

lonely ice pictures all carved out by a tropical sun, together form an unforgettable image (the illustrations of the 'Mountains of the Moon' in the JOURNAL<sup>6</sup> bear a striking resemblance with the corresponding ice formations in the Cordillera Blanca). According to what we have read of America, what Hein has related concerning the Cordillera Real and what I myself have seen, I must pronounce the Cordillera Blanca as the most beautiful and possibly also the most interesting mountain-massif in the Andes. Its peaks are, I think, as regards beauty and difficulties (not height), to be considered as almost equal to the mountains of Asia.

THE NORTH FACES OF JUNGFRAU, MÖNCH AND EIGER.

BY HANS LAUPER.

(Read before the Alpine Club, December 12, 1932.)

I HAVE been a sufficiently assiduous reader of the ALPINE JOURNAL to know that an invitation from the Honorary Secretary to read a paper before the Alpine Club could not well be refused. I cannot express adequately how much indeed I appreciate this great honour. But at the same time I cannot help feeling grave doubts as to whether I am the right man in the right place to-night.

Can I relate anything which might be of interest to an audience composed of 'la crème de la crème' of mountaineers? Never in my life have I realized how many pitfalls there are in the English language. And so I must begin my paper with an excuse: If I do not come up to your expectations,<sup>1</sup> I am not the only one to blame, but a good deal of the responsibility rests on the shoulders of our committee.

(1) *The North Face of the Jungfrau.*

If I am to talk of the N. face of the Jungfrau I shall have to go right back to the Golden Age of Mountaineering. The history of this face of the Jungfrau is part of the history of our incomparable Club, and therefore I need not go too much into details.

<sup>6</sup> *A.J.* 44, 94-5.

<sup>1</sup> The paper proved one of the most successful ever read before the Club.—*Editor.*



*Photo, 'Ad Astra']*

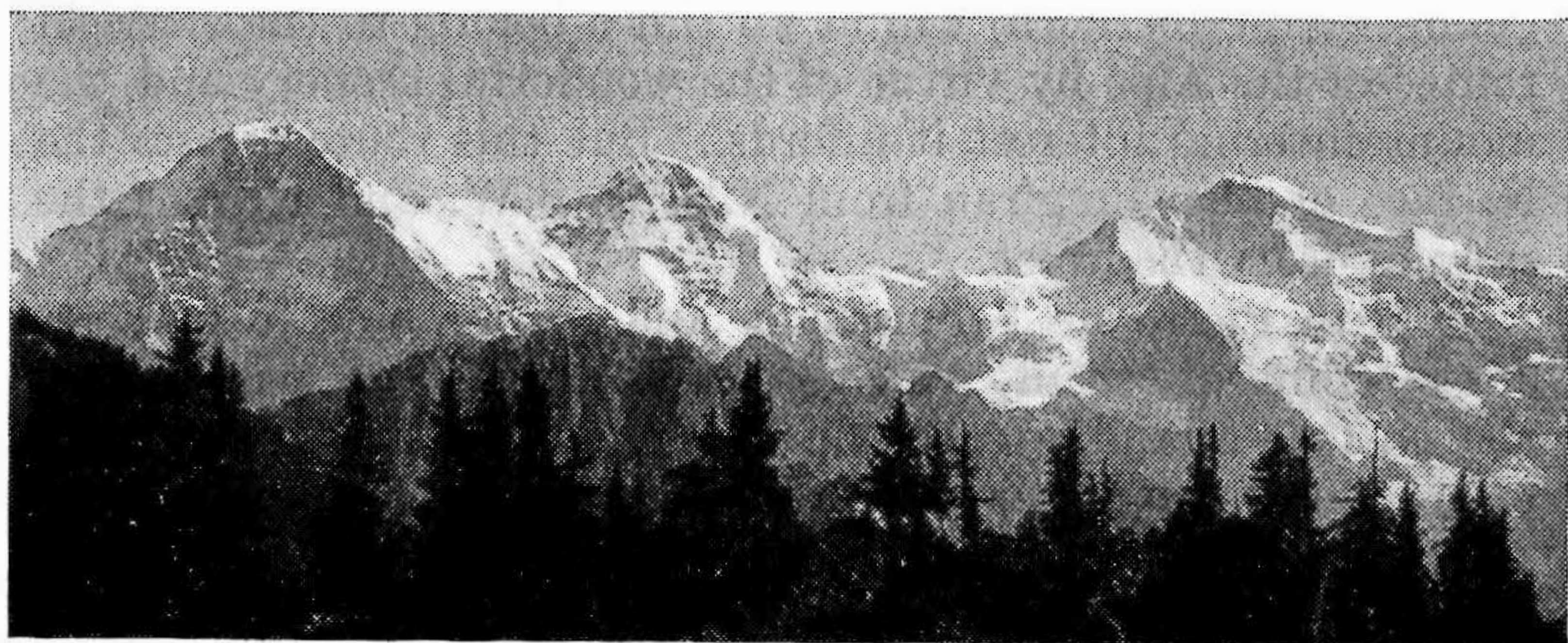
UPPER N. FACE OF JUNGFRAU, SHOWING 1926 ROUTE.

[To face p. 45.]

The late Captain Farrar in his very interesting paper in 'A.J.' 31, 210-17, has proved how, long before the first ascent of the Jungfrau in 1811, chamois-hunters of the Lauterbrunnen valley had been busy spying out the weak places of the great wall of the Jungfrau dominating their home.

But it was only after Tyndall's and Hawkins' crossing of the *Lawitor* in 1860, and after the first traverse of the *Jungfraujoch* by Leslie Stephen and his friends in 1862, that the N. face of the Jungfrau became really the centre for ambitious and, may I be allowed to say, qualified mountaineers.

In 1863, one year after Stephen's crossing of the Jungfraujoch ('A.J.' 1, 97-112), Herr von Fellenberg began these explora-



*Photo, Gyger.]*

THE N. FACES OF EIGER, MÖNCH AND JUNGFRAU.

tions by two attempts upon the Rotbrettgrat, that is the ridge which forms the western boundary of the N. face. On the second of these attempts, four days after the first, he was accompanied by G. S. Mathews. In 1887 Sir H. Seymour King, with Ambros Supersaxo and Louis Zurbrüggen ('A.J.' 14, 31-37), succeeded in conquering the overhanging step on which Fellenberg's attempts had come to an end, and in completing the ascent to the top of the Jungfrau. Ernst U. and Edward Gertsch, of Wengen, with Fritz Fuchs, were in 1926 ('A.J.' 38, 317-21) the first to reach the Rotbrett arête from the N., a climb which has since been repeated only once or twice. In 1865 the famous Alpine brotherhood of Hornby and Philpott climbed the N.W. ridge of the Gross Silberhorn, starting from a bivouac at the foot of the triangular wall of the Rotbrett ('A.J.' 2, 254-61). But they were forced by bad weather to descend from the Silberhorn by way of the Klein Silberhorn and Schneehorn to the Guggi Glacier and the Kleine Scheidegg. It

was only in 1926 that a tourist whose name is unknown, with two guides of Wengen, completed this ascent to the top of the Jungfrau.

Three days after the Hornby and Philpott climb, von Fellenberg ascended the Silberhorn by the formers' line of *descent* and spent a miserable night in the Silberlücke, but he too was prevented by bad weather from pushing forward.

A fortnight later H. B. George and Sir George Young ('A.J.' 2, 210-11) at last succeeded in making the first ascent of the Jungfrau by the 'Guggi route,' that is by ascending the Schneehorn from the Guggi Glacier, crossing the Klein Silberhorn to the Silberlücke and ascending the Jungfrau over the *Silbergrat* and the Hochfirn. This ascent of the Jungfrau (*via* the Schneehorn-Silberhorn) will at all times belong to the classical routes of the Alps by virtue of the wonderful scenery and the mountaineering interest it affords. But this route *crosses* the N. face of the Jungfrau from N.E. to S.W. and reaches the summit from the West.

