The Fight for Kangchenjunga, 1929.

By PAUL BAUER.

(*Translated.*)

PICKED mountaineers have assaulted Himalayan peaks for a generation. The last great fight for Everest enthralled the world. Since its tragic ending no one has striven for the greater heights ; it seemed as if mankind had found itself too weak to struggle upwards in such lofty zones. But this belief could not last ; a time had to come, another generation had to continue the struggle.

We, young German mountaineers, were left to ourselves ; the necessary effort had to depend on our own initiative. We had behind us the experience of those latter years of the World-War, of hundreds of trying mountain expeditions, some bordering on the limits of possibility, and, greatest of all, we were bound by an infrangible sense of comradeship.

In January 1929 we resolved to pit ourselves against the giants of the Himalaya.

All my companions were experienced mountaineers :[1] Eugen Allwein of Munich—the conqueror of Mt. Kaufmann—Peter Aufschnaiter of Kitzbühel, Ernst Beigel of Munich, Julius Brenner of Kaufbeuren, Wilhelm Fendt of Munich, Karl von Kraus of Munich, Joachim Leupold of Arnstadt, and Alexander Thoenes of Speyer. All belonged to the most enterprising class of Munich mountaineers and were members of the A.A.V.M., the fairy godmother of the expedition. The Central Committee of the D. & Œ.A.V. also assisted us.

Of the preparations for the expedition, entailing a vast amount of work, I will say nothing.

On the voyage through the Mediterranean towards India, we were uncertain whether our goal was Sikkim or the Central Himalaya ; we did not know whether we could obtain permission to enter Sikkim or not. A month later, in Darjeeling, our destination was settled, and we set out bound for the Kangchenjunga massif, without knowing, however, for certain whether we should be able to set foot on the mountain itself.

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[1] Dr. Bauer was leader of the 1928 Bavarian expedition to the Caucasus—*A.J.* **41,** 166-9.



Telephoto, M. Piacenza.

KANGCHENJUNGA, N.E. Face and Spur.

Our first duty was to ascertain whence the peak could be approached and how it could be tackled. The Nepal approach was out of the question, since permission to enter that State had not then reached us. Acting on information obtained in Darjeeling, I settled on the Gangtok-Lachen-Zemu Glacier route, choosing this plan out of the many proposed.

Following requests conveyed by letter, the Darjeeling secretary of the Himalayan Club, Lt.-Colonel Tobin, and Mr. Shebbeare, transport officer of the [1924] Everest expedition, had for weeks been collecting porters for us. Everyone, especially the Chief of Police, Mr. Landenla, assisted us to the utmost of their ability.

Three days after our arrival, the first half of the expedition—6 Germans and 44 porters, sirdar, cook, etc.—left Darjeeling. The second half, 3 Germans and 42 porters, followed two days later; with these came Colonel Tobin, who for the following weeks was our guide, philosopher and friend. Eight days later the head of the column attained Lachen and began at once preparing a path through the forests of the Zemu valley. Ten days later, August 18, the base camp (Camp III) was established on the Green Lake plateau at a height of 14,343 ft. Equipment and parties were ready, and we began the exploration of the N.E. side of Kangchenjunga, as well as testing our own fitness for so unwonted an undertaking: 3 Germans and 2 porters started for the Simvu massif, 2 Germans and 1 porter for the foot of Kangchenjunga, another party broke ground in the direction of the chain N. of the Zemu Glacier. The Simvu party slept the first night on the S. side of the Zemu Glacier—where it bends towards the S. at a height of 15,600 ft. It snowed in the night and thick clouds enveloped the party, so that only towards 9 A.M. could the steep N.E. moraine of the Simvu Glacier be ascended. The ice was then entered on at a height of about 16,000 ft.

Here, for the first and last time, the action of a porter delayed the party. However, the other porter, Lewa, added to his own pack the principal part of his comrade's load, leaving him some warm clothing so that nothing could happen to him. This casualty was sent back on the first opportunity. The Simvu Saddle was attained on the same day, where snow recommenced, so that camp had to be pitched lower down; here the missing porter, driven by hunger, rejoined the party. On the following day, turning some difficult places close to the saddle, the party bore upwards along the ridge of the Simvu Peak. Thick cloud boiled all around, and as this never

diminished during the many hours spent under shelter of a Zdarsky sack, a descent was made to the camp.

On the following day it cleared, with a temperature of — 11° (C.). Soon the Sahibs had again reached the ridge and for the first time perceived the summit of the Simvu Peak, from which they were separated, however, by a torn glacier lying considerably lower down. The ridge on which they stood led first southward over several elevations, each to be reckoned in the Alps as a separate peak, then eastward towards the main summit, in the then circumstances and time available quite impossible of access. An attempt was made to reach the nearest point, but the slopes were so steep and in such bad condition—fresh snow on ice—that they could not be touched. At a height of 18,500 ft. the party turned regretfully downwards.

The Kangchenjunga party, accompanied for part of the way by Colonel Tobin, was more favoured by weather, although only a short distance away from the Simvu detachment. The day was mostly clear, the fresh snow fallen in the night vanished in the early hours of sunshine. We had two objectives as possible routes: the E. arête leading from the Zemu Gap, and the N. arête connecting Kangchenjunga with the Twins. The E. arête is terrifically long, with many ups and downs, as well as terribly exposed to wind; it could only be attempted if quite free from technical difficulties, and, in any case, leads at the best to the second of the lower tops. The N. arête, on the contrary, rises regularly, is relatively sheltered and comparatively short. If it could be reached from the depression [2] between the Twins and Kangchenjunga, then was the best route up the mountain found. This hope, however, came to naught; from the depression a tremendous icy and corniche-crowned rock wall falls, at a terrible angle for some 3500 ft., to the Twins Glacier. Even if this wall could possibly be forced by regular assault, it was nevertheless obviously impracticable to bring up porters day by day, for weeks on end, in such an attempt! As a last resort we examined a spur splitting off on this side, high up from the N. arête, and plunging down towards the E. Its upper part was clearly feasible, but the reverse appeared to be the case with the lower. The 'Kangchenjunga' party, convinced of the impossibility of 'Munich Gap,' studied this N.E. spur

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[2] Colonel Tobin was kind enough to christen this depression 'Munich Gap.'

from both sides—from the Twins and from the upper Zemu Glaciers. The aspect of the lower part, crowned by many vertical ice pinnacles, was terrible. Gullies, clefts and ribs in the slopes of these pinnacles left, however, an avenue of hope, despite all appearances to the contrary. For a mountaineer it is the one remaining possibility of access to Kangchenjunga from this side, and the more closely I studied these pinnacles the more was I convinced of the possibility of this spur and of the necessity for an attempt.

