CHAPTER XI

THE FIRST ATTEMPT: THE GREAT ICE WALL

We left the next morning, May 1, in good weather. The party consisted of Professor Dyhrenfurth, Kurz, Wieland, Duvanel, Wood Johnson, and myself. Hoerlin, Schneider and Dr. Richter were to follow in a few days ; the first two were not fit, and had been bothered by stomach trouble, whilst Richter was suffering from a strained heart. Hannah also was to follow in a day or so, and remain in charge of Camp One.

Whether or not the rest at the Base Camp had been as beneficial to the health of the party as had been hoped was doubtful. It is a curious fact that during the whole expedition we never felt really fit at the Base Camp. Probably, it was not so much the altitude as the damp and boggy ground on which it had been pitched, and the relentless winds and snowstorms that chilled us every afternoon. At all events, we were glad to leave it, and get to grips with our opponent.

In order to get on to the middle of the glacier, we had to thread our way between and over moraine mounds ; the route had, however, been facilitated by the erection of cairns the previous day by Schneider and Kurz, who had visited the glacier for mapping purposes.

For a considerable distance the gradient of the Kangchenjunga Glacier is a gentle one, and in five miles it does

not rise more than 1,500 feet. The day before, Wood Johnson and I had noted a snowy corridor running up the middle of the glacier, which seemed to offer an easy routes and this we gained after negotiating the maze of moraines.

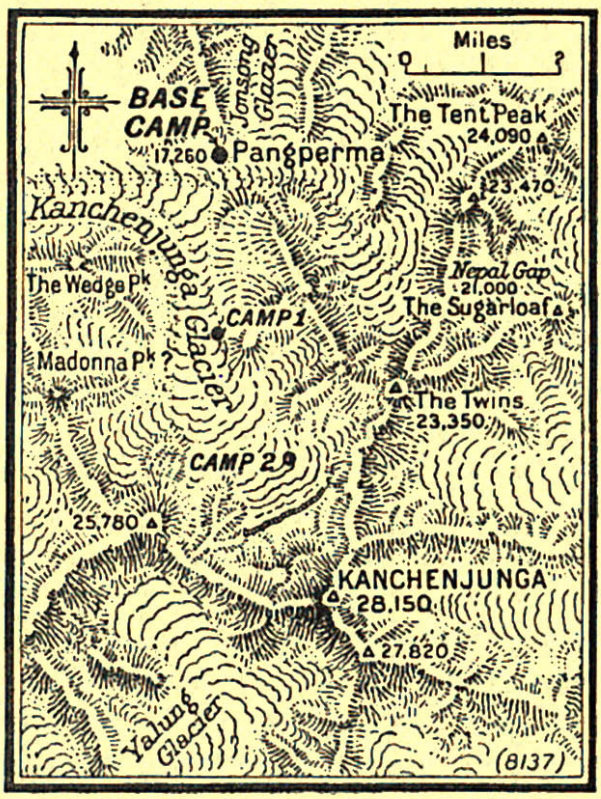
As we marched on up the glacier, the mountain wall, began gradually to shut us in on either hand. We were passing through the portals of an immense gateway into another world. Kangchenjunga gained in magnificence as we approached the foot of its northern face. From the Base Camp the edges of its hanging glaciers had looked but a few feet high, but now we began to appreciate their real scale—huge walls of ice hundreds of feet in height. Once there came the sound of an avalanche from the icy recesses of the great mountain ; its deep growl echoing menacingly from peak to peak seemed to threaten us for our invasion of these solitudes.

The corridor, at first wide, became a narrow trough through ice hummocks. The sun poured down upon us a fierce heat in which the snow became more abominable every hour. Once again we experienced the energy sapping effects of glacier lassitude.

Progress was slow, but there was no need for hurry, save at one place, where we were forced by the roughness of the glacier under the cliffs of the Twins. Here, the glacier was liable to be swept occasionally by ice avalanches discharged from a hanging glacier and we hurried across a level stretch which was strewn with fallen ice blocks.

The way became rougher. Presently, there came into view an unknown mountain to the west, about 23,000 feet high, situated between the Wedge Peak and the North-west Ridge of Kangchenjunga, on the watershed of

the western tributary of the Kangchenjunga Glacier and the Ramthang Glacier. Between it and the Wedge Peak a steep glacier flows downwards to join the main ice stream of the Kangchenjunga Glacier. It is a serene and stately mountain, with icy ridges converging to a summit of



By courtesy of *The Times*

purest snow. So impressed were we by its beauty, that we named it the Madonna Peak. This name was, however, subsequently changed by Professor Dyhrenfurth to Ramthang Peak.