In 1926 Pierre de Schumacher and I were able to find yet another line of ascent, which leads as directly as possible up the N. face straight to the final summit and is situated over entirely new ground, except on the top of the Klein Silberhorn, where it crosses the 'Guggi route' at right angles.

This ascent, which I had had on my programme for several years, very nearly remained an attempt too, as driving from Thun to Interlaken we smashed our car as well as a railway barrier by reason of the brakes not working. The car was so badly hurt that we just succeeded in pushing it over the rails on to the far side a few seconds before the express train passed! We had just time left to shoulder our rucksacks and run as fast as we could to Leissigen, where we caught a train at the very moment of its departure.

At Wengernalp I asked the man in charge of the telescope where the gamekeepers used to climb up to the Schwarzmönch, the rocky buttress N.W. of the Jungfrau. 'There is no use my telling you,' he answered, 'you would not be able to go up there.'

So we looked over the ground on our own account, and after an early dinner left the Wengernalp and descended to the Biglenalp. We then followed the upper band or ledge at the foot of the Schneehorn and Silberhorn and crossed the *Bandlawi* and the *Giessenlawi*. These are two avalanche funnels through which the Kühltal and the Giessen Glaciers discharge their ice. The crossing of these avalanche shoots

takes no time as the funnels are quite narrow, and is not as dangerous as might be argued, as the noise of the avalanches would give plenty of notice to take cover. A very lively description of these avalanches by Francis Galton, well worth reading, is found in 'A.J.' 1, 184. The ledges we crossed there are the haunt of numbers of strictly preserved chamois, which have their regular paths and trails on those shelves.

The climb up to the end of the little glacier at the foot of the N.W. arête of the Silberhorn is very intricate, but somehow we struck the right way. In the vicinity of the glacier we found a convenient sleeping place. The night was fine and not too cold in spite of the late season. Schumacher as well as I have considerable experience in bivouacking and even enjoy sleeping out. At 2.50 A.M. on September 20 we broke camp, got on to the glacier in a few minutes, and ascended it in a S.W. direction. The ground over which we advanced might be struck by ice falling from the little hanging glacier between the Rotbrett and N.W. arêtes of the Silberhorn. We went up as fast as possible, mounted a first rocky step at 4.0 A.M. and at 5.0 a second step which gave access to the névé leading below the rocks of the Silberhorn over to the central part of the Giessen Glacier. We crossed this névé in an oblique direction without step-cutting, although the inclination of the slope is considerable, and reached the end of a huge icicle which hangs down from the W. bank of the Giessen Glacier. At 5.35 we got round its sharp-pointed end and over on to its N. side by easy rocks. Turning back W., we cut a few steps up to the crest of this icicle. Ascending its ridge, much to our agreeable surprise we found the ice of such a convenient structure that in spite of the steepness we were only now and then compelled to cut steps. By 6.17 we had gained the Giessen Glacier on a little plateau. We had been going at a good pace and welcomed this resting place, where we had our second breakfast.

Leaving at 6.30 A.M. we aimed at what seemed from our standpoint to be the saddle between the Gross and Klein Silberhorn. The scenery was beautiful and the snow in perfect condition. In spite of some impressive séracs and huge crevasses we managed to advance without either much step-cutting or any considerable variation from a straight course. Finally traversing to the left over a steep snow slope, we reached the Klein Silberhorn at 8.30, exactly at the same moment as the sun touched it. The top of the Klein Silberhorn is a mere sérac hardly emerging out of the glacier plateau beyond.

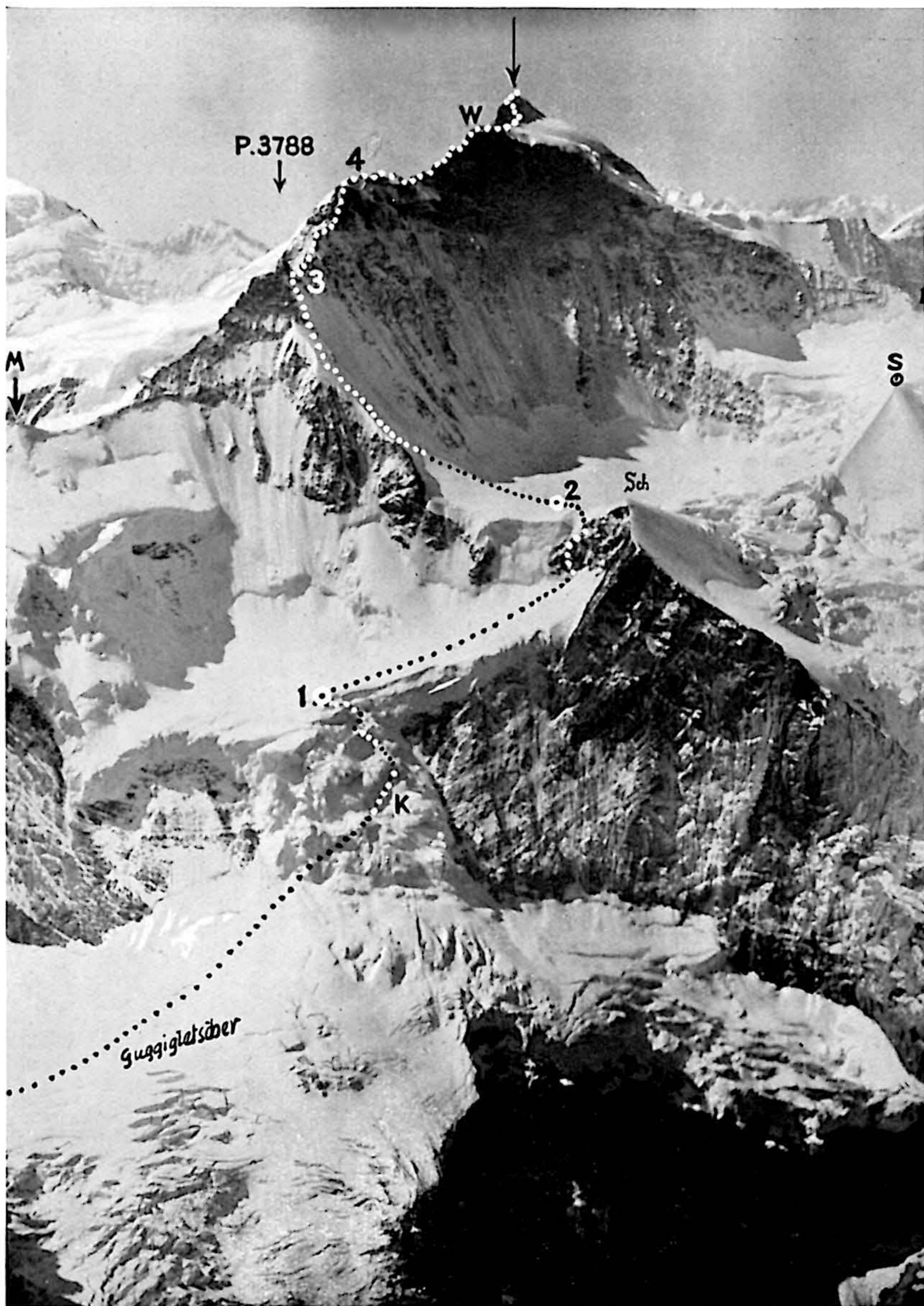
There, with plenty of time to spare and being in no hurry, we enjoyed a sunny hour of rest and meditation amid some of the grandest scenery in the Alps.