The 'Northern' party had perceived from the elevation near Camp III (*ca.* 17,000 ft.), in the centre of the chain N. of the Zemu Glacier, another glacier flowing gently from a snow saddle in a W. to E. direction and of several kilometres in length, which then turned sharp to the S. Camp was pitched on a grassy terrace some 16,000 ft. high, close to the tongue of this glacier. The fine weather of the following morning soon changed for the worse, compelling an alteration of plans and an attempt on the nearest elevation of the chain. As this elevation, reached by an intermediate buttress, was attained (*ca.* 19,000 ft.) the weather became completely overcast, and the party, after a long wait, accordingly descended. The weather continued so bad for the following days that the party, having stayed for two days in camp, returned from their fruitless reconnaissance.

On August 24 and 25 we were all reassembled in the Base Camp. Our experiences had shown that equipment and party were sufficient. The porters had proved themselves. Although still in the monsoon season, the weather was very similar to an unreliable summer in the Alps; there were frequent but desultory storms. We had all, without exception, become acclimatized to altitude and had not belied our reputed capabilities of carrying heavy loads. Accordingly we felt ready to come to grips with Kangchenjunga. As Nepal was still closed territory to us—we should otherwise have explored the N.W. slopes of this tremendous peak from the Kangchenjunga Glacier—we began our assault on the N.E. spur, which had at any rate one redeeming feature, its immunity from avalanches.

The high-altitude porters were fitted out with clothes, boots, goggles, crampons, axes and ropes. Superfluous and useless men, among whom were 10 former Everest porters,[3]

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[3] It is but fair to add, as the Editor of the *Himalayan Journal* points out (*loc. cit.*, 1930, p. 18), that several of these men—notably

were left behind. We took 17 Sherpas and 8 Bhutias, of whom 5 only were on Everest. While Colonel Tobin started for Darjeeling by the Yumtso La and Tulung Monastery, we set off from the base in three parties composed each of 3 Germans and 6–8 porters. The dates were August 26, 28 and 30. While the first party pitched the advanced base camp (VI) at the foot of Kangchenjunga, at a height of 16,183 ft., making a route through the icefall above the camp, the last was busy with the forwarding of stores and remaining loads to Camp III.

A first attempt to scale the 700 ft. high icefall failed. The way led under threatening séracs and astride ice ridges as high as houses ; we even had to rope down on the return. This route, impossible for porters, gave us, however, a glimpse of the upper glacier basin leading fairly gently to the foot of the wall and the lower doubtful part of the precipitously rising S.E. slope of the N.E. spur. On the following day we found a feasible route further W.

As the last party reached Camp VI we were fairly sure of the route, without in the slightest degree comprehending what difficulties it might afford. We had trained the keenest porters in axe and crampon work, and especially in the manner of belaying themselves and rope management. From the uppermost glacier basin it did not appear impossible to attain the more level portion of the crest of the N.E. spur over its 2800 ft. steep slope or wall. From a fresh camp (VIIa, 17,749 ft.) at the foot of the slope under overhanging rocks, we tried to force our way. First zigzagging about over snowy ledges, under perpendicular steps trying to avoid stones and avalanches, we crawled slowly upwards. Great boulders, a cubic metre in size, flying into space compelled a sharp look-out ; we had nearly attained the crest when the weather worsened so much that a return became obligatory. On the following day a larger party, 4 Germans and 3 porters, started off up the same route, provided with bivouac equipment and food. Their duty was to prepare a fresh camp on the crest of the spur. The weather was perfect. What could only be seen dimly through thick cloud yesterday, now lay quite clear before us. The steep slope leading up to the lowest depression in

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Lobsang, who rendered splendid services on Kangchenjunga in 1930, and Sonam Tangay—had but recently returned from the fatally insane 'Farmer' expedition, during which they had narrowly avoided death by starvation. Namgya, my trusty 'personal' Bhutia in the 1922 Everest expedition, had been severely frost-bitten on that mountain in 1924 ; he also had to fall out early.—*E. L. S.*

the ridge was seamed with countless ice flutings between which rose sharp, serrated and corniche-covered ribs. The traverse of this slope, appearing possible only yesterday, now seemed impracticable. We tried to climb straight up, but soon the entire party of 7 stood spread-eagled one above the other on the smooth icy slopes without the slightest means of security. We came to a full stop. I now scrambled up to the leader, Allwein; the wall was very hard, it was impossible for all the party to proceed, especially as the last 5 were in the gravest danger of stonefall. Aufschnaiter and I at once led down the 3 porters, while Allwein and Thoenes tried to reach the ridge without packs. This attempt failed also, owing to steep slabs and treacherous snowy bosses. On the following day Allwein and Thoenes reached the ridge by a steep ice gully more to the right; this gully was too hard, however, for the porters, while the ridge, crowned by snowy hummocks 40–50 ft. high, falling away further on in a perpendicular gap 200 ft. deep, seemed impracticable.

Opinions in Camps VI and VII were very divided. I opted for an attempt on the E. arête from the Zemu Gap, but could not decide on the abandonment of the N.E. spur without a most determined attack. Accordingly we pitched camp 900 ft. higher up the slope or wall, for a last and conclusive attempt on the following morning. The porters had an optimistic feeling about the result; before returning to the lower camp, Keddar, grinning all over, produced a white veil from his breast-pocket and fluttered it over us as a talisman.

During the night, while distant lightning flickered with ghostly effect over the final pyramid of Kangchenjunga, we spoke somehow for long of a remarkable contrast—of the marble château of Hollebeke where we had lain in the front room around the piano on precious carpets stretched on marble friezes, while in the back rooms enemy shells exploded—and of its once occupier, Cléo de Mérode, who had certainly not deserved our thoughts here in the heart of the Himalaya!

On the following day the weather was uncompromisingly bad; still, a decision had to be taken now: no other choice was possible, we had to try to hew a breach in the countless snow bosses and force a slow progress up the slope to the ridge. The first man, well belayed, began his arduous snow labour. It seemed a hazardous beginning to trust to these vertically rising hummocks, springing many feet upwards from their slabby foundations. With time, however, progress was possible; icicles, thick as a man's arm, interwoven with

the névé, gave a quite unhoped-for security, even when profound chasms gaped out in the retaining curtain. The leader cut carefully upwards, 15 minutes at a time, to maintain his strength at this great elevation. At last, after 75 minutes, a way had been hewed through the first rib and up the gully, so contrived that laden porters could be fairly secured. Other leaders succeeded each other, but soon the labour had to be abandoned as small avalanches began pouring down the gully. We turned back care-free at the thought that we had discovered the necessary technique for making the formidable slope possible for loaded porters, even if we had not reached the crest that day. We had taught ourselves by a remarkable and new kind of ice-technique how to turn obstacles safely, and, above all, had learnt that even at this height it was possible to undergo the hardest step-cutting.