The Indian Survey authorities have wisely decided to

adhere to native nomenclature in the Himalayas. They are justified in doing so by the fate that has overtaken the peaks of the American and Canadian Rockies, where anyone with any pretensions to fame, and sometimes none at all save to be the first to tread a summit, has dubbed his name (or it has been dubbed by admirers) to inoffensive mountain tops. Only in very exceptional cases is there any justification for this. Among these may be mentioned the case of a member of the Alpine Club, who, hearing that a peak had been named after him, considered it his duty to make the first ascent.[1]

We were anxious to see round the corner of the Twins, and up the Eastern Tributary Glacier to the North Ridge, but soon we saw that the glacier dropped so steeply above its junction with the main ice stream of the Kangchenjunga Glacier that no view would be obtained until we had mounted some distance up it.

The first object was to find a suitable place for Camp One. It was necessary to camp out of range of ice avalanches from the Twins and Kangchenjunga. The most level site for a camp was under the cliffs of the Twins, but as this was by no means safe, we were forced to pitch camp some way out on the glacier itself. Here the glacier was very rough, and there were several crevasses near the camp artfully concealed by snow. Professor Dyhrenfurth fell into one of them up to the waist. It was a deep one, and he was unroped. Had all the snow-bridge given way, the odds are he would have been killed.

A few yards from the camp we discovered another deep crevasse running in the direction of the camp itself.

[1] Mr. L. S. Amery.

Determined probing, however, failed to reveal any crevasse actually under the camp, so that there seemed reasonable hope that we and our tents would not disappear into the bowels of the glacier in the middle of the night.

We were a happy party in camp that evening. Happier than we had ever been at the Base Camp. The feeling of lassitude so often experienced at the Base Camp had disappeared ; we felt fitter and stronger. Most important of all, we were sheltered by the Ramthang and Wedge Peaks from the abominable afternoon winds. Only an occasional puff stirred along the snowy surface of the glacier. Higher it was different. Far above, the icy bastions of Kangchenjunga jutting defiantly out into space thousands of feet above our heads like the prows of some ghostly mid-aerial fleet, were being lashed by tortuous columns of snow spray. Thin shreds and sinuous tendrils of blown snow writhed from the crest of the North Ridge. Sometimes they would rise steadily, like smoke from a factory chimney on a calm day, the next moment they would be captured by the vortex of a local whirlwind, and drawn upwards convulsively, to vanish into the deepening purple of the evening sky.

For once the weather was kind to us. The evening snowstorm was a mild, desultory affair, lacking its usual venom. The sun gleamed through the gently falling snow, illuminating its crystals, until they gleamed like showers of diamonds distributed by the prodigal hands of the mountain fairies. At sunset, the clouds rolled back, leaving only light grey skirts of mist that clung to the knees of the peaks. The peaks took to themselves the splendours of

evening, and the snow around us gleamed opalescently with their reflected glories. We stood outside our tents entranced, and mindless of the cold. Blue deepened to purple, purple to ink-pot. Stars glittered frostily ; the low mists dissolved into the night. It was very silent, yet not quite silent. From somewhere came a sound, more felt than heard, like the distant surge of Atlantic breakers heard from far inland—the wind.

There was no mess tent, and we ate our dinner lying in our sleeping bags. A candle placed on my tin-box served to illuminate my own abode. At regular intervals the honest face of Nemu, with its habitual slightly worried expression, thrust itself between the flaps, and two horny hands would press upon me such delicacies as the cook thought fit to inflict upon us. These included portions of the yak Wood Johnson had shot, but I found them only suitable to sharpen a knife on for the next course.

I awoke next morning to see the sun stealing across the glacier, pushing before it the cold shadow of the Twins. With a short march in prospect, nothing was to be gained by starting until we were thoroughly warmed up. During the expedition, we did not once have occasion to leave a high camp before the sun had risen. To have done so on many occasions would have been to have courted frost-bite, and it was doubtful whether the porters could have been induced to start until the life-giving rays of the sun had cheered them.