At 9.30 A.M. we started again. Great was the temptation to follow the ordinary 'Guggi route' to the top. But bravely we crossed it at right angles and soon gained the foot of a well-defined rocky spur which, slightly W. of the Wengern-Jungfrau (4060 m.), disappears in the ice of the Hochfirn. At first our way led us easily up a sort of natural staircase. Gradually the ridge became steeper and more exposed. Two characteristic red towers afforded two or three steps of really difficult and delicate climbing on account of their steepness and of the snow, which made hand-holds slippery and cold. At about 3900 m. there was an awkward step, forcing us to traverse out to the right for about 15-20 yards over rocks covered with ice, like a frozen waterfall, with an impressive view back over the Silberhorn, now far below, and into the green trough of the Lauterbrunnen valley. About 10 yards of easy rocks brought us into a narrow gully which widened like a funnel as we ascended. Soon the Hochfirn was gained just W. of the Wengern-Jungfrau, and 15 minutes later we reached the bergschrund, directly under the cairn of the Jungfrau.

A nasty cold wind had sprung up and made a halt more advisable here than on the very top. The weather became worse and worse while we rested, and when after 20 minutes we attacked the summit rocks and reached at 2.0 P.M. the top of the Jungfrau, it was quite obvious that a storm was brewing. We had accordingly to abandon our plan of descending to the Rottal, so at once began the descent towards the Jungfraujoch, which from the Rottalsattel on was attained in fog, rain and snow ('A.J.' 38, 315-6, with marked illustration).

We had been favoured with unimpeachable conditions and therefore the ascent over the N. face had been both easier and shorter than anticipated. As a matter of fact we had in all cut about two dozen steps only. But if the snow on the névé, which leads below the rocks of the Silberhorn over to the Giessen Glacier, or on the slopes up to the Klein Silberhorn, were ice, as is so often the case, or if this snow showed any tendency to avalanche, our line of ascent might be impracticable, or at least extremely dangerous.

On August 19, 1930, Christian Rubi found another way on the N. face of the Jungfrau. He *descended* with Herr Glättli from the top of the Jungfrau over the 'Guggi route' to the glacier plateau between the Klein Silberhorn and the Schnee



Photo, 'Ad Astra.')

[N. FACE OF JUNGFRAU, SHOWING 1932 ROUTE.]

K. = Kühlauenen Glacier : Sch. = Schneehorn : S. = Silberhorn : L. = Silberlücke :  
 M. = Mathildenspitze : W. = Wengern Jungfrau. (Left hut 02.10) P. 1, 04.45 :  
 P. 2, 05.40-06.00 : P. 3, 07.50-08.00 : P. 4, 09.25-09.40. Summit, 11.45.

[To face p. 48.]



*Photo, Gyger.]*

MÖNCH, N. FACE, 'NOLLEN' ON RIGHT.

horn. Bearing to the N.W. this party *descended* over the entire length of the Giessen Glacier. The glacier afforded, as was to be expected, a good deal of interesting ice work. Three *rappels* were necessary *en route*, and going at a very fast pace it took 3 hours to reach the rocks at the end of the glacier from where the descent was made to the Wengernalp, approximately by the route described in our ascent.

In 1931 (July 26) Christian Rubi, this time accompanied by Ernst U. Gertsch (of Rotbrett fame), descended over the little hanging glacier between the N.W. and the Rotbrett arêtes of the Silberhorn to the Rotbrettsattel and then to Stechelberg (*cf.* 'A.J.' 43, 376, with line of descent marked on illustration).

All that remained on the N. face of the Jungfrau was the combination of the 'Guggi route' with the ascent over the N.E. arête, as had been Andreas Fischer's intention as far back as 1909. As all the essentials of this climb, which Alfred Zürcher and I succeeded in accomplishing in August 1932, led by Joseph Knubel and Alexander Graven, are published in 'A.J.' 44, 325-7, I need not go into further details. May I be allowed only to add that this line of ascent deserves repetition, as it is a combination of ice and rock-climbing second, in beauty and interest, to none of the first-class expeditions in the Alps.

## (2) *The North Face of the Mönch.*

The climbing history of the N. face of the Mönch is as short as the topography of the face is simple. This face rises abruptly out of the much broken up Eiger Glacier. Up its eastern part there rises a small but well-defined rocky spur, while at a considerable distance W. of the summit the mighty buttress of the 'Nollen' descends towards the N.W., separating the Eiger from the Guggi Glacier. On this Nollen buttress at its lower end is placed the Guggi hut (S.A.C.), which serves as a starting point for the ascent over the 'Nollen' (that is the little hanging glacier half-way up the N.W. buttress) and for the ascent of the Jungfrau by way of the Guggi-Schneehorn-Silberhorn. The first ascent over this N.W. buttress fell to Herr von Fellenberg on July 13, 1866, with Christian Michel and Peter Egger ('A.J.' 2, 364; 6, 94), after a vain attempt by H. B. George and A. W. Moore with Christian Almer and two other men on July 25, 1862. In recent years the ice bulge of the Nollen has become less steep; it was climbed, for instance, last season more than a dozen times.

The ascent of the true N. face direct from the Eigergletscher station of the Jungfrau railway had been attempted by a German tourist, Herr B——, with Hans Schlunegger, sen., and Fritz Steuri, sen., in August 1920. Luckily for us, this party had to retreat at the foot of the mountain owing to the incompetence of the tourist.

On July 22, 1921, I arrived at the Eigergletscher accompanied by my friend, our fellow-member of the A.A.C.Z., Max Liniger.

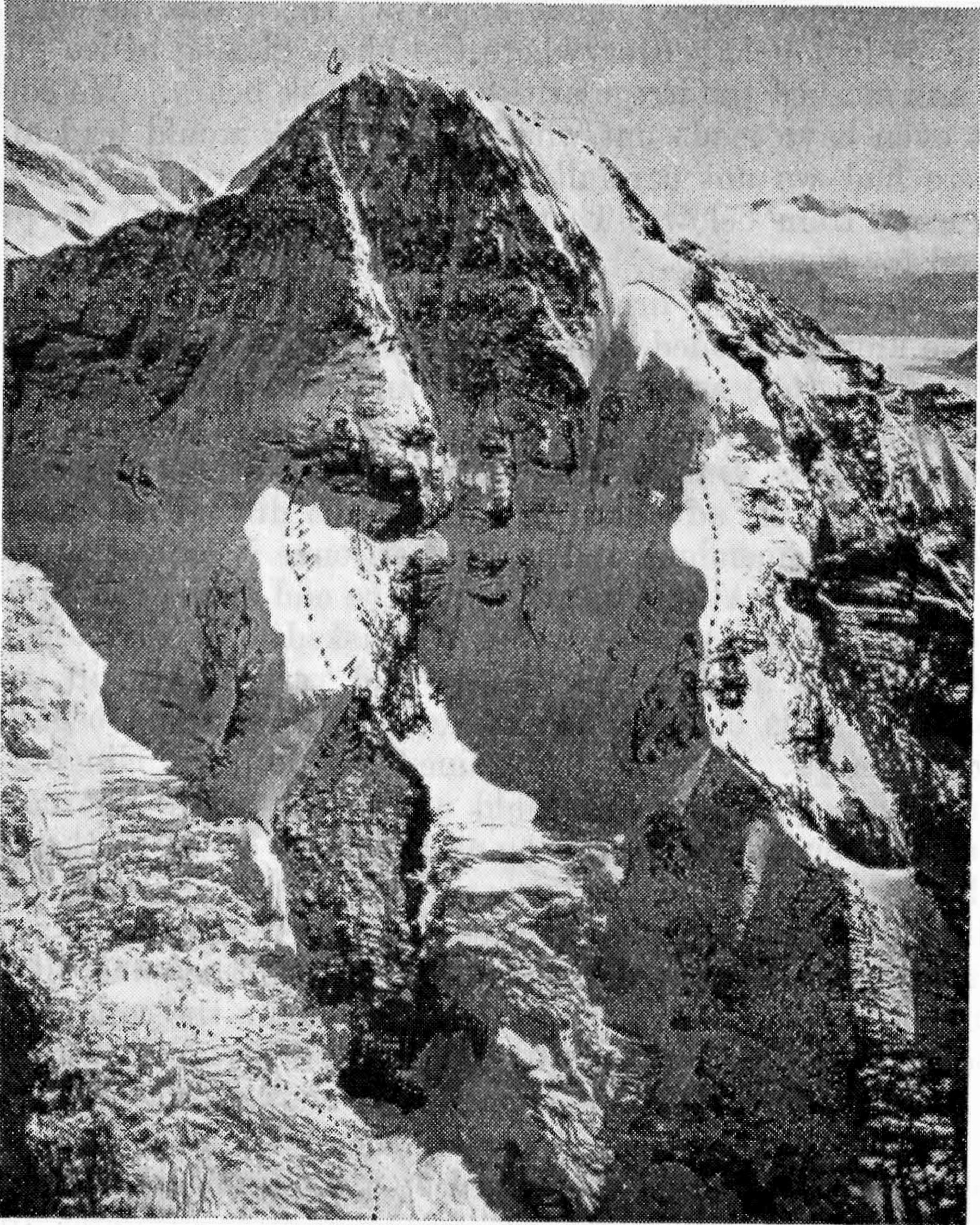
We started from Eigergletscher (July 23) at 1.45 A.M., descended to the extremity of the Eiger Glacier, where we put on our crampons and ascended without difficulty the steepening slope of ice. First we gained height at a good pace, but all too soon huge crevasses, invisible from the Scheidegg, barred direct ascent. Many a *détour* had to be made before reaching merely the icefall of the glacier where it flows through the narrow gorge between the Klein Eiger and the N. face of the Mönch. The scenery gained in grandeur as we ascended. To our right rose the terrific northern face of the Mönch, to which the gigantic crevasses, the ice pinnacles of marvellous form and variety gave an appropriate foreground.

