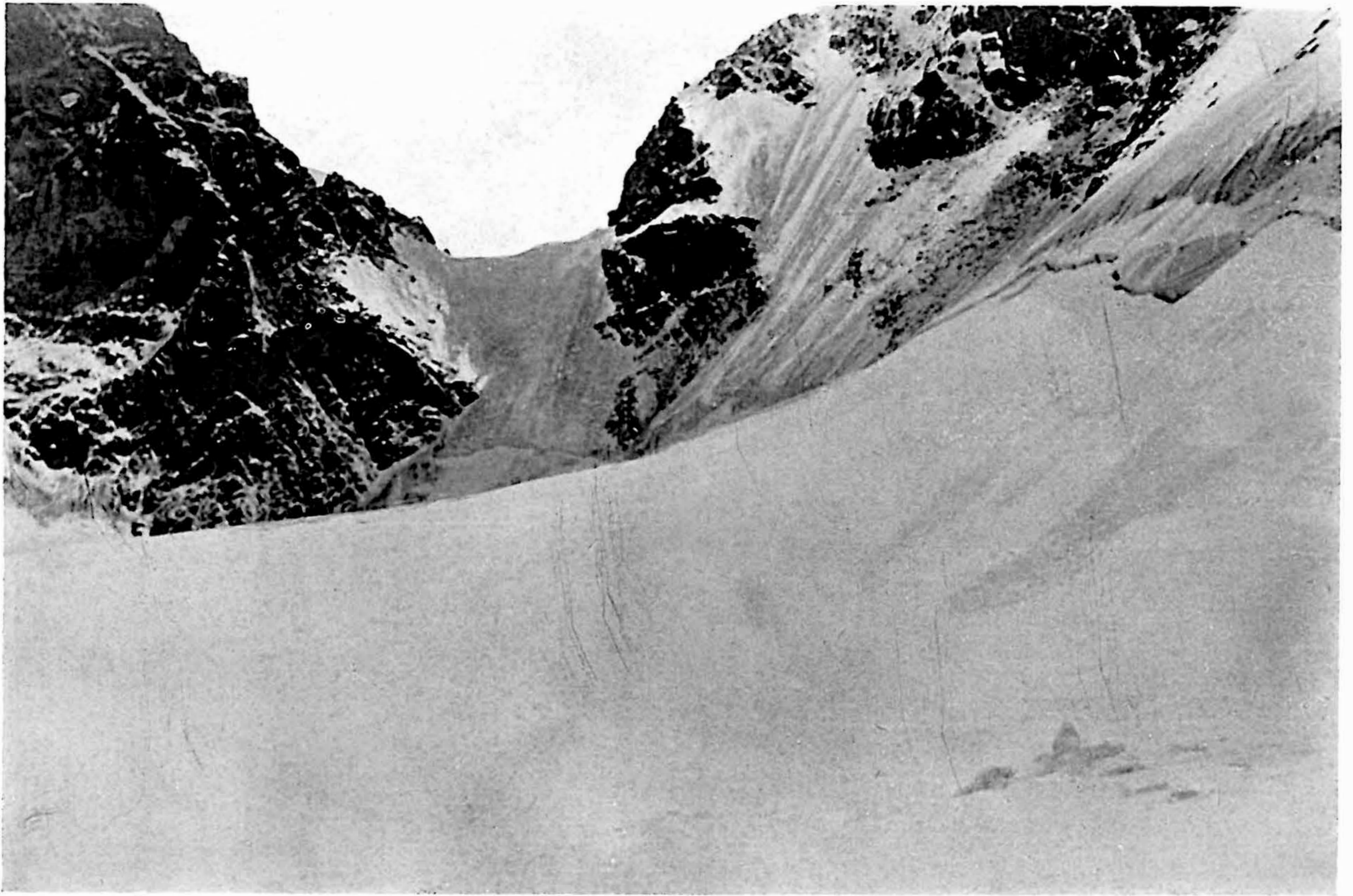
turned up by the ordinary route and, after two other short halts, reached the summit of Piz Roseg at 8.15 over the *Schneekuppe*. When ascending from the depression between the two peaks, Graven went well out on to the N.E. face—and found that it was in excellent condition. We could also see that the hanging glacier dominating the gap was compact, solid and safe.