Professor Dyhrenfurth had brought with him a small horn, of a pattern not unlike those used on foreign railways as a signal for the train to start. With this horn he was wont to arouse the camp in the morning. In theory, the

three blasts which he used to blow on it were the signal for climbers and porters to tear themselves from their sleeping bags. In practice, Wood Johnson and I would, if it happened to wake us, turn over with a sleepy curse and enjoy another forty winks. Finally, Wood Johnson managed to steal it, but shortly afterwards another one was produced. However admirable the intention, there is something abhorrent in being awoken thus on a mountainside in the morning. A more human method is for the leader himself to go round to the tents shouting into each one, "Get up, you lazy louts," or some such appropriate remark.

Leaving Camp One, we set out up the glacier, and soon reached the foot of the Eastern Tributary Glacier, which rises steeply from the main Kangchenjunga Glacier for some distance. Under the cliffs of Kangchenjunga it is considerably broken, and pours over a low rock cliff, down which the unstable ice topples hourly with thunderous roars. Under the cliffs of the Twins it was less broken, and extensively moraine covered, and we mounted it without difficulty.

Wieland and I were leading. Anxious to see the head of the glacier, and solve the problem that had been exercising our minds, we climbed as fast as possible. The going was simple, nothing worse than an occasional step to chop out. The slope eased off, and we stepped on to a level terrace of snow.

Leaning on our ice-axes, we regained our breath, gazing upwards at the same time. What we saw was doubly disappointing. Before us, the glacier rose in unbroken snow slopes set at a moderate angle, yet steep enough to obscure all but the crest of the ridge connecting Kangchenjunga to the Twins—the ridge we must gain. But what *was* visible was very unpromising. Here were no easy rock

shelves and snow slopes, but sheer ice-armoured precipices. Only the face directly beneath the highest summit of Kangchenjunga seemed to offer any hope. If the lower terrace could be reached, it might be possible to establish a camp there, traverse to the left, and climb a slope of 1,500 to 2,000 feet to the crest of the North Ridge. The slopes leading upwards from the end of the terrace did not seem so excessively steep as those dropping directly from the North Ridge to the glacier. Yet, we were looking up and foreshortening had to be taken into account. At all events, one could say offhand, the climbing would be decidedly difficult.

But how to reach the terrace? Did the ice wall defend its whole length? If so, what was the alternative? We were in a horseshoe of mountains. From Kangchenjunga on the east to the Twins on the west, the precipices swept round without a break. The sole alternative to attacking the North Ridge via the terrace was to retreat. Discussions and opinions were unnecessary. Optimism's flower was already withered as we trudged up the snow slopes.

The glacier here forms a trough into which the sun was beating with piercing intensity. To have gone up its centre would have meant lassitude in its most disagreeable form. On those concave snow slopes we would be like flies in the middle of a burning glass. Accordingly, we traversed the northern slopes of the trough. Even on these the heat was bad enough, but it was relieved now and again by puffs of cold wind. We came to crevasses, only occasional ones, but cunningly concealed in places, with only a slight ripple or depression in the snow to indicate their presence, and once or twice, not even that. The snow was soft, and stamping

a trail was hard work. We took turns at it ; a quarter of an hour at a time was enough.

Already we were beginning to learn something of the secret that makes for good uphill walking at high altitudes ; it is rhythm. Heart and lungs must keep in time with the movements of the legs. Each upward step must synchronise with the breathing. It does not matter how many breaths are taken to each step, as long as always the same number are taken. Once let this synchronisation fail, and it is necessary to stop and puff. The secret of maintaining it is a pace not varying by a fraction of a second in the interval of time elapsing between each step. To begin with, it is necessary to concentrate on the maintaining of this rhythm, but soon it becomes automatic. This is one reason why ground calling for a variety of pace is much more tiring to negotiate at a high altitude than ground on which the same pace can be kept up continuously. Above 20,000 feet it is much easier to ascend a snow slope in good condition than the easiest rocks, provided, of course, steps do not have to be kicked or cut.

As we rose, we were able to gaze up the Western Tributary Glacier. Like the Eastern Tributary Glacier, it falls in a steep ice-fall in its lower portion, but above the ice-fall unbroken snow-fields rise gently to a low col separating the Ramthang Peak from the Kangbachen summit of Kangchenjunga. The Ramthang Peak itself rises gracefully, but seen from this direction the Wedge Peak loses something of its grandeur.