At daybreak we found ourselves cutting steps up an icefall in order to gain a narrow ice ridge from which the next pinnacle could be attacked. A bold jump across a gaping crevasse was followed by delicate balancing along a narrow ledge to the point where progress again seemed possible. The icefall, which in 1921 was in the worst condition, yielded only by deep stratagem and craft to the most accurate diagnosis and determined assault.

Finally we emerged at the top end of the icefall and only a few insecure bridges had still to be crossed to reach the steep snow slope giving access to the rocks. These rocks were unstable and broken up, but at 7 o'clock we reached the conspicuous promontory well seen from below and on all pictures of the N. face. After a short rest we ascended a narrow snow ridge and a snow slope of moderate inclination. Where it became steeper the snow turned into solid ice. Bearing to the right and cutting steps, we approached what we rightly considered to be the key to our proposed ascent. The ice slope is cut off above by a perpendicular wall of black limestone rocks which has to be surmounted somehow. Three snow-covered, slightly ascending bands or shelves are inserted in this wall, but all seemed to peter out half-way up the step. We aimed at the second and best defined shelf, as we had observed that the rocks at its end were broken up to some extent. We expected to find there some way over the rampart, but at the same time

were determined to try the other two shelves if this should prove to be a blind alley.

Arriving at the shelf we found it broader than expected, about 3 yards wide, but it was filled up with ice and looked very



*Photo, H. Lauper.]*

MÖNCH, N. FACE, SHOWING 'NOLLEN' (RIGHT) AND 1921 ROUTE (LEFT).

awkward. Suddenly Nature seemed to have prepared the way for us. The many little rivulets flowing down during the daytime from the ice slope above the rampart had broken up the ice on the shelf, and here and there had even cut deep holes and cavities which provided excellent anchorage while we, ever so cautiously, traversed the ledge. This traverse was by no means easy, and very exposed. Finally we arrived at its end high above the huge gulf separating us from the N.W. or

'Nollen' buttress. What we saw before us was not at all encouraging. A rocky spur, projecting out of the wall, barred further progress, but at the same time, with the cliffs leaning out over our heads, formed some sort of a shallow gully unfortunately entirely plastered with *verglas* of the worst variety. Nothing could appear more hopeless; there was no decent hand or foot hold; everywhere the black glazing of ice filled up and masked the irregularities of the rock below. We could not even have made out whether this crack would lead anywhere had we not carefully examined these rocks with the telescope from below. Therefore without hesitation we prepared for the assault.

I jammed myself firmly up to the shoulders into the next of the aforementioned cavities, Liniger put his iceaxe into the loop of the rope around his waist, and precariously began to clamber and crawl up the crack, while I paid out the rope, securing it as well as the prevailing conditions permitted. Inch by inch he advanced in spite of the difficulties, but the effort was tremendous and more than once it looked as if he would fall off. At last he arrived at the end of the visible part of the gully. 'How does it look?' I asked. 'I can't tell you yet,' was his answer. Cautiously and very slowly, in order not to lose his balance, he reached for his axe and began to scratch steps. How he maintained his position, clinging to some slippery wrinkles, I could not understand. But nevertheless he succeeded in putting one foot into one step, then the other, and finally he disappeared high up on the wall. The whizz of the fragments showed that he was hewing steps, gradually I paid out the rope, and just as this was all but out there came a rancous yodel announcing the conquest of the gully.

I was not sorry to leave my shadowed nook, to the discomfort of which the suspense and anxiety about my friend's success had added considerably. Helped by a good pull from the rope above, I soon surmounted the first step and, climbing up in Liniger's steps, I discovered my friend sitting securely behind a big boulder on an outcrop of rock, the top of the promontory cutting off the second band or shelf. He had already found time to smuggle a cigarette into his mouth.

I did not proceed as far out to the right as he had, but taking the lead, I made for another but better defined cleft which, towards the left, led up over the second step of the limestone rampart. The difficulties there were still great, but the cleft was protected by an overhanging cliff, and therefore the rocks at least were dry. At last I scrambled up on to easier ground

but the rope being out I had to retrace a few steps before I could secure Liniger while he followed. We found ourselves at the lower end of a steep ice slope, and climbing cautiously up over rocks which slanted the wrong way, we arrived at a small but convenient platform and, as we most gratefully acknowledged, bathed in full sunshine. The worst lay behind us, but it had taken us nearly 2 hours to climb up this nasty step of little more than twice our rope's length. The day was fine and having revived our spirits by a hearty breakfast and a delightful pipe, we rested for the better part of an hour before setting to work again.

This was simple enough. For the next 3 hours we had to cut steps up a steep slope of ice, and ice it was of that hard blue sort so often spoken about but so seldom seen. In places the slope was so steep that hand-holds were needed. First we bore to the left, and then came back towards the middle of the face, where a little below the rock spur, for which we were aiming, we got on to a strip of good snow. This provided good purchase for our crampons, and soon after we reached the foot of the rock spur. We climbed up over a few quite smooth and rather difficult slabs on to the crest. Here we took off our crampons and rested for a few minutes. The ascent of the rock spur, set at a very steep angle, was at first difficult, but became easier as we ascended. As we gradually approached the N.E. arête of the Mönch, our crest showed a disagreeable inclination to merge into quite a steep slope of ice and snow. To avoid unnecessary step-cutting we crossed over to the next rock rib on our right. This afforded once more quite good but strenuous climbing and landed us on the sharp snow crest of the N.E. arête. The snow was soft, but in Liniger's steps, who had again taken the lead, I walked up almost without effort. At 4.30 P.M. we shook hands on the top of the Mönch. We had been *en route* for about 15 hours, including halts of 1½ hours.

For half an hour we rested, not talking or eating much. We just sat on the top, feeling that to-day was to remain for ever one of our finest days amongst the mountains.

(3) *The North Face of the Eiger.*

'Où il y a la neige on peut toujours passer.'<sup>2</sup>

DANIEL MAQUIGNAZ.

Early this year my friend Alfred Zürcher invited me to join him and his guides for a climbing season in the Bernese Oberland.

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<sup>2</sup> *A.J.* 26, 151.