It was so cold upon the summit that we did not sit, but spent 10 minutes there looking down the face and admiring the mountains around us. We could clearly see Howson, Powell and White-Thompson going up the *Biancogrät* guideless at a fine and steady pace.

The lower part of the face still called for examination, so we went down quickly to the first rocks of the N. arête—known as the *Eselgrät* in Pontresina—and having spent 25 minutes there for breakfast, reached the Tschierva Glacier by that arête at a little before 10.30. We then walked round under the N.E. face and were delighted to find that its condition appeared excellent. We therefore made a good track back over the rather broken glacier (this track was to save us at least an hour next morning and enable us to reach the foot of the face by lantern light), for all doubts were banished, the N.E. face could be attempted to-morrow if the same weather held—little sun, not too cold a morning, but a cold wind on the summits.

It was a little past midday when we arrived back at the Tschierva hut, brought our good news to Zürcher, and in turn had his own—that illness had passed and he would be fit for to-morrow's climb. But all still depended upon the weather which was curious and uncertain. A high bank of cloud had overcast the sky in the morning, and broke up only later in the day. In the early morning, the weather had been so mild that we climbed in our shirt-sleeves although there was no sun. Higher up and especially upon the summit, the S.W. wind was bitterly cold. Yet the sheltered Tschierva Glacier was warm, although not unpleasantly so. All that afternoon we kept careful watch upon the weather. An unchanging bank of cloud hung in the W., while above us the clouds were broken and fresh ones were constantly formed by the wind as it blew against the now warm rocks. But these new-made clouds sheltered the N.E. face, which the sun hardly touched all day.

That night was again a warm one, and when we got up next morning, August 23, the conditions were exactly like those of yesterday—continuous high cloud filled the whole sky when we left the hut at 2.10 A.M. We went up by lantern light in the track made the day before, and reached the foot of the face



Photo, T. G. Brown.

PORTA ROSEG from Tschierva Glacier.



Photo, T. G. Brown.

PORTA ROSEG (below), S.W. arête of Piz Scerscen (left), Crast'Agüzza and Piz Zupô (left background), Piz Argient (right background), E. arête of Piz Roseg (right), from N.E. face of Piz Roseg.

at 5.10 after a most dismal walk. The recent snow still lay upon the glacier as far down as the hut, while even so early in the morning, this snow was soft and deep almost as far as the place where we halted. If the glacier snow was in such a condition, was our attempt justifiable? But the sun had scarcely touched the face all yesterday and there was really no reason to suppose that its condition had changed since our examination. To that I pinned my own faith as we crossed the glacier, so we decided at any rate to ascend as far as safety permitted. We set off in two parties, Graven leading the way.

The bergschrund was crossed without difficulty and the snow on the actual face was soon found to be excellent. The ascent to the gap is not only the most trying part of the climb, but it is the part which may be exposed to danger from above, so we had to move quickly. No unnecessary pauses were justified; I kept my camera hung round my neck, set and ready for such views as might be taken while in actual movement. The formation of the terrain held us for 20 minutes on an upward line under the end of the ice-cliff on the left—happily unconscious of what was above. Then we came clear of the cliff and ascended on steep ice between scattered rocks, some of which lay directly in our path. The angle was very steep and Zürcher told me afterwards that, during this part of the ascent, his eyes were level with Knubel's heels in the third step above him.

As we came level with the base of the great ice-cliff, the view towards the Porta Roseg along the face was magnificent; but as we passed further up, the cliff, turned inwards to the gap, hid the view to our left. This natural section of the ice-shelf was separated from us by a steep couloir of ice; we now saw nothing of the cliff on our right, for the centre of the gap is really a sort of shallow buttress on the E. side of which we were ascending. Soon we were level with an extraordinary sight on our left. The outer part of the shelf of ice forming the ice-cliff was firm and compact, but further in there was a thick belt of rotten and disintegrated ice. The place looked as if the outer part of the cliff will at some future time break away from the belt and not from a clean-cut crevasse. But, be this as it may, it seemed that only a miracle held the ice together; we were thankful that this sight had been hidden from us whilst passing beneath.

Our ascent took us up level with the top of the outer edge of the cliff, but we still had some way to go before we could traverse on to the top of the shelf near its junction with the upper face.