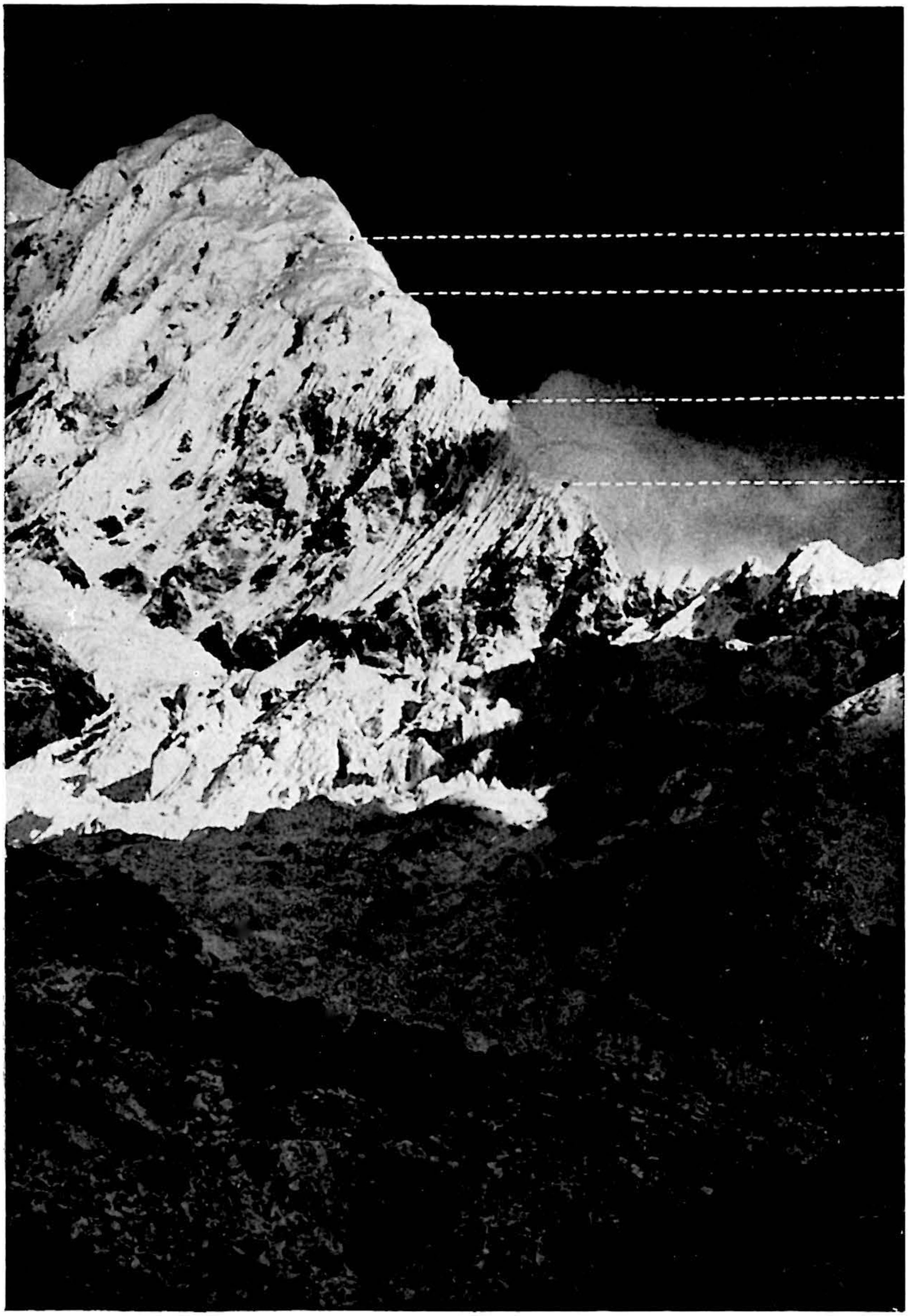
Further snowfall on the following day compelled a retreat to Camp VI. After one fine day, employed in another attack on the ridge, again a great snowfall occurred, and avalanches drove us to evacuate once more Camp VII. An entire day in deep fresh snow was spent in removing the equipment from Camp VII to VI.

On September 13 the weather at last cleared up, and fresh parties set out for the ridge. As it appeared highly questionable whether the difficulties of the N.E. spur—now becoming highly evident in the uppermost parts of the crest—could be overcome, it was settled that 3 Europeans and 2 porters should be detached to reconnoitre the approaches from the Zemu Gap. The first attempt towards the Gap, on September 4, had led to no conclusions owing to continuous bad weather. Camp VIIb was pitched at 18,569 ft. in the wall and christened the 'Adlerhorst' (eyrie), as it was placed on a rock barely 7 ft. square overhanging the precipitous slope below a tremendous perpendicular tower—the 'Winklerthurm.' We had *two* Camps VII. The first lower down, VIIa, was abandoned later on and we used only the upper camp, 900 ft. higher up, VIIb.

Two more days of strenuous step-cutting in ice brought us to the crest of the ridge and a scene of incomparable splendour. Nearly vertically below us lay the Twins Glacier, while slopes of 60° led downwards, on the further side, to the Zemu Glacier. Icy and shining pinnacles led upwards for 6500 ft. In a wide cirque above us towered the ice-slopes of Tent Peak, the Twins, Kangchenjunga, Simvu, above the two mighty glacier basins. Avalanches thundered in continuous icy