Our pace was painfully slow, for quite apart from rhythm, or the lack of it, we were by no means acclimatised. Like the lower slope, the one we were on eased off

on to an almost level terrace. Above the terrace the glacier rose again, but this time it was broken into an ice-fall which appeared to extend its whole width. We decided to camp on the terrace, for there seemed little chance of getting through the ice-fall the same day, and the porters, like us, were making heavy weather of it in the soft snow under the broiling sun.

Now at last we could see the whole of the face separating the North Ridge from the Eastern Tributary Glacier. Our hearts—I know that mine did—sank, as we gazed at it. There was no question of climbing it. The only possibility, if " possibility " it can be called, was directly over the ice wall, under the face of Kangchenjunga. This runs as a clean-cut barrier 600–800 feet high for some three miles across the face of the mountain, but under the North Ridge it is broken up into a series of ice waves and subsidiary walls. At one place a steep shelf sloped upwards from left to right, but above it towered a huge mass of unstable pinnacles that were liable to fall at any moment and sweep the shelf from end to end with their débris. Indeed débris lying on the shelf and below it showed that such falls were a frequent occurrence. Even had the shelf offered an easy climb, the steep ice of its lower and most dangerous portion would necessitate a staircase being cut. The sole remaining " possibility " was directly over the ice wall, where it was most broken, but I must confess that until it was pointed out to me as such I had not given it a second thought.

It was a pleasant spot for a camp. The sun lingered long upon us. The only drawback to it was the fact that there were one or two concealed crevasses in the vicinity, but we

gave the porters strict orders not to go more than a yard or two from the tents.

Afternoon merged into evening, and the sun fought its daily battle with grey snow clouds. The cook was preparing the evening meal, and tempting odours were being wafted across the snow as, anxious to obtain some photographs, I strolled down the track for a short distance. Far beneath, the last half-dozen porters under the charge of Wood Johnson were toiling up the snow slopes. How small they looked, how painfully slow their progress. They halted ; I heard a faint shout. Doubtless they were glad to be within sight of camp. Now they were moving again. I heard another shout, and then another ; not so much a shout, as a curious high-pitched cry. This immediately struck me as strange. Men going uphill at nearly 20,000 feet do not waste their hard-won breath in shouting. There came a whole series of these cries. They seemed to come from a distance of a mile or so away, in the direction of the cliffs of the Twins. But between me and these cliffs the snow stretched unbroken, with no sign of any living thing on them. And still these strangely insistent, almost eerie, cries came.

Wieland joined me, and we both listened. An eagle perhaps ? Wood Johnson approached, and calling down we asked him if he heard them too. " Perhaps it is a Mi-go," he said, half jokingly, and then asked if Ondi, his servant, had arrived. I went back to the camp. Yes, Ondi had arrived, said the others. But where was he now ? There was no sign of him. At that the truth began to dawn upon us and Wieland and I hurried across the snow in the direction of the cries. Soon we came across a single track,

coming from the camp ; there were no returning foot-marks. We followed it cautiously. After a few yards the track ended in a small hole, not more than two feet across. Approaching it, we gazed down between the jaws of a crevasse. From the depths came a moan and a faint despairing cry.

We hastened back to camp. While Wieland returned with ropes and porters, I strapped on crampons in order to be ready to go down, if necessary. By the time I returned, a rope had been lowered. Fortunately, Ondi still retained sufficient presence of mind and strength to tie himself to it. With half a dozen sturdy porters hauling on the rope, he was soon dragged out. We quickly ascertained that he had no bones broken, but he had been badly bruised, his back and hands were skinned and bleeding, and he was half frozen and suffering severely from shock. He had fallen fully thirty feet before wedging between the walls of the crevasse, and had been down there for fully two hours. His extremities were white and numb, but we managed to prevent frostbite by massaging them. So severely was he suffering from shock, that, in the absence of Dr. Richter, I took upon myself the responsibility of giving him a double dose of belladonna. Whether or not this was the right treatment I do not know ; at all events, it sent him to sleep in a few minutes, and when he woke up next morning, he was much better and no longer suffering from the physical effects of shock.

It must have been a terrible experience for him, and many men less tough would most likely have succumbed. The next day he was sent down to the Base Camp, but after two days there he insisted on returning. Such was the

spirit of the man. But the accident had a lasting effect on him. Prior to it he had been an excellent servant in every way, after it he became morose and sullen, dirty and careless in his work. It was only towards the end of the expedition that he began to recover something of his old spirit. I hope that by now he has completely recovered from his terrible experience.