This part of the ascent and the following traverse were the steepest and most difficult parts of the whole climb. Finally, at 6.40 A.M., we gained the shelf across the steep ice of the couloir. At this point we were perhaps 1000 ft. above the glacier and all danger from above was now at an end. The ascent from the schrund had occupied 1 hour 20 minutes of the fastest climbing we have done together.

Immediately above us was the depression between the two peaks, but our wish was to climb direct to the summit and not to the dip, so we walked along the shelf to our left for 10 minutes. Here we came into the direct line under the summit and made a large step in the sloping shelf, where we put on our crampons. Graven had led so far; now Knubel and Zürcher went first. A crevasse, not difficult to cross and beautifully fringed with icicles, stretched across the whole face above the ice-shelf. The slope immediately above this was still covered with snow, and was steeper than any other part of the *upper* face. That face stretched above us in one unbroken sweep; but far up on the right was the high hanging glacier under the *Schneekuppe*, while high on our left were three upper ice-cliffs rising like steps one above the other. The highest of these forms the remains of a hanging glacier under the actual summit, prominent in the earlier photographs, but now diminished and minus its western half.

We went up past the ends of these ice-cliffs, and soon the snow thinned out. It disappeared altogether when we were about 200 ft. below the level of the uppermost ice-cliff on our left, so the remainder of our ascent had to be made in bare and exceptionally hard ice up a face the angle of which Norman Neruda measured as varying between 54.5° and 62° . The upper ice-cliff on our left was covered from top to bottom and throughout its whole length with a fringe of icicles. It was very beautiful, and when we came a little higher we found that it really stretched across our path and a little way farther to our right as a sort of 'step' in the ice-face about 4 or 5 ft. in height.

Two possible routes offered themselves to our choice once the step was passed. An upward ascent bending slightly to the left would possibly lead to actual snow on the remains of the old hanging glacier, or an upward ascent slightly to the right, if very carefully aimed, might hit a solitary rock (quite large enough for one person to stand upon, but no larger) embedded in the face. The choice of routes was not ours, however, but Knubel's, and to him a single stone in an ice-slope is as attractive as a solitary chamois in a canton. The rock naturally

won; he reached it in three rope-lengths of finished step-cutting. Here we eventually foregathered, for if the stone gave stance only for one, it provided an excellent belay for all. Some more rock showed above us at a little higher than another rope's-length—perhaps 120 ft.; the intervening ice was the last on the climb. Some good snow lay on the slope above the rocks, taking us in a few yards to the summit-ridge at almost the same height as the actual summit—which proved to be a few yards to our left. The time was 9 A.M.

The hour spent in sun upon the summit leaves a pleasant memory. Our good fortune had held, the conditions of the face had been excellent and the morning warm. Fortune had favoured us in this, for the N.E. face can hold little pleasure on a cold day—perhaps cold might even be a danger there. Soon we had to leave and we descended by the same route as the day before. Our welcome at the hut was as warm as ever, but now, alas, we had to say good-bye. We travelled to Zermatt next day.

TÆSCHHORN BY THE 'TEUFELSGRAT.'

While the ascent of the *Teufelsgrat* is one which leaves behind rather mixed memories, its accomplishment gave great satisfaction to Zürcher and myself. A year before, in 1929, we had set out to climb it from the Tæsch Alp; but when we reached the foot of the couloir the weather was so threatening that we abandoned the ascent there and then, doing so wisely, for there were thunderstorms later in the day and a cloud enveloped the ridge. Five years ago, in September 1925, I had been but little more fortunate. A strong N. wind sprang up, and the return from the top of the E. couloir down the S. face of the Kienhorn and the descent of the W. couloir was the most dangerous piece of climbing which I have ever done. Stones dislodged by the wind were falling all the time.