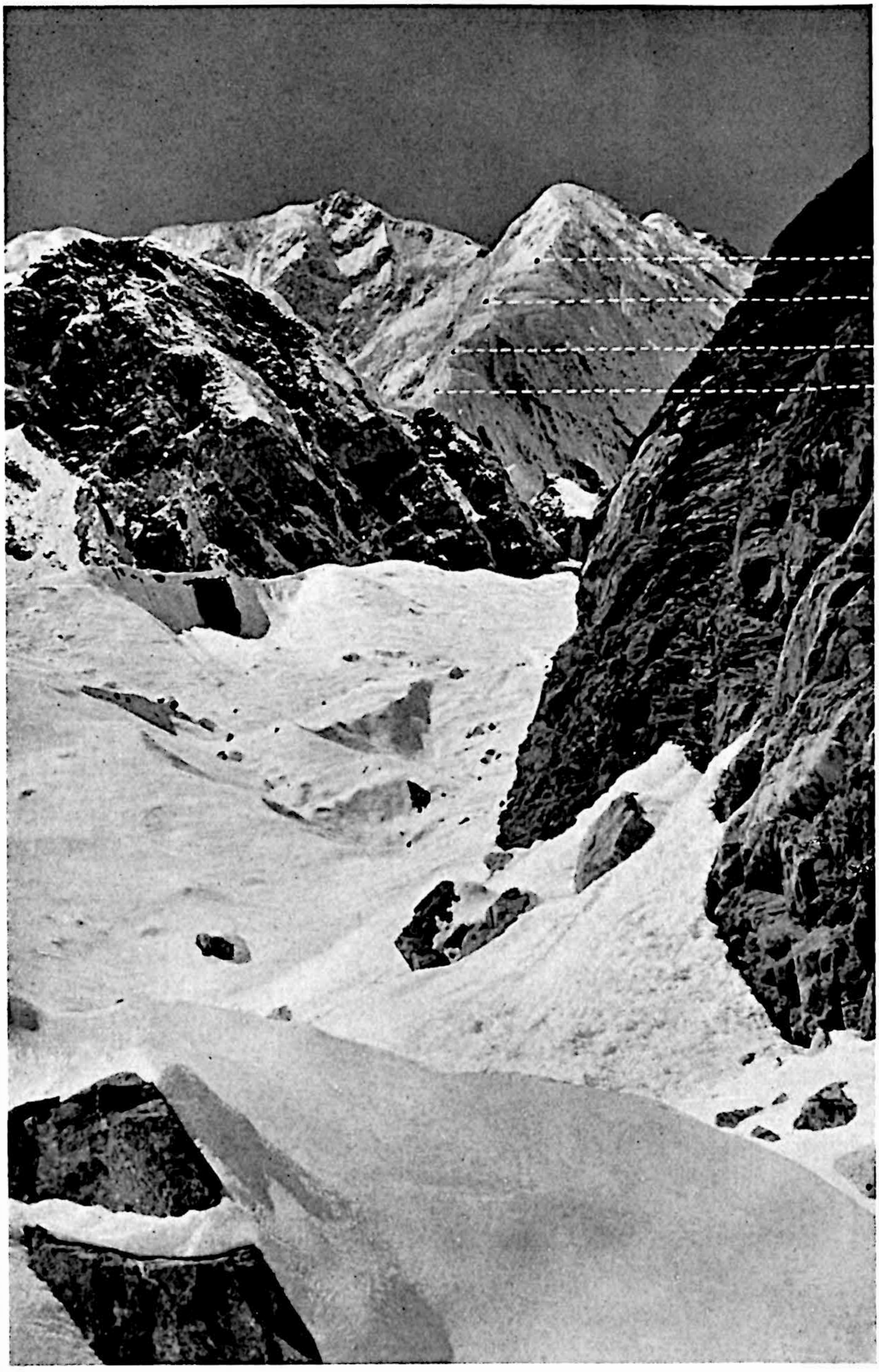
cascades down these faces, behind us endless glacier shapes swept into the dim and cloudy distance. For two days we toiled and struggled in conquering the three towers—so inconspicuous from below—on the level part of the ridge, and at last reached the base of the precipitous step. The Zemu party was now dissolved, since here on the spur every man was precious. The next day should have brought us at length to a snowy ledge in the great step which I had already fixed on as the site of Camp VIII. Night, however, intervened before we had quite reached its level. We were still about 300 ft. lower than some perpendicular gendarmes, impossible of negotiation at that hour. Bivouac material and provisions were dumped where we stood. The porters, belayed to a well-buried axe, watched us with astonishment scooping out a place for the camp in a corniche on the dizzy ridge. Then Aufschnaiter and Kraus descended with them to Camp VII, while Beigel and I settled down in our tiny tent. The spot was not altogether trustworthy, since in one place where the axe had been deeply driven, we could look down through a hole on to the Twins Glacier. We slept well, but at dawn great care was necessary in distributing our stiffened limbs properly while wriggling gingerly out of the insecurely pitched tent. Hardly had the sun begun to thaw us than we started on the first gendarme, hacking out layer after layer of ice from its flanks till we could force a way past it on the left and attain a névé slope at an angle of fully 70°. Two hours later this also lay below, and we had cut a good deep zigzag track through it connecting each icy boss with the next. A hundred feet below us lay the little tent, above us rose more ice pinnacles. A little ice crevice, enlarged by us into a chimney, brought us some 20 ft. higher up the steepest part of the névé, much hampered here by many corniches. By the early afternoon we stood at length at the base of the last pinnacle separating us from the first platform in the spur. We saw the ' shock troops ' (Nos. 2 and 3 parties) approaching from below with their porters ; quickly we levelled out a space on the terrace for our friends' camp, and then turned downwards as the spur now lay in shadow. Soon it grew so cold that danger of frost-bite became threatening. We met the other contingent, Allwein and Thoenes, with the porters Chetin and Lewa, just as they attained the terrace.

On the following day Allwein and Thoenes took on the pinnacles above Camp VIII, while Beigel went up from our little tent to that camp so as to bring down the two porters.



Photo, Bavarian Expedition.

N.E. Spur and Neighbourhood of Camp VI.



Photo, Bavarian Expedition.

KANGCHENJUNGA and N.E. Spur
from Twins Glacier.

It is perhaps of interest to relate that I felt very weak on this day, and was also unable to go up with Beigel. I lay in the tent for some time, but about 10 A.M. began cutting again round the first pinnacle ; at first I had to work slowly, but gradually increased the pace as normal power and health returned. All of us suffered once or twice from similar occurrences, arising evidently from over-exertion ; half a day's rest proved sufficient to recover from these lapses, even when leading to real bodily faintness. We Germans had only one case of true mountain sickness among us, but 2 porters could not be brought higher than Camp VII owing to this cause. Beigel came back towards midday with the porters, and we began to scramble up towards Camp VIII. A party led by Aufschnaiter and Kraus brought the news from Camp VI that Shebbeare had arrived there, convoying food and stores from Darjeeling. I went down with Aufschnaiter to see him, leaving Allwein, Beigel, Kraus and Thoenes to carry on the work.

Now came the hardest labour on all the N.E. spur. A few ropes' length above the tents of Camp VIII (20,737 ft.) came the base of the first 70-ft. perpendicular step. It had to be stormed by the crest. After 15 ft. of ice-work, there followed an overhanging crack filled with powdery snow leading diagonally upwards and to the left ; it was blocked by a corniche above. After flogging down the greater part of the overhang and corniche, a comparatively easy ascent was however assured. A short way along the crest there followed the second and harder pinnacle. It was scaled roughly by a short, nearly vertical ice runnel, a traverse to the left into a hollow, a steep ascent to the right back on to the crest, followed again by a scramble up the ice wall ending in a corniche. We christened it the ' Wendeltreppe.'