For many reasons I was glad to accept. Zürcher had set himself a big programme, and until this had not at least partly materialized, I could not hope to air some of my own plans. The guides, Joseph Knubel and Alexander Graven, both old friends of mine, arrived from a 20 days' sojourn at the Gamba hut with Professor Graham Brown, and I daresay they were not at all displeased to exchange the scanty comforts of the Gamba for the many luxuries of the Hôtel des Alpes on the Kleine Scheidegg. The weather was bad at first, but judging from the records in sleeping we put up during this time, all four seemed badly in want of a good rest. Still, on one of these days we succeeded in going up Männlichen without even getting wet, and on this occasion obtained a fair view of the N. face of the Eiger. Both guides were very keen to try it on the line I proposed. But at the end of this week, with the weather improving, we set out for a 10 days' trip, which enabled Zürcher to complete his collection of four-thousanders by the addition of five more peaks. To me this tour brought the ascents of Klein Fiescherhorn, Agassizhorn and Dreieckhorn, which on all my many visits to the Oberland, I had somehow always failed to climb. Even to Knubel some of the peaks ascended were new, while it was Graven's first expedition in the Oberland. On Tuesday, August 16, we crossed the Eiger from the Mittellegi to the Jungfrauoch. This expedition, of which we all liked best the climb from the northern to the southern Eigerjoch, gave us another chance of looking at the N. face of the Eiger. At the Jungfrauoch Zürcher received a message which forced him to leave on business for a few days. The guides employed one of these days in a reconnaissance of the lower part of the N. face, returning shortly after lunch with a very optimistic report. 'We could have reached the top in 3 hours from where we turned back,' so they declared.

It may be well to explain here the topography of our mountain. The Eiger forms, roughly speaking, a pyramid with the W. arête running towards the Kleine Scheidegg, the S. arête connecting the Eiger with the Mönch and the N.E. or Mittellegi arête, which is described in detail in 'A.J.' 41, 282 *et seq.* There is a fourth arête, but only of secondary importance, descending from the top in a S.W. direction and forming at its lower end the Klein Eiger (3470 m., *Siegfried*). The S. face of the Eiger plunges into the Kallifirn in an 800 m. wall of slabby, nearly perpendicular rocks. The N. face is broken up by a kind of rib or crest descending towards Alpiglen in a true northern direction, from a point a little N.E. of the top and



*Photo, Gyger.]*

EIGER, N. FACE, SHOWING 1932 ROUTE (figures correspond with *A.J.* 44, 319).

*[To face p. 54.*



*Photographer unknown.]*

'EIGER WAND' WITH 1932 ROUTE TO LEFT. Figures refer to *A.J.* 44, 319.

which divides the whole N. face into two parts. One is the triangular western part, well known to visitors of the Kleine Scheidegg and the peaks of Männlichen or Tschuggen. This is the face commonly described as the 'north wall of the Eiger.' It is said to have been ascended once or twice as far as the windows of the Eigerwand station of the Jungfrau railway!

That part, E. of the ridge or above-mentioned angle, is formed by the northern slopes of the Mittellegi arête and the Hörnli. This face was climbed 60 years ago (*cf.* 'A.J.' 41, 282) to the *Mittellegipass*, the depression of the Mittellegi arête between the Mittellegi hut and the Hörnli. In 1894 Mr. C. A. Macdonald, with Peter Bernet and Christian Jossi, after an unsuccessful attempt on the Mittellegi, descended over this face from about half-way up the Mittellegi arête ('A.J.' 40, 329-30, with illustration). The lower part of the face between the Mittellegi arête and the eastern angle of the western half of the entire N. face is, generally speaking, concave, and in some places there are deep gullies raked by avalanches and stonefalls and interrupted by rocky steps. These avalanches feed the little hanging glacier marked on the map and called *Hoheneis*.

Many mountaineers must have looked at the N. face of the Eiger with more or less defined plans of finding a way up it. The late Captain Farrar wrote in his obituary notice of Johann Grill, *der Koederbacher* ('A.J.' 31, 265): 'As we passed Alpighen on our way to the Scheidegg our man (the *Koederbacher*) demanded to know whether the Eiger face had ever been ascended. We, keen to do the great Jungfrau traverse, were hard put to it to get him away.'

Of actual attempts, I only know of two. Some years ago (1924?) A. Gassmann and A. Fleuti, of the A.A.C.B., spent a night on the rocks at the foot of the N. face. They, as well as MM. Lagarde, Devies and T. de Lépiney, of the G.H.M., who, in July 1932, bivouacked no fewer than three times, were prevented from pushing forward by bad weather. I know also that some of the younger Grindelwald guides were keen to try it, and it must have been a hard blow to them to learn of our success. But very sportingly indeed they most warmly congratulated us on our return, and the Grindelwald section of the S.A.C. even sent to its member, Joseph Knubel, a very amiable letter of congratulation.

On Zürcher's return to the Kleine Scheidegg we decided to waste no more time and to attack the N. face on the next day.

On Saturday, August 20, we left the Kleine Scheidegg at 1.50 A.M., and followed the railway track for a quarter of an hour down towards Grindelwald. At the Red House, a little railway building well known to ski-runners at Scheidegg, and exactly 2000 m. below the top of the Eiger, we left the track and ascending towards the E. over meadows, scree and the last remnants of avalanches, approached the gigantic wall of the Eiger. High above us, but apparently strangely close, appeared the lighted window of the Eigerwand station of the Jungfrau railway. The guides had done their job well two days before and, without any hesitation, led us to the spot where the first act of the day's play ended and the second began. The pleasant walk was over and the difficulties were soon to begin, or at least the serious part of our climb. We roped up and at 3.40 attacked the first rock step. An oblique ascent to the right over slabby rocks led up to a ledge; a few more steps followed and then we bore back towards the left. A traverse, which in the half-light of the breaking day looked sensational but was found easy, led over to scree-covered ledges which we ascended towards the left, soon coming to the little hanging glacier *Hoheneis*. This we crossed in 10 minutes from W. to E. At 4.55 we ascended its eastern bank and climbed up a few abrupt steps remarkable for the disagreeable looseness of their rocks. Clambering up one of these steps we heard some stones rattling down from above. In a great hurry we rushed for cover beneath some overhanging rocks. We were unhurt, but assuming that a party starting for the Mittellegi arête had dislodged these stones, we all yelled out to attract their attention. Apparently we succeeded, as this was the only stonefall experienced the whole day. We were now about perpendicularly beneath the Mittellegi hut, and turned back to the right, S.W., to gain a big couloir or gully, which we knew had to be crossed to attain the snow slopes on the upper part of the face. Climbing up some more steps, but always keeping to our right, at 6 o'clock we arrived at a small ledge which, close to the gully, was well protected against falling stones by some overhanging rocks.

The view hence, although very limited, was extraordinary. Looking down we could see the last few steps up which we had just climbed. These already concealed the Hoheneis Glacier, and below these rocks only a few débris of avalanches could be seen before the eye rested on the green sunlit meadows and the toy-like houses of Alpigen. Above us some vertical steps barred the view and left visible only the top of some of the

higher teeth of the Mittellegi arête, towering upwards into the clear sky. In the direction of and across the gully, we saw the huge rocky buttress over which we had to find our way to reach the upper part of the face. I had always considered this promontory, standing out of the wall like a tower of a fortress, as being one of the questionable points of our proposed line of ascent. But now I noticed at once some sort of a chimney or rather deep-cut crack which, I felt, might be feasible.

According to the plan formed at the Scheidegg we had intended to rest for some time on the ledge where we now stood and prepare ourselves for the task ahead by a hearty breakfast. But curiosity—or was it rather nervous tension?—had grown to such an extent, that only a cup of tea was hastily swallowed, the hitherto short interval of rope lengthened, crampons fastened on to our boots, and on we went again.