We spent the night of Monday, August 25, at the Tæsch Alp, and, setting out next morning at 2.45 in fine weather, reached the *Teufelsgrat* at the depression E. of Kienhorn at 7.20, and arrived on the summit of Tæschhorn at 1.40 P.M., having spent $1\frac{1}{4}$ hours in halts on the way. What can I say of the intervening hours spent on the ridge? It is so long and complicated that details are difficult to remember. Narrow and sensational edges amid unparalleled rock scenery alternate in the memory with traverses on faces which Symons has described aptly as 'morally perpendicular' ('A.J.' 25, 111). One traverse on the N. side of the ridge took us over ice-glazed

rocks and patches of ice. It was more difficult, if less dangerous, than were those rotting walls on the S. side. The memory of wonderful views forward and back from the tops of innumerable gendarmes is mixed up with little things, a step of rock breaking here, a double armful of broken stones in a chimney there. What can one make of it? Were the rock sound, the ridge would rank as one of the greatest and most delightful in the Alps—worthy of its own scenery. As it is, rottenness spoils the climb, despite the grandeur. If mountain ridges may be invested with personality, I would liken the *Teufelsgrat* to a fine athlete who has allowed himself to pass into dissipation and decay.

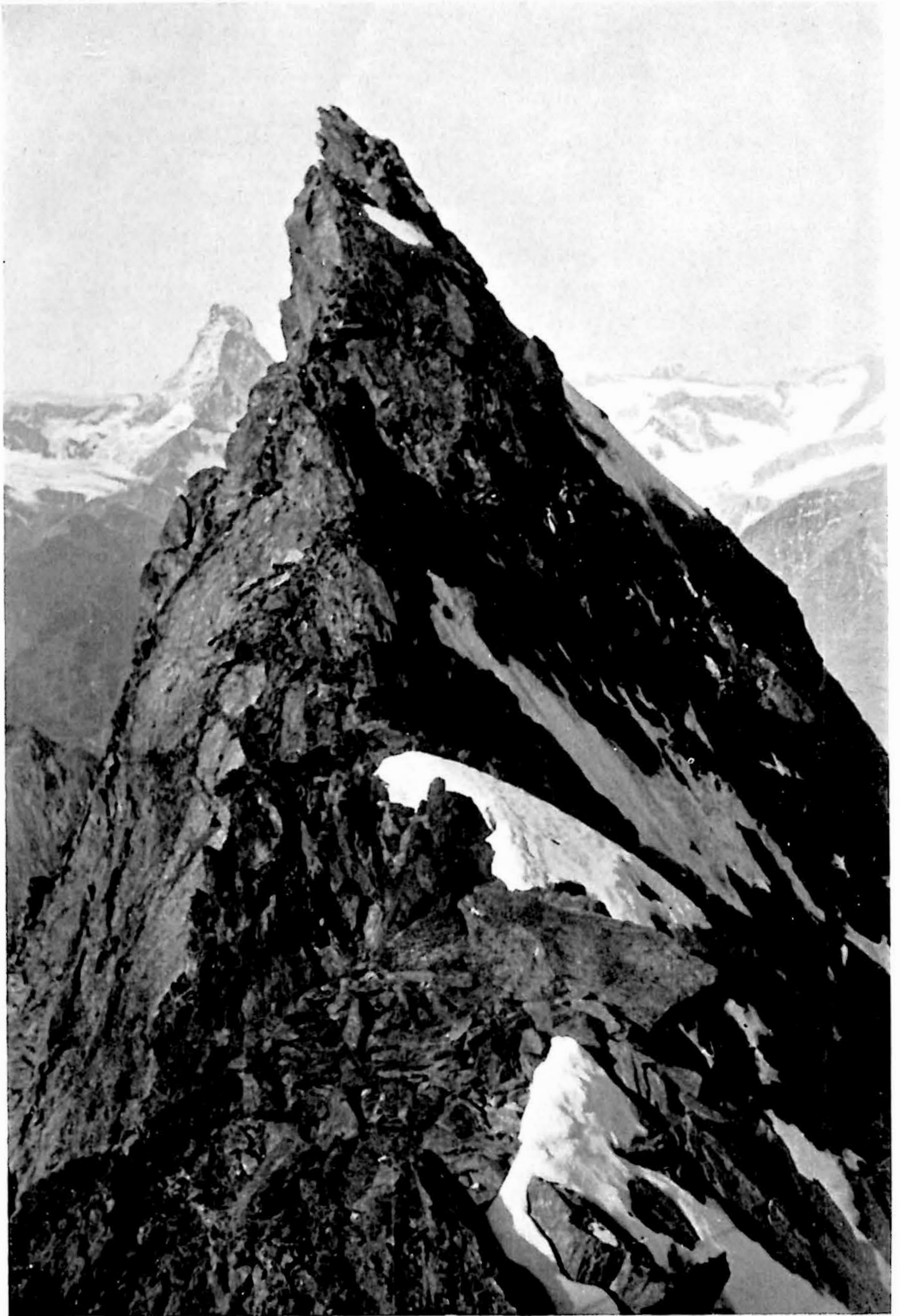
We spent nearly an hour on the summit, and then descended by the *Mischabelgrat*, from which we turned off W. before coming to the Joch. Thence we reached the Täsch Alp again at 7.30 P.M., after many pleasant halts. The subsequent descent through the trees by lantern light was not the easiest part of the day's work; but the drive up the road to Zermatt was perhaps the most delightful. For Zürcher had long wished to climb the great ridge, and had been once repulsed, and I myself had a double account for settlement. The day had been magnificent, the mountain had at last bowed to its fate; our several accounts were paid.