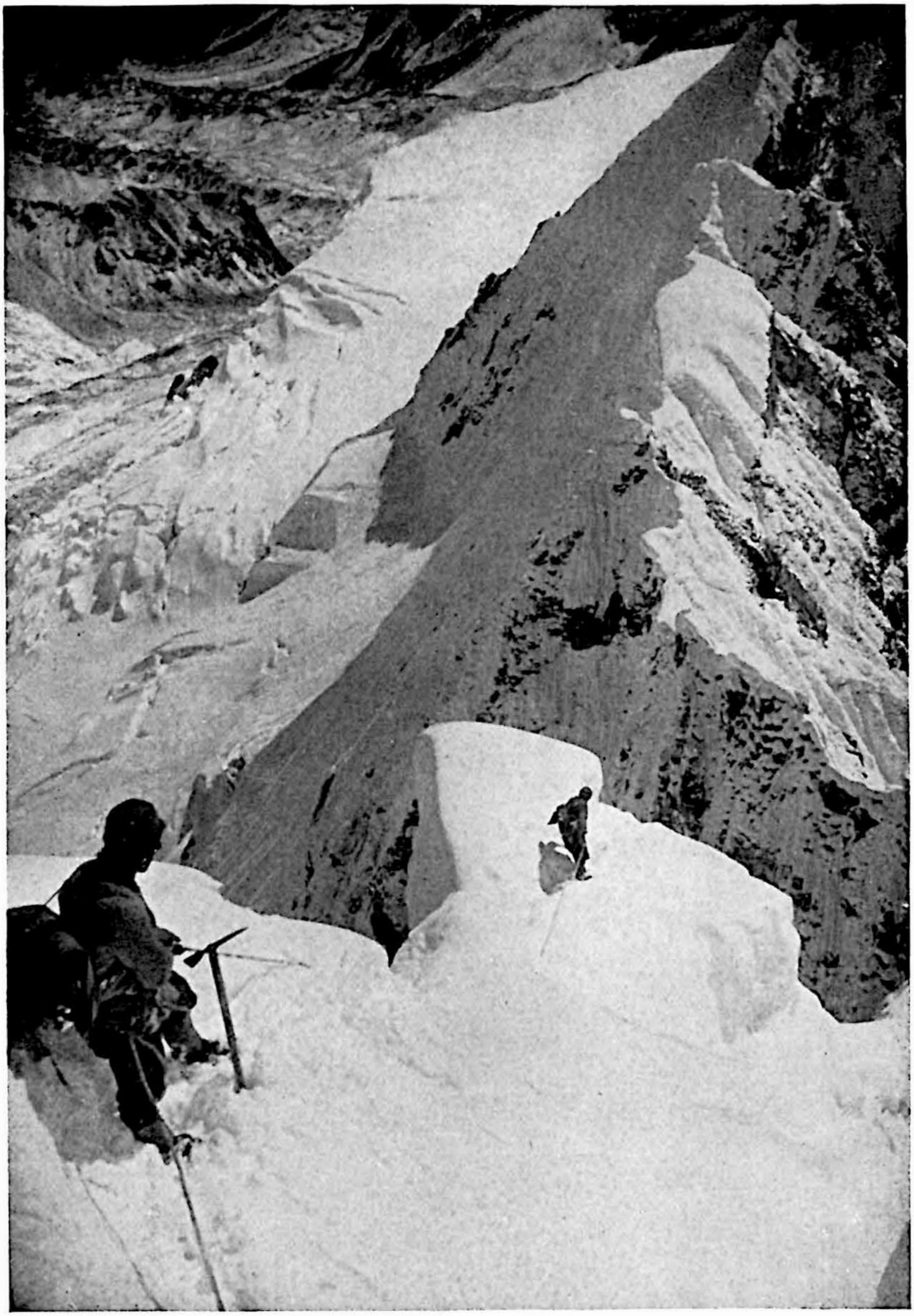
The following twin pinnacle is quite different. It hangs over the ridge like an enormous mushroom, some 120 ft. high. On the Twins' side rises a wall formed of wind-blown powdery snow above the overhanging bulge. It was dreadful work crawling up on the treacherous powdery mass poised above the nearly perpendicular Twins Glacier slope.

The next pinnacle gave us the longest work of all. Allwein's report reads as follows : ' On reaching the fourth tower on September 23, we were at first completely at a loss, the crest appeared vertical or even overhanging, so was the slope falling towards the Twins Glacier, and so indeed was the left flank as well. Yet on this latter flank depended our

only hopes, for a tiny ledge led upwards in the face crowned with a huge corniche furnished with a deep recess hollowed out of the ice in its centre. Higher up, the ledge soon ended under impossible ice overhangs, leaving no other alternative but from the said recess to burrow a shaft perpendicularly upwards through the wide-stretching corniche. We worked away the whole day at this tunnel, but on returning to camp at 4 P.M. the work lay still unfinished.

'On the following day we endeavoured to improve the route; corniches on the first and second pinnacles were still further abolished, thus making a quite convenient gangway. I crashed down enormous masses of overhang on the third pinnacle while Thoenes engineered it from below, till finally this originally difficult and dangerous pinnacle became the easiest of all. Then again we set to work on the tunnel, which Beigel finally completed in an hour's labour. He emerged first on to a narrow ledge under overhanging névé, then tried an aperture to the left but failed to connect. Thoenes next cut up a névé slope to the right, to the summit corniche, where I completed the task.

'On September 25 we stood above the long-dreaded 200-ft. gap. A great dizzy rib, corniched on both sides, leads to its foot. The rib was barely 2 ft. wide and the snow so soft that we could make no proper route and only beg the porters to follow exactly in our footsteps. The first step of the great succeeding tower is comparatively simple, although excessively fatiguing. A steep snow runnel leads parallel to this crest on the latter's S. slope; up this we struggled after clearing away enough soft snow to enable steps to be cut in the underlying firm névé or ice. We joined up together on a little shoulder half-way up. The final climb began with a steep zigzag which I hacked across the S. slope of the tower. After about 100 ft. there followed another upwards traverse to the left under and along a great corniche. The wall was fearfully steep above, the snow very deep, and my progress proved tantalisingly slow. The work always appeared easier a few feet above, but instead grew actually steeper. Beigel had long gone up round a tooth to belay me, and yet the final corniche would *not* come! Its conquest was exceedingly difficult, as its base was masked in masses of rotten snow in which I had to work my utmost to fashion reliable foothold whence to flog the corniche down. At last, even this hindrance was overcome and I stood again on the open crest—the last great obstacle was conquered. My companions followed quickly,