Graven and I now took the lead, while Knubel and Zürcher stayed behind until we had reached the foot of the rocky buttress where we believed we were again safe from possible stonefalls. Our way led over steep hard snow and steps had to be cut. First we hurried straight up, then crossed over to some rocks which might have provided scanty cover in case of stonefall; then again up a few yards and finally, close to a barrier of rocks, *descended* again towards the foot of the buttress. In places the snow had already turned into ice and the crossing, especially of the icy floor of some gullies, called for much strenuous step-cutting. At last we reached the rocks; my friend and Joseph Knubel followed, while we kept a lookout for anything that might fall during their ascent. Soon they caught up with us, and after taking off our crampons we proceeded on our way. A few steps of loose rocks brought us to the crack, which we found to be quite deep. The rock was wonderfully firm; the climbing, although difficult in places, proved quite safe and pleasant. But streams of water poured down into our chimney from all sides, so that all got pretty wet in no time. Graven and I took off our shirts and put them into the rucksack to keep them dry, and in the heat of combat forgot to put them on again higher up. It was only towards evening, when the sun had disappeared behind the top of the Eiger and I was waiting my turn to climb up the last rock barrier, that the chill creeping up my back reminded me of this. But in that spot I did not care to undress and dress again, and therefore this very useful garment remained at the bottom of my sack up to the last snow arête before it could be returned to its original purpose!

There was one interruption in the crack which forced us to a short traverse out to the left, a rather precarious piece of climbing, on account of the wet and slippery rocks. But above this we re-entered the crack, surmounted two or three overhanging and not at all easy places, afterwards attaining some snow filling up the bottom of the crack, which now also became wider. But finding the snow to be soft and rotten, we preferred to leave the crack and climb the right-hand wall. We emerged on the top of the buttress and so to a well-marked crest, on the second step of which we found a good place to sit down for a rest and to make up for the breakfast we had forgotten lower down.

The rocks on which we rested (8.36–9.10) projected out of the face like a balcony and afforded an impressive view over the N. face down to the Kleine Scheidegg. The Wetterhorn looked at its best, seen behind the crags of the Eiger Hoernli and across the sweeping abyss of our face. Looking down on Grindelwald, I had for a moment the uneasy feeling of being watched through a telescope. But the only man who knew of our plans was Herr Seiler of the Kleine Scheidegg and he, a mountaineer, had, of course, kept his knowledge to himself.

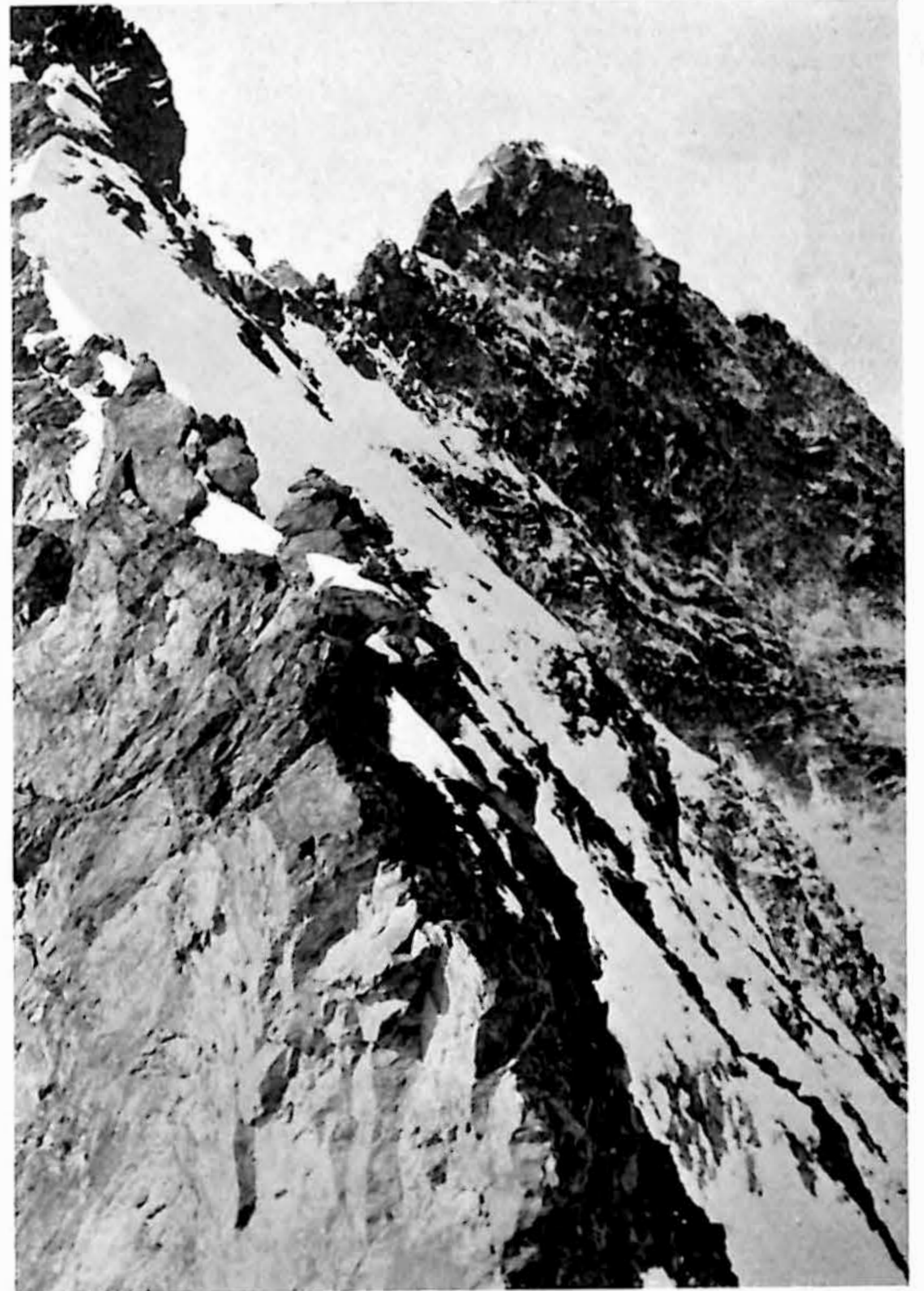
Our platform appeared to be still far below the level of the Mittellegi hut (3300 m.), which we could see across a steep snowfield perched, like an eagle's nest, on the narrow crest.

At 9.10 we were *en route* again. For a few yards, again on crampons, we followed the crest on which we had rested and then, cutting steps again, ascended more or less straight up the very steep snow slopes. Graven was still leading and accomplished all step-cutting in most wonderful style. Despite some places where the snow changed into ice, or where the snow was of that powdery sort forcing Graven to cut down into black ice, the conditions as a whole were excellent and our progress was rapid. As time went by we attained the steep snow slopes N.W. of the big gendarme of the Mittellegi arête and had to cross out to the right on to the crest descending from N.E. of the summit. This oblique ascent required unremitting care and constant attention on the part of all the members of the party. The slope on which we found ourselves was frightfully steep, and looking down I could see our tracks for only a few yards, the rest being invisible owing to the steepness of the slope. At last we approached the edge, and *descending* a few steps found a resting place very similar to but still a good deal more exposed than the one which we had left just 3 hours before.



*Photo, H. Lauper.]*

MÖNCH : M. LINIGER ON N.E. ARÊTE, 1921.