AN INTERLUDE.

The Breithorn by the *Younggrat* had been selected for our last climb together, but this had to be postponed until Saturday, for the arrival of some friends in Zermatt prevented Zürcher from climbing in the meanwhile. Graven and I being free, however, selected a traverse of the Tête Blanche and Tête de Valpelline for our Thursday's climb. The *Teufelsgrat* was the sixth and longest climb which he and I had made in the past nine days; of these six, some had been of the first rank. Further, the long railway journey on Sunday might almost count as an expedition in itself.¹¹ If we were to be fresh for the *Younggrat*, our climb must be a simple one.

¹¹ By the so-called 'Glacier Express'—St. Moritz (Pontresina)—Reichenau-Disentis-Andermatt-Gletsch-Brigue-Visp-Zermatt; a through train taking some 10½ hours for the journey, and remarkable, even among Swiss metre-gauge railways, for the extremely high fares.

The 'times' (in 1930) were: St. Moritz dep. 08.15, Zermatt arr. 18.55, or, an average speed of 15·7 m.p.h., including stops, for the 168 miles, with 10 mins. longer in the reverse direction.



Photo, T. G. Brown.

First prominent gendarme on Teufelsgrat from above.



Photo, T. G. Brown.

Summit and S. face of TAESCHHORN, from point 4102 m. on Teufelsgrat.

When we had traversed TÊTE BLANCHE and stood on the TÊTE DE VALPELLINE that Thursday morning, the circuit of the Vispthal peaks was completed save only for the Matterhorn, which to me is still inviolate. It will be a noble moment when we attain that mountain on some appointed day in the future.

BREITHORN BY THE KLEIN TRIFTJE OR 'YOUNGGRAT.'

Of the two great buttress or ridge routes up the N. face of the Breithorn, that to the W.—the Triftjegrat—is one of the most interesting and pleasant in the Alps. But when Graven and I climbed it in 1929, our eyes were attracted away to the E., where the next great ridge—the Klein Triftje or *Younggrat*—runs up to the central summit of the Breithorn. That ridge is of a different order of difficulty, and we subsequently examined it from many points of view. From all of these it gives an impression which closer contact fails to change.

H. J. Mothersill and C. S. Ascherson, with Ulrich Almer, Christian Kaufmann and Christian Jossi (jun.), ascended to the main ridge of the Breithorn on July 17, 1897, by a route which, starting near the foot of the Klein Triftjegrat, finished up the face to the W. of that arête—a magnificent climb ('A.J.' **18**, 528). This route did not, however, utilize the arête itself, which was not ascended in its entirety until attacked, on August 18, 1906, by R. J. Mayor, C. D. Robertson, and G. W. Young, with Joseph Knubel and Moritz Ruppen ('A.J.' **23**, 491). The ridge was then left alone (for all I know) until 1928, when there occurred that attempt by a French party, the fatal ending of which is still fresh in our memories ('A.J.' **40**, 424). Dr. von Kehl is said to have been successful upon the arête in the following year. Now, in 1930, we were about to attempt its third ascent with Joseph Knubel again in the party—twenty-four years after he was first victorious.