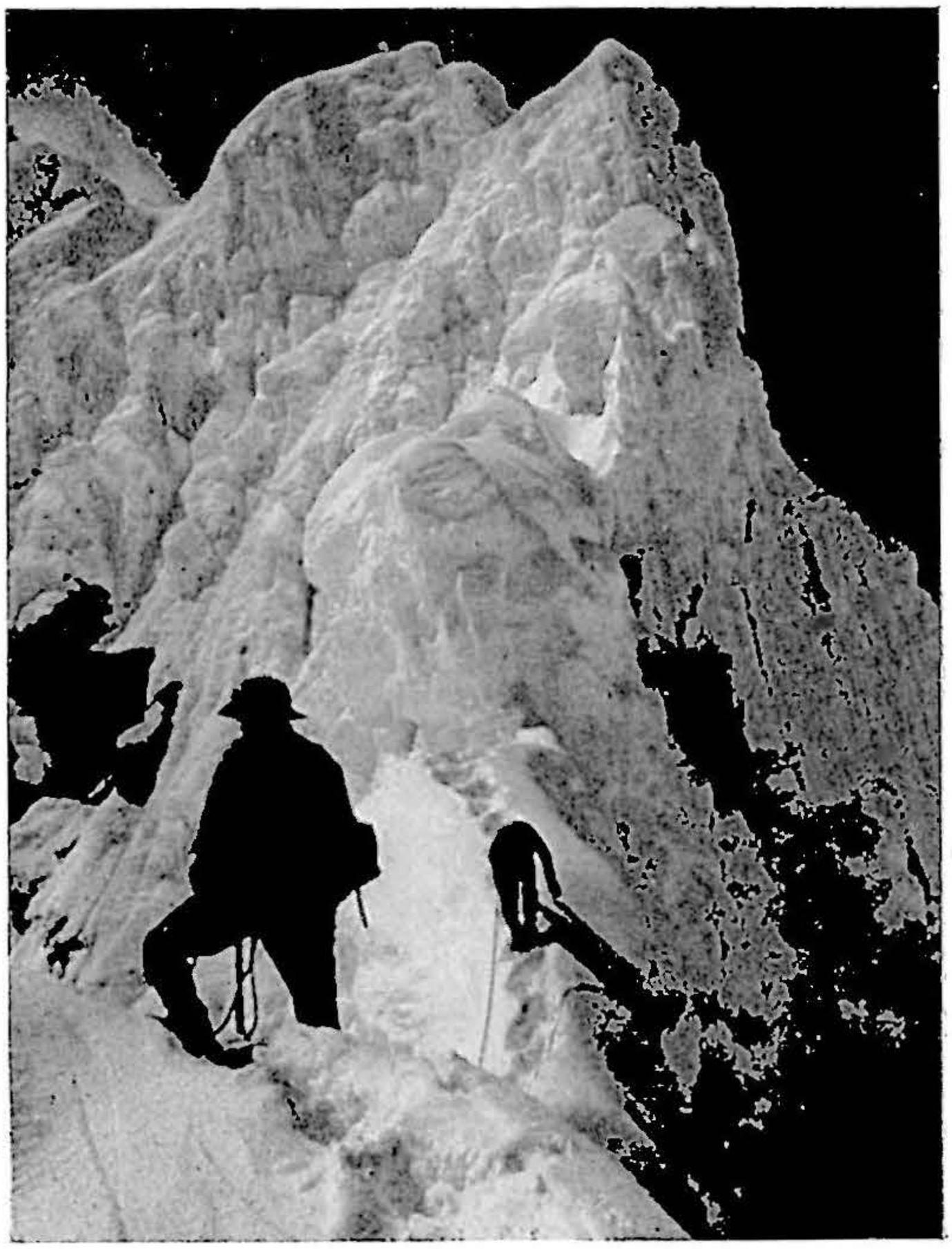
Photo, Bavarian Expedition.

N.E. Spur between Camps VII and VIII.
The "Great Step."



Photos, Bavarian Expedition.

Porters on N. E. Spur between Camps VII. and VIII.



Above Camp VIII., the "Tunnel" Pinnacle.

while Beigel went on yet another rope's length to where another small pinnacle compelled a turning movement in the deep powdery snow of its N. slope: we christened this the "Pulverthurm." We then hurried back to camp.

'The weather was now giving us some anxiety, snow fell nearly every day and on this occasion all night as well, lying on the following morning fully a foot deep: however, the weather became fine once more.'

On my return on September 26 to Camp VIII with Brenner, Fendt and 5 porters, the route lay open towards Kangchenjunga, the most doubtful part had been overcome. It had cost two weeks' labour; often had we started in the dawn with the hope of accomplishing our purpose on the same day, we had settled on signals and reports to the lower camps for the start of the assaulting columns and to give these any necessary fillip, but never could we give the signals! Fresh obstacles always cropped up. Until the conquest of the great gap was accomplished it had always seemed highly problematical whether real progress was possible at all. Now, however, we were sufficiently far advanced for the thing to be certain. Camp IX was pitched above the 'Pulverthurm.' We scooped out ice-caves in Camps VIII and IX, holding 6–8 persons. The porters were at first mistrustful of these newly invented caves; soon, however, they had to acknowledge their worth. The entrance was made as small as possible, the temperature in the interior sank rarely below — 2° to — 3° (C.), while outside it was usually about — 10° by day and — 20° to — 30° by night. Inside, the cave resembled a marmot's shelter, but 3–4 hours' work was necessary for two men to enlarge the cave to hold six; some 13 to 16 cubic yards of ice and snow had to be excavated.

Above Camp IX (21,712 ft.) there were no special difficulties. Two easier towers were soon made accessible, a few snow-slab avalanches broke away, but it was always possible to secure the leader so that he could not slip far. Only one wider slope entailed great precautions when first approached, but the danger no longer proved serious once firm steps had been trodden in it. Camp X (23,057 ft.) was pitched on easy and open terrain; an ice-cave was also scooped out there. Feverish preparations were now made for the final assault. Leupold, stationed at Camp III and commanding the lines of communication from Gangtok to Camp VI, sent up all necessaries, and was getting ready to take part in the attack himself. Beigel, in charge of the commissariat and thus

having the best insight into our requirements, descended with Fendt and Brenner to Camp VI in order to supervise the arrangements for transport above, while Brenner and Fendt took charge of Camps VI and VII. The rest all assembled in Camp X. The weather had become doubtful during the last eight days; there were no storms, but continual snow flurries intermixed with sunshine; a few clear hours every day, but no 24 hours' unbroken blue skies. According to all forecasts, October, the post-monsoon season, should bring settled weather and facilitate the start for the summit.

On October 3, while the last party, Beigel and I with the porters Keddar and Passang, returned to Camp X, and Thoenes completed the ice-cave of that camp, Allwein and Kraus went higher to reconnoitre and track out the route for the following day. Although the snow was not good—they often broke in knee-deep—they were able in an hour to accomplish about 350 ft.[4] They turned back at about 7400 m. (24,272 ft.). Their exploration gave the result that no more difficulties [5] were to be expected, but that owing to snow

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[4] Our height measurements were calculated from three aneroids, of which two were graduated to 10,000 m. and one to 7000 m. They were compared all through with two boiling-point thermometers kept in Camps VI and III, and consulted daily.