Night fell, accompanied by the usual snow flurry, but the weather next morning was perfect. Unfortunately, Kurz, who had been afflicted with earache and general altitude debility which had rendered him unable to sleep, decided to return to the Base Camp. This he did for a large part of the way on ski. Professor Dyhrenfurth, also, was not feeling well enough to continue. This left only Wieland, Wood Johnson, and myself.

As Professor Dyhrenfurth was anxious to attack the ice wall, it was necessary to establish a camp at the head of the glacier. It was, therefore, arranged that a day should be spent in working out a route through the ice-fall to the upper plateau of the glacier. With this end in view we set off in two parties, Wood Johnson and myself on the leading rope, with Wieland and a porter carrying a ciné camera on the second.

Traversing first of all towards the cliffs of Kangchenjunga, we turned up a snowy corridor. The difficulties and complexities of the ice-fall proved far greater than they had appeared from a distance. First came a short, steep wall of ice. This ice, like all ice we subsequently encountered on Kangchenjunga, was of a rubber-like toughness, and many blows of the ice-axe were needed to fashion a step. The work served to remind us once again that we were by

THE RESCUE OF ONDI

no means acclimatised to even this moderate altitude, 19,500 feet, and I felt my icemanship lacking in vim as Wieland, with a wicked grin, proceeded to post himself on a snowy hump and film my efforts.

Above this pitch we found ourselves on the lower lip of a huge crevasse, which appeared to traverse the whole width of the ice-fall. It was a formidable moat, several yards wide and not bridged by a single tongue of snow. Even supposing we got across it, it was by no means the only difficulty, for there were wider crevasses beyond equally formidable. As there was no possibility of crossing it on the left, I told Wood Johnson to anchor himself, whilst I explored as far as the rope would allow me to the right. The ice lip I was on writhed upwards sneeringly. There seemed little object in going on, but I gingerly ascended to its delicate crest. It was a happy move; for but a short distance farther did the ice-fall continue towards Kangchenjunga, before becoming lost in smooth snow-slopes offering no difficulty whatever, which led easily up to the plateau above.

We retraced our steps, and passing along the foot of the ice-fall, gained these snow slopes. There was certainly no difficulty in circumventing the ice-fall by this route, and a gentle walk took us quickly uphill. It was, however, not quite certain whether these slopes were entirely free from danger. Though we were separated by nearly half a mile of level snow-field from the foot of Kangchenjunga, the huge masses of hanging glaciers suspended on the great face of the mountain told of forces held in check which if released must result in avalanches of cataclysmic dimensions which might well sweep the whole breadth of the

snow-field. Indeed, one solitary block of ice lying near at hand and projecting through the newly fallen snow seemed to make this unpleasant possibility very real.

The reader may think that I am making much of the problematical, but one of the first lessons the Himalayan mountaineer learns is that exceptional forms of danger are more likely to encompass his disaster than ordinary forms of danger. In the Alps accidents usually occur through ordinary causes and neglect of ordinary rules. There is a certain mediocrity in Alpine dangers ; the mountaineer knows that in one place he may be in danger from falling ice or stones, and in another he is not. In a word, the Alps are a well regulated mountain range. They have passed through so many geological epochs that they have acquired a certain staidness of demeanour. The Himalayas are different, they are not entirely divorced from their catastrophic epoch. Their scale is so vast, their weather conditions so different that they are still capable of producing the exceptional. Thus, I think it may truly be said that until the mountaineer has learnt to appreciate the huge scale of things and the catastrophic size of ice avalanches his chances of annihilation are infinitely greater than on the most difficult Alpine climbs.

Tacking up the snow slopes, we reached the little plateau above the ice-fall. Having satisfied ourselves that it was the obvious site for a camp we continued on up towards the ice wall. We had not gone far before we came across more artfully concealed crevasses. Wood Johnson went through into one, but I had him so tightly on a rope that I was able to jerk him outwards and backwards almost at the same instant. The snow was soft and fatiguing, and we

decided that it would be best to return and save our strength for the morrow.

We descended quickly, and in less than an hour were back in camp. We had done what we had set out to do—to discover a camping site as high up the glacier as possible. We had also ascertained that there was no possible way to the North Ridge save over the ice wall and the lower terrace.