Friday, August 29, started well with a slight N. wind; but as Graven and I ascended the Theodul Glacier towards the Gandegg (there to join Zürcher, who had abandoned his friends on the Gornergrat), the wind began to veer to the S., and a few drops of rain or sleet fell. The wind then dropped and there was dead calm soon after our arrival at the inn. The weather now became full of some dreadful portent. Cloud formed rapidly and simultaneously on all faces of the Matterhorn, while huge masses of vapour materialized beyond the ridges of the Theodul Pass and the Weissgrat with gigantic speed. It seemed as if some terrible beast were crouching for

a spring—while we stood outside the hut in the stillness. Then the cloud on the Matterhorn began to stream out to the *South*, while the air about us began to move off gently towards the Pass. It was a dramatic moment, and the good N. wind was still blowing with gentle persistence when we went to our beds.

The weather was fine and settled when we left the hut at 3 A.M. on August 30. So early were we, that we had to wait a while at the foot of the Triftje arête for the morning light. The sun had not yet risen when we descended an easy couloir on to the Breithorn Glacier; it did so, however, whilst we were making the none too easy traverse of the glacier to the foot of the *Younggrat*. We reached the foot of our arête a little before 6 A.M., resting there for a quarter of an hour, during which we put on our crampons.

We had followed our usual custom of climbing on two separate ropes, and Graven had been in front so far. Knubel and Zürcher now led up the steep snow arête. The views as we ascended were magnificent. But soon the state of the snow began to claim our attention; it seemed to be too soft and we wondered what lay ahead.

The *Younggrat* is easy to describe. After ascending in a steep snow edge set at an average angle appearing slightly to exceed 45° , it flattens out near an interesting group of gendarmes. Immediately thereafter, the ridge soars up in a further edge of ice or snow set at a very steep angle. This upper ice-arête, some 600–650 ft. high, terminates blindly against the foot of the precipice forming the summit-ridge of the Breithorn. A very steep ice couloir furrows the precipice a few yards to the right, W., of the top of the ice-arête, while its black ice descends at the side of the arête to far below the rocks. In exceptional conditions the climb might possibly be finished up this couloir, but the first successful party reached the summit by rocks on its near side. A broken rib of rock and ice on the far side of the couloir leads straight up to the summit-ridge close to the highest point of the central summit of the mountain. We were now on the lower of the two snow or ice-arêtes; our anxiety was whether the state of the upper would allow us to finish the climb.

Soon we wondered if we could even reach the gendarmes. The arête below them steepens and bends to the left at one point, then eases again; the condition of the snow near this place became bad. Having proceeded a little way up the steep part, it was clear that the snow above must be dangerous.

But a small rocky boss projected from the snow of the face about 24 ft. or so on our right, and it was possible that a safer ascent might be made thence up the face to the crest of the arête at its gentler upper part. Deep powder snow intervened, and Knubel had to sweep this away as he cut the twelve necessary steps into the ice. This traverse, a difficult one, the most difficult part of the climb except the passage across the upper couloir, was magnificently executed. But that short passage, and those twelve steps, occupied half an hour.

Zürcher joined Knubel on the rock, while Graven crossed to give additional support to Knubel's further venture. There was still no certainty as to further progress, but Knubel found excellent snow when he ascended the face above the boss. I joined Graven and on we went. There was one difficult little mixture of ice and rock before attaining the base of the first gendarme; but when that was passed, we reached firm rock at a little before 8 A.M.

The *Younggrat* is not conspicuous for resting-places, but there is an excellent one at the foot of the first gendarme. Here we sat for 20 minutes or so, while Zürcher scratched our names on an aluminium flask and left it to commemorate our visit. Graven and I now went ahead. My memory of these gendarmes is a pleasant one. Their rock is excellent, while the arête is very sharp. Three of them adorn the ridge, of which the third is the most imposing. We stood on its summit at 9.15, glancing up at the great steepness above still separated from us by a more level part of the arête.