*Photo, H. Lauper.]*

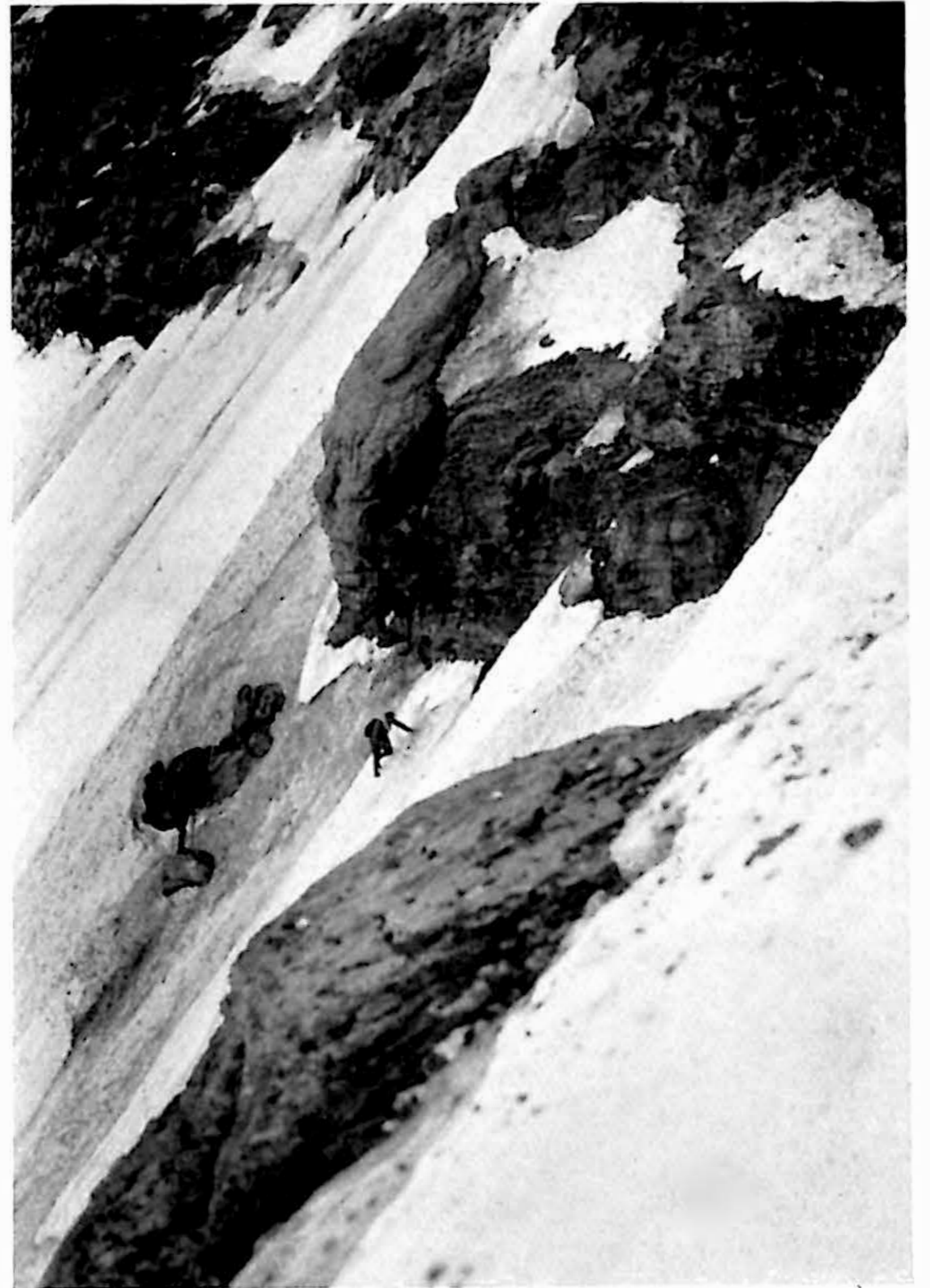
JUNGFRAU, N.E. ARÊTE.

*[To face p. 58.]*



*Photo, H. Lauper.]*

EIGER, N. FACE FROM P. 3.



*Photo, H. Lauper.]*

EIGER, N. FACE; AT FOOT OF BUTTRESS.

We were not quite as high as the big gendarme of the Mittellegi arête (3687 m.), but the fantastic abruptness of the cliffs at our feet, with Alpighen more than 2000 m. below and the appalling steepness of the snow slopes up which we had ascended, gave one the feeling of utter isolation. But Knubel, giving expression to that feeling with the remark, 'We are all of us a little bit crazy,' caused us all to laugh, although no one disagreed with him. We had now been more than 10 hours under way and there still remained a little more than 300 m. to be climbed. But we had also at least 7 hours' daylight before us and felt entitled to a good long rest and a solid meal. Forty minutes we halted before knocking out my pipe, and looking down for the last time on to the Kleine Scheidegg I followed Graven, who had already cut steps up a small and steep snow crest. Crossing diagonally upward to the left we aimed for a small strip of rocks far above us. Graven did not seem to like the rocks when finally he reached them, nor did he make rapid progress. It took him some time to turn the lower end of this rock rib, and after disappearing on its eastern or left-hand side he called down to us, asking for Knubel to follow him up. Zürcher and I accordingly had to wait in our steps while Knubel joined Graven at the base of the rocks, and apparently secured the rope for Graven. Next Zürcher followed his guide, using, like Knubel, the rope between Graven and myself as an additional hold, and only on his joining Knubel was I allowed to follow. While all three of us were stuck in more or less insecure positions at the end of the rock rib, Graven climbed up the eastern slope of this rib, which, to judge by his slow progress, was by no means an easy task. Knubel came next, followed by Zürcher. For quite a long time I stood there alone, my companions being invisible to me, and had not stones been dislodged on my left and had not the rope led up over the rocks, I should have felt as though I had been forgotten and left alone. But now Knubel's cheerful voice was heard again, telling me that my turn had come at last. I did not find the climb *too* difficult, but, of course, I was secured by Knubel and most of the loose rocks had been cleared off by my predecessors. On the top of the rib I joined my friends, finding Graven still ahead on yet another ice slope. Above this there was another oblique barrier of rocks forming on its lower extremity a conspicuous knob, which I thought I had observed previously, both from the Mittellegi arête as well as from the Scheidegg. This could not be far from the lower end of the snow arête forming the eastern border or edge of the roof of the Eiger.

As we approached this barrier of rocks we perceived a crack at its lower end, for which we headed at once. This crack was filled up with ice, the rocks were viciously loose and, in addition, there was an overhanging step on the top of it.

With kinked necks we followed the manoeuvres of Graven while he fought his way up, clearing the rocks from ice and throwing out loose boulders which swooped whistling down into the void. At last he disappeared over the top of the barrier, but the slowness with which the rope travelled showed that the difficulties were still considerable. I followed up to the beginning of the crack, with Knubel close behind me. The ascent of the crack itself was difficult enough, and when I finally emerged I found myself on another steep slope with Graven some 50 ft. above, just below some more rocks. He again asked Knubel to follow up, which the latter did, clambering up swiftly like a cat. Then Graven cut up a few more steps in hard snow and settled down to secure the rope. Was it really a grin of satisfaction on his face as he did so, or was I getting nervous? 'How does it look?' I shouted up to him. 'Oh, we are still far from the top!' And now I felt pretty sure he was smiling. But as Zürcher, who in his turn had had to wait a considerable time below the rampart, was asked to come up and I had to secure his rope, I was prevented from meditating on the meaning of Graven's friendly grin. Knubel and Zürcher followed Graven's rope, and from the noise they made on joining him I concluded that we had reached the final snow crest and had consequently won the fight. As fast as I could I hurried up and swung myself over the crest on to some rocks, 3.50 P.M. From this spot I at once saw the top. All that remained for us to do was to step up a nice snow arête of moderate inclination on to the N.E. or Mittellegi arête and then follow this to the summit of the Eiger.

We were not, as a rule, exactly a talkative crowd, but here, while we took off our crampons, swallowed some food and allowed a certain little flask to circulate, a joyous merry conversation ensued, which gave voice to the entire satisfaction of 'Herren' as well as guides concerning the climb just accomplished.

Our position afforded a good view of the upper part of the Eigerwand, but what we saw looked uninviting, nay even forbidding enough. 'Impossible?—Impossible, ne me dites jamais ce bête de mot,' the great Mirabeau is said to have remarked once.