[5] Without in the very slightest degree wishing or venturing to detract from what was an astounding *tour de force*, we must nevertheless throw complete doubt on this optimistic statement. In the *Himalayan Journal*, 1930, p. 181, Colonel E. F. Norton, who has attained the highest *known* altitude, 8550 m. or 28,300 ft., states:

'Now the difficulties imposed by altitude only begin to be really serious from about 24,000 or 25,000 ft. onwards, both as regards conditions of the snow and rarity of the air.'

In an able article in *The Times* (August 9, 1930), Mr. F. S. Smythe writes: 'The Bavarians considered that they had overcome the principal difficulties. Such, however, is far from the case. These difficulties had scarcely begun. Altitude and its effects only begin to be serious over 24,000 ft., and being on the sheltered side of the mountain they had not yet begun to experience the terrible west wind which sweeps the upper part of the north ridge with such merciless severity. And last, but not least, is the final pyramid—a rock pile rivalling the upper part of the Matterhorn in its steepness and difficulty.'

These opinions are shared by all members of the Everest expeditions as well as by past and present explorers in the Himalaya. Dr. Bauer, having seen this note, writes: 'I know very well that there were difficulties, but the *technical* difficulties were not to be

conditions a further camp would have to be pitched in the neighbourhood of the first peak—at about 27,000 ft.—and the final and ultimate camp, XII, at the base of the summit rocks. If our friends had dreamt for a moment that their point would prove our ultimate record, they could certainly have raised it by several hundred metres. As it was they turned hopefully back so as to save their powers for the morrow, and at noon were down again in Camp X. The German height record [1929] was thus achieved during a morning's stroll.

At nightfall hopes ran high in our ice-cave. What we had hardly dared to expect—the approach of Kangchenjunga's summit—seemed now at hand. As the dawn of October 4 appeared the sky for the first time was covered with forbidding black clouds, a cold wind was whistling and light snow falling : by 8 A.M. it was snowing hard. We had to alter our plans and prepare for a siege. Kraus and Thoenes, together with the porters Lewa and Chetin, descended to save food in Camp X, and help Brenner and Fendt with the transport. By nightfall on October 5, as it was still snowing hard and no signs of improvement were showing, we began to realize with heavy hearts that the ascent of Kangchenjunga was now barely possible. Only a deliberate abandonment of our hitherto 'safety-first' tactics for a desperate assault might result in success. This would entail a complete break-up of our lines of communication and result in 'every man for himself.' The 'summit' party could no longer, as hitherto, be supported by a reserve ready to leap-frog in case of necessity. Even with instant improvement of the weather it would take days for a relief party to fight its way through from below to our support.

The plan was accordingly changed. As the weather appeared too bad for an attempt on the summit, we wanted at least to learn something of Kangchenjunga's N.W. side. Permission

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compared with those we had overcome. The wind was quite another thing, but I hoped to escape it in our ice-caves and wait for a calm. In August and the first half of September it was usually calm every morning till the afternoon ; some days were absolutely still throughout. The wind on the other side would, I hoped, compact the snow, giving us a comparatively easy walk. I know, of course, that altitude difficulties begin at about 7500 m., but I supposed we could get up to 8500 m. *without* loads, having carried 40 lbs. per man in deep snow at 7200 m. Anyway, my opinion is that any man who attempts the mountain is and must be an optimist ! '—*Editor*.

having meanwhile reached us to proceed through Nepal, I determined to avail myself of it and to send a party under Beigel on this duty, while Allwein and I, with the porters Keddar and Passang, would make our final and all-out effort. Hope smiled once more when October 6 broke unexpectedly clear and snow ceased falling for the first time for 48 hours. Beigel and Aufschnaiter descended at once, while Allwein and I with the two porters and four days' provisions started upwards. We had to capture the first peak at least! But even the start was unpropitious, for after two hours' hard work we had risen barely 250 ft. over the bad snow. The surface was wind-blown and only held until our full weight came on it; we then squelched thigh-deep into the flour-like stuff. Abandoning our loads, we struggled upwards for an hour and a half with the hopes of preparing a future route and obtaining a view. We had reached a height of possibly 24,000 ft. when retreat was determined on. The snow had to consolidate itself, and at least one more day was necessary.

As we stood once more in our ice-cave the atmosphere took on a most singular appearance. To the south a vast cloud-bank was forming at a height of 30,000–40,000 ft., while above Simvu and the Zemu Gap the sky became of an extraordinary sea-green colour—altogether a most threatening and terrible sight.[6]

Next day our cave entrance was again completely blocked up. It was snowing fiercely and many times we had to sweep the exit clear. By nightfall at least 7 ft. of snow had fallen and not the slightest change was apparent. A cataclysm of Nature seemed to foreshadow our doom. Any further attempt in the meanwhile was utterly out of the question, and yet with the goal so near we could not begin to retreat. Soon no other choice was possible, the Storm God was still piling snow on us, but, on the following morning, trusting to our powers and experience, we determined to 'wrestle one more fall.' The descent appeared humanly impossible, yet an attempt had to be made. Roped at the fullest possible distance [7] we fought our way down, leaving behind a furrow a man's height in depth. For a slightly *ascending* bit, not 150 ft. long, we took over two hours. Our unfortunate

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[6] See *Round Kangchenjunga*, p. 114, for Mr. Freshfield's description of strange atmospheric appearances heralding the great storm of September 1899.—*Editor.*

[7] 130 ft. between each man.—*A.J.* **42,** 76.

porters, laden each with some 80 lbs., sank so deep in their tracks that we, with our 40 lbs. load, had often to pass them and jerk them loose from below. The steeper slopes mostly peeled off in avalanches as the leader, tightly held from the rear, stepped on to them. The great and most dangerous slope, thank Heaven, had already avalanched: we went down a certain distance in the groove itself and thus saved a good two hours. Another slope, however, parted with Allwein and the two porters on it, but with a final and desperate effort I was just able to hold them. For ten minutes or more we lay motionless and exhausted before we could resume the fight. On our arrival at Camp IX we had to dig for half an hour before we could clear the ice-cave's entrance buried in 7 ft. of snow. Once inside we could lie still during the night, recovering our strength for the ensuing and most difficult portion of the ridge.