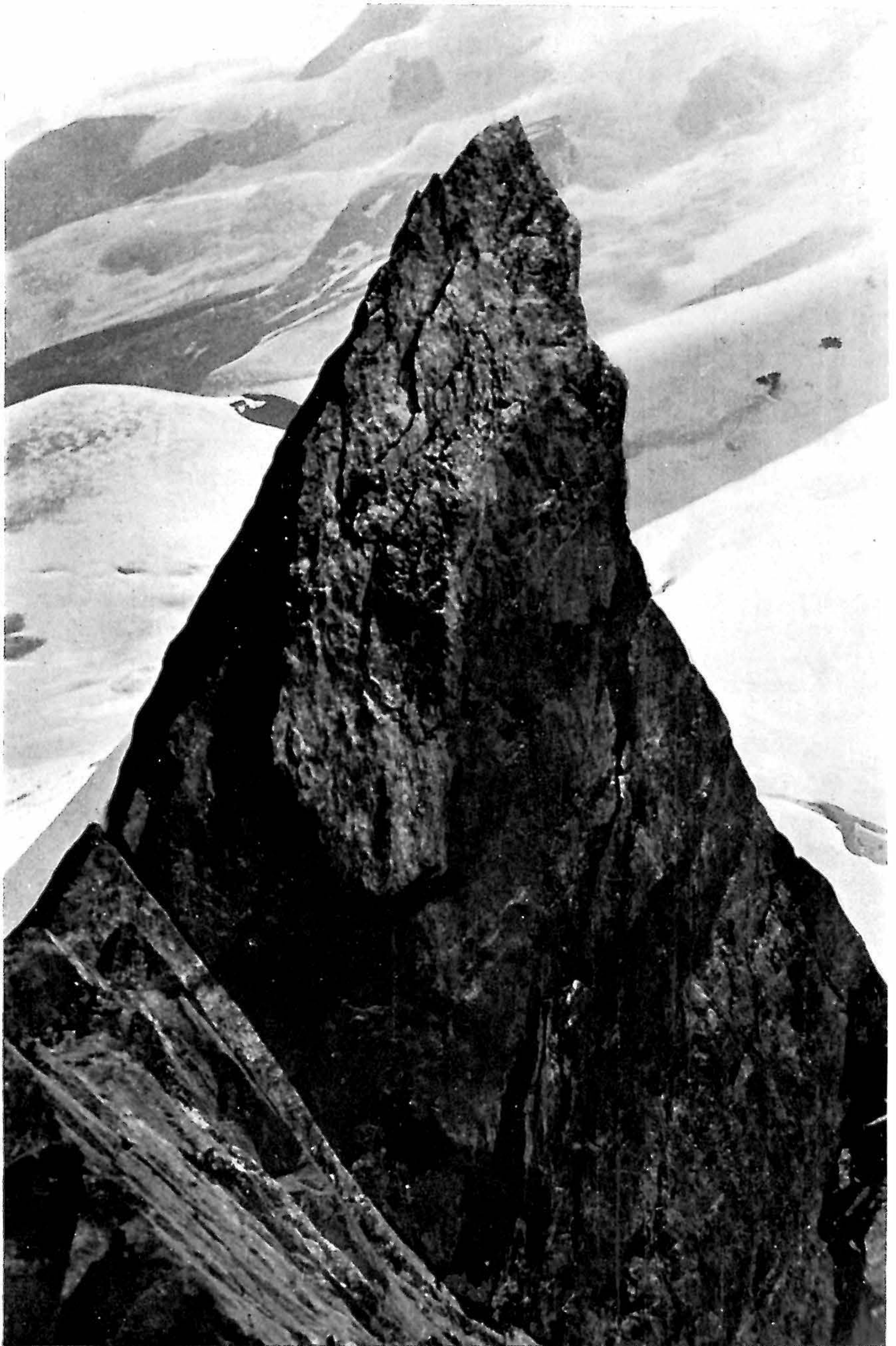
Now came another difficulty: Graven descended the far side of the gendarme and on to the W. slope of the arête below a narrow and slightly corniced crest of soft snow. But this slope again became too bad for further progress, so he re-ascended to the crest and broke through it. There was, most fortunately, a line of rock exposed below the crest on its E. side; I joined Graven and we continued the traverse. This led us along to a rock face up which we ascended until we came to the foot of the upper ice-arête at 9.40. We had discarded our crampons at the last halt, now they had to be replaced.