At last the guides lighted the cigars for which they had

waited so long and which smelt as bad as ever. Then we strolled up over the last snow crest on to the N.E. arête and followed this to the top of the Eiger. Bright clouds played around the mighty head of the Mönch and the serrated N.E. ridge of the Jungfrau, while others crept up from the deep-cut trough of the Lauterbrunnen valley. The setting sun shot golden arrows of light from behind a dark bank of clouds away in the west.

The last gleam of this eventful day saw us hurrying down the western arête of the Eiger. Just before getting down to the Eiger Glacier we overtook a Belgian gentleman with his guide, who had started a few minutes *before* us from the Scheidegg and who was destined to enter the hotel nearly 3 hours *after* our arrival. So, for once, the usual tedious route up and down the W. arête proved to be a good deal longer an expedition than our way up the 'wrong' face!

Smoking a well-earned pipe in the dark, I walked down with my friends to the Kleine Scheidegg, where we were warmly welcomed by one and all.

My companions had long gone to bed and were sleeping the sleep of the just when I followed their example, with a grateful feeling of satisfaction at having had the good fortune to climb the N. faces of that renowned Trinity of noble Bernese Oberland peaks, the Jungfrau, Mönch and Eiger.

[N. face routes on Jungfrau, explanation of Herr Fahrni's sketch :

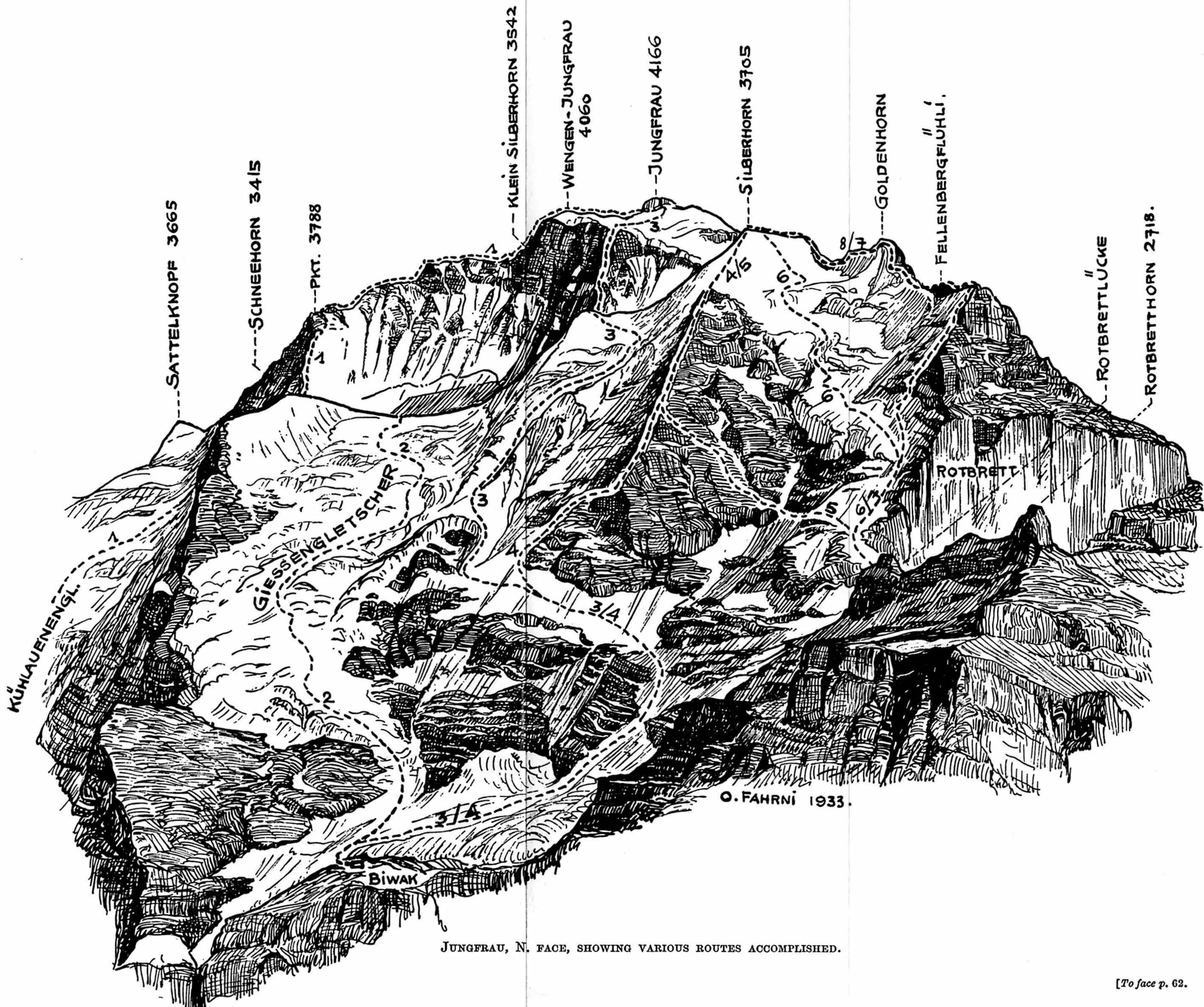
*Route No. 1.*—(a) Lower part is *Guggi route*, August 29, 1865, Sir George Young and Rev. H. B. George with Christian and Ulrich Almer and Hans Baumann.

(b) Upper part is N.E. arête 'attained from the N.' July 30, 1909, as far as Point 3788 m., by Dr. Andreas Fischer with Hans and Ulrich Almer. And, 'attained from the N. and followed to summit of Jungfrau,' August 23, 1932, by Herren Alfred Zürcher and Hans Lauper with Joseph Knubel and Alex. Graven.

*Route 2.*—August 19, 1930. Herr Glättli with Christian Rubi.

*Route 3.*—September 12, 1926. Herren P. von Schumacher and Hans Lauper.

*Route 4.*—September 8, 1927. An unknown amateur with Hans Gertsch, Rud. Brunner and Rob. Lauener.



JUNGFRAU, N. FACE, SHOWING VARIOUS ROUTES ACCOMPLISHED.

*Route 5.*—August 10, 1865. Revs. J. J. Hornby and T. H. Philpott with Christian and Ulrich Almer, Christian Lauener and Johann Bischoff.

*Route 6.*—July 26, 1931. Herr E. U. Gertsch with Christian Rubi.

*Route 7.*—August 24, 1926. Herren E. U. and Edward Gertsch with Fritz Fuchs. (*Rotbrettgrat* ‘attained from the N.’)

*Route 8.*—September 24, 1887. Sir H. S. King with Ambros Supersaxo and Louis Zurbrüggen. (*Rotbrettgrat* ‘attained from the W.’)

We are again indebted to Herr Fahrni for his admirably clear sketch.—*Editor.*]

## MOUNTAINS AND GLACIERS IN WEST PATAGONIA.

BY H. N. PALLIN.

‘In all high mountain climbing there remains an element of exploration.’—SIR MARTIN CONWAY.

HOW often it happens that one makes an acquaintance too late, becomes alive to an idea when the possibility of carrying it out is past; or that an idea develops so slowly that it has not time to mature before it is too late. True it is that this need not always happen or the matter be of such importance that it plays a decisive part in our future activities, but nevertheless I regret that I had not an opportunity before 1930 of reading Sir Martin Conway’s—now Lord Conway of Allington—extraordinarily interesting work on *Aconcagua and Tierra del Fuego*.<sup>1</sup> If I had had access to this work before or during my stay in South America in 1920–21, I should have had good prospects of making the interesting ascent of Aconcagua, or at least I think so myself. I had time and money at my disposal, and I was in a particularly satisfactory condition after the conclusion of an expedition in West Patagonia. In Lord Conway’s book one can follow step by step his splendidly simple, well planned and well carried out ascent of the mountain on December 7, 1898, during the almost incredibly short absence

<sup>1</sup> London : Cassell, 1901.