Next day things went wrong at the start. The porters were rather nervous and we could not get them down the great step. We led them back to the cave and, without packs, set out to render possible the traverse of the steepest towers. Next day we jettisoned a good half of our packs, throwing them down the 5000-ft. precipice on to the Twins Glacier; thus relieved, the party could re-attempt the struggle. At last the weather became fine; in spite of the weary labour it would have been pure joy to clamber along that wondrous ridge had we not been torn with anxiety as to our friends' fate, for nowhere on the ridge nor on the Zemu Glacier could we perceive a sign of living beings. At nightfall two days later, however, on entering the 'Alderhorst' we acquired the blessed assurance that all the 'ridge' party were at any rate still alive. Each of the two parties descending before us from Camp X had had a strenuous struggle. The porters kept falling heavily, avalanches poured down continuously. Beigel and Aufschnaiter had fared the worst; on October 7, the most trying day of the entire expedition, they were between Camps IX and VII. Alternately leading, each was swept off his feet in turn by the resistless downward rush of wind-compacted snowy masses. Once when traversing slightly below the crest, the leader slipped and was held only by the second man leaping into space on the reverse slope. This mishap caused the loss of both sacks and all provisions and bivouac material; both climbers had to spend the night on the ridge under a corniche without shelter of any kind. Beigel suffered severe frost-bite in his feet. All his toes and most of

the ball of his foot became blue and black. Although Kraus and Thoenes with two porters had rubbed them ceaselessly for two days, his feet could not be saved.

On October 12 we trekked from early dawn towards Camp VI. From the upper edge of the icefall we perceived tracks below us on the Zemu Glacier. Brenner, Fendt and the porters had made them to the base of the fall. The latter they could not touch owing to the danger of avalanches. There at the base they met us and relieved us for some hours of the packs carried now for five days. Joy and congratulations met us in Camp VI, although communications were unquestionably severed with below. A snowy curtain many feet deep and several miles long separated us from the Base Camp. It took four days to plough our way thither. Everyone carried their own particular pack; the Sahibs broke the trail, sinking in below their knees, the porters followed, while in rear came Beigel supported on two tent poles, silent and uttering no complaint. On the afternoon of October 14 we came, luckily, on Narsang and seven porters coming up from below.

Leupold had spent a trying time in the Base Camp; for more than 14 days he had been without communication with the upper camps. The porter parties which he despatched above returned days later completely exhausted, unable to force their way through the drifts. On October 17 we put an end to his anxieties, and he hurried down at once to Lachen to send up relief porters and organize the return transport. We struck the German and British flags which had for many weeks marked the site of the camp, and, heavily laden, bade farewell to the autumn-tinted, débris-covered glen.

At the snout of the Zemu Glacier a fresh weather catastrophe descended on us. For three days it snowed and rained without intermission; the snowed-up bamboos and rhododendrons rendered progress almost impossible. Beigel, who had been carried during the last few days' marches, had again perforce to walk. The mountains' slopes became literally alive, the walls re-echoed ceaselessly with the continuous rumblings of landslides. We stood on the margins of mud-shoots before rushing across between each fresh torrent, as the slimy stream subsided into its greasy bed. At the end of the forest zone Beigel could again be carried by six Lachen porters there awaiting us. One carried him on his back while the others supported the porter. Keeping perfect step the brown, barefooted natives galloped along

to the inspiring cry of 'Atsha! Atsha!' reverberating from the surrounding cliffs. On October 20, at midnight, Beigel and I, constituting the rearguard, arrived at Lachen. Dishevelled, dead-beat, our nerves worn out with the wild struggle against nature, with unkempt beards and covered with mud, we trod with heavy feet into the brilliantly-lit dining-room of the Lachen bungalow. Like a being from another world, a gentleman grasped us by the hand exclaiming, 'Oh, welcome, will you have tea or whisky?' Such was our reception by Mr. Patterson. I was so astounded that I seemed to recoil into civilisation spontaneously. My first drink was tea, but my second consisted of whisky.

We had to wait another day in Lachen because the porters had been compelled to dump the kits in the forest. The storm had caused such fearful damage to the Lachen path that its traces will be noticed ten years hence; the hamlet of Yatang further north was partly destroyed by landslides.

The trek to Darjeeling was henceforward but a joy, especially as our faithful porters could soon be allowed to march without loads, but our injured friend's condition caused us the greatest concern. Racked by fever, he had nevertheless to ride on horseback for five days, till at last by motor car and rail he could be carried to hospital in Calcutta, twenty days after his frost-bite. A fine constitution and an iron will kept him alive, and perhaps the cake presented to him by the charming wife of Colonel Weir, Political Officer in Gangtok, also helped! It was really the only thing he could eat on the whole journey from Lachen to Calcutta.

We met with a wonderful reception in Darjeeling. The Governor of Bengal honoured us with a luncheon party, while the Himalayan Club received us with a banquet in Calcutta, presided over by Major Kenneth Mason. A newspaper correspondent inquired from me whether I was 'disappointed'; his meaning gradually dawned on me and I had to smile. Well, certainly, we had failed to reach the summit of Kangchenjunga, but we knew we had achieved far more than we had dared to hope when leaving Munich. I will say nothing about our having beaten the German altitude record on Mt. Kaufmann by a clear 1000 ft., but we had found a route to Kangchenjunga, and had proved for the first time for certain that man, even at this height, can overcome the greatest difficulties and that the struggle against altitude can be carried to a far greater extent than had hitherto been deemed practicable. Also, from our weather experiences and observations it might

be argued definitely whether the monsoon season is not the *best* for expeditions among the greatest Himalayan heights.

The bitterness of defeat is effaced almost from my memory by the joy of the salvation of all our friends and all our porters; by the fact that between us nine, despite all weariness and exhaustion, there never was the shadow of a dispute, and that we stand still closer together than even before. The remembrance of warm comradeship, Germans and Britons allied together in the fight for the giants of the Himalaya; the knowledge of friendship, binding us with so many over there in India, will be with us for ever.

[We must again express our sincerest thanks to Dr. Bauer for the privilege of being able to publish the narrative of a feat without parallel, perhaps, in all the annals of mountaineering.—*Editor*, 'A.J.']

The Assault on Kangchenjunga, 1930.

By F. S. SMYTHE.

(Read before the Alpine Club, November 4, 1930.)

WHETHER or not Kangchenjunga is the second or third highest mountain in the world has not yet been ascertained definitely. Allowing for various corrections, such as refraction and levelling, it has been placed, unofficially, as superior by a few feet to its great rival K_2 in the Karakorams. Actually, allowing for the errors which are liable to creep into the most accurate Himalayan surveying, to say nothing of a fluctuating snowfall, and even the geological uplift stated to be still raising the greater Himalayan summits, it can be assumed that there is practically nothing in it one way or the other. However, according to the 'Himalayan Journal,' the *latest* heights are: K_2, 28,250 ft.; Kangchenjunga, 28,227 ft., with a possible error each way of 12 ft.

In a general way there are two types of mountain peaks: the mountain that forms its own massif, and possesses its own glaciers and valleys descending to low levels; and the mountain which is merely a point projecting above a complicated glacier system. Kangchenjunga is a good example of the former; K_2 of the latter. Everest stands at the dividing line between the two types. Only in height does it surpass Kangchenjunga;