Here we took a short rest, during which the others joined us, and it was not until a few minutes before 10 A.M. that we set off again, leaving Zürcher and Knubel behind while accomplishing the step-cutting. The arête above was extremely steep. A little good snow in the lower part soon gave place to ice; thereafter ice predominated, sometimes covered with a thin layer of powdery snow and occasionally graced by patches of

névé sufficiently good and deep for the kicking of occasional steps. But the arête consisted chiefly of ice, and when I was not guarding myself (once unsuccessfully) against the products of Graven's activity, I counted the steps and rope-lengths as they ran out. The seventh run-out of our 100-ft. rope took Graven just short of an isolated stone a little below the final rampart and nearly at the top of the arête; he had cut 348 steps.

While still two rope-lengths below the top of the arête the others came up and joined us. We were now near the place of the accident of 1928. Graven had taken part in the search afterwards and, when we were on the Great Gendarme, had shown me the supposed site of the accident—about 100 ft. below the top of our arête. The couloir furrowing the rampart is not broad and may be described either as splaying out below the rocks or as merging there into a very steep ice-face. This is bounded by an ill-defined 'arête' on its far side; and as the two arêtes, our own and the other, converge above, a traverse 100 ft. below the rampart would be much longer than one at the actual base of the rocks—or considerably longer than a rope-length of 100 ft. The second member of a party would therefore have to move out on the face while the leader is still on it, *and* there is no secure anchorage on the arête behind. Moreover, the face (or shallow couloir) to be traversed is extremely steep. When we made the ascent, the black ice-tongue from the true couloir above descended down past this point. If the leader slipped on that traverse, the other members of the party might well be pulled off one by one from the arête behind him.

I must not, however, support the probability of Graven's theory of the site of the accident. The first party to ascend the *Younggrat* overcame the final obstacle by going up the rocks to the left (E.) of the couloir, and Knubel succeeded in effecting his lodgment thereon only at the second attempt. It is possible that there exists another route up the rocks more to the left, but no exit by the rock face should be attempted unless the rocks are dry. Geoffrey Young, who watched them, tells me it is probable that the French party of 1928 first attempted the ascent of the rocks, then abandoned that line and tried to ascend the couloir direct; he thinks that it was when leader and second man were both in the couloir that the accident took place. Our own line—the traverse across the foot of the couloir at the level of the base of the rocks and then the ascent of the rib to the W. of the couloir—was, in the then conditions,



Photo, T. G. Brown.

First gendarme on *Younggrat* from above.



Photo, T. G. Brown.

KLEINTRIFTJE (or "Younggrat") of BREITHORN.
(Graven cutting across ice couloir above upper arête, near scene of
1928 accident.)

certainly difficult. But it is probably as interesting a finish as either of the others ; and the presence of adequate (if not ample) anchorage at each end of the traverse adds an element of safety. If the rocks are iced (as they were when we ascended) the route taken is the only justifiable one ; it is perhaps the best under *any* conditions.

We went on to the top of the arête where two rocks emerge and anchorage is possible. I belayed myself and took some photographs of the operations whilst Knubel played Graven out over the rock. The true couloir is a concave recess of very steep black ice, and Graven reached its near edge by cutting across under the base of the rampart or precipice. Then came a piece of step-cutting worthy of Knubel's feat on the lower arête. A large detached rock lies on the other side of the couloir ; Graven cut across to this and then down until he could pass below it, ascend a little, and find anchorage on its far side—there was still a little of our rope to spare. We now crossed in our turn and went on. During the ascent of the rib on the far side of the couloir there is a fine view of the main ridge cornice, seen across yet another gully. In a few minutes—at a minute or two after 11.30 A.M.—we reached the central summit of the Breithorn without further difficulty.

There we spent 45 minutes, and not only was our sojourn happy, but the descent also. We went along the summit-ridge to the E., descended to the S., came back over the Schwarzthor, and plunged down through deep snow. Then we reascended to Rotenboden—there to catch a train. I fancy we actually sang, for a fortnight of climbing weather had really been obtained !

NESTHORN AND FUSSHOERNER.

By H. BOOTH.

(Read before the Alpine Club, February 3, 1931.)

THE Ober Aletsch Glacier and the adjacent peaks have not received in recent times the same amount of attention as many other parts of the Alps. The Aletschhorn and the Beich Pass are the two expeditions made by most visitors to the Ober Aletsch hut. Consequently it provides an area where ordinary climbers can on occasion have the pleasure of not following in anyone else's footsteps.