That night I was awakened several times by the sound of great ice avalanches. Heard thus, through the darkness, there was something indescribably menacing in their deep growls. It was terrifying to be disturbed from sleep in this way ; one felt pitifully small and helpless amid these vast and wrathful mountains. The porters felt something of the same, but in a different way. In the avalanche they heard the voices of the gods, in the moan of the night wind the jeering of the Snow Men. Once I heard a mutter from their tent, a low intonation rising and falling—they were praying.

The morning of May 4 was warm, sunny, and windless. Professor Dyhrenfurth was not well, he was suffering from severe high altitude throat, and could only speak in a whisper. These throats are induced by the dryness of the air, and the necessity for breathing through the mouth. The throat becomes painful and congested. At its best it is a nasty infliction, and reduces climbing efficiency considerably ; at its worst, it may be really serious. On Everest, Mr. Somervell's throat became so congested that he could scarcely breathe, and had he not been able to cough away the obstructing matter he might have been suffocated.

Professor Dyhrenfurth decided to return to the Base

Camp. Before leaving he gave us his instructions. As the route over the ice wall was the only way to the North Ridge offering any hope, we were to make every effort to overcome it. We were to establish a camp on the terrace, and attack the slopes above it leading to the North Ridge. Once on the latter, there were two routes worthy of consideration to the upper terrace immediately beneath the final rock pyramid. The first lay directly up the ridge. Immediately below the terrace, however, which at its junction with the ridge formed an extensive scree shelf, the ridge rose in an abrupt step which looked far from easy. The other route left the ridge below the step in favour of steep, crevasse riven slopes on the east face overlooking the Zemu Glacier. By crossing these, the upper and easy portion of the great rib attempted by the Munich party would be reached, and this followed to the terrace above the step. This route possessed the advantage of being on the leeward side of the mountain, and not exposed to the terrible west wind that constantly harries the North Ridge. On the other hand, the possibility of avalanches was not to be disregarded on this traverse, and the loose snow blowing over and off the North Ridge might well form wind slabs[1] of the most dangerous nature. If this was so, it would be best to keep to the crest of the ridge, but the great step below the upper terrace suggested something more than ordinary rock climbing difficulties, and by "ordinary," I mean the difficulties that a mountaineer may be expected to tackle with some degree of confidence at a height of 26,000 feet.

[1] The most treacherous form of avalanche : often found in the Alps during the winter months. The whole slope of wind-compacted snow comes away in a solid slab, which breaks up into a cataract of hard snow blocks.

THE RAMTHANG AND WEDGE PEAKS FROM ABOVE CAMP TWO

The reader must forgive me if the pictures I paint in his mind are done so with a brush steeped in the blues of pessimism, but the more we examined that huge mountain face, the more difficult and dangerous did it appear. Retreat in the face of such obvious difficulties and dangers would have been dishonourable neither to ourselves nor to mountaineering. After all, mountaineering is not to be classed with one of the modern crazes for sensationalism and record breaking at the possible cost of life and limb. It is an exact science, a perfect blending of the physical and the spiritual. It is not, and should not become, a desperate enterprise. There is no sport worthy of the name that has not its own peculiar risks, but no one has any business to walk deliberately into danger, and if risks are to be taken, they should be taken only by those who are fully alive to them.

Following our tracks of the previous day, we were soon up on the plateau. Leaving the majority of our porters to make camp there, and taking with us our personal servants only, we started off to the foot of the ice wall, accompanied by Duvanel with his little cohort of porters carrying various cinematographic apparatus and gadgets.

The snow had not improved since the previous day, and we sank in almost knee deep as we ploughed up the slopes. We kept as far as possible to the left, for the danger of ice avalanches sweeping the slopes to the right was obvious, and the ice blocks of former avalanches were strewn about them. Higher up, we were forced by some crevasses to the right for a short distance, but were soon able to traverse back to the left again.

As we approached the ice wall its magnificence

increased. It towered over our heads, cold and green, in tier on tier of ice, laced and friezed with snow. Immediately beneath it was an almost level terrace of snow about a hundred yards in breadth intersected longitudinally by a large crevasse. As far as we could see there was only one bridge over the crevasse, and that did not appear particularly solid. Driving two spare ice-axes into the snow, one on either side of the crevasse, we fixed a rope between them, which would serve as a safety hand-rail in the event of the bridge collapsing.

Beneath the lowest point of the wall was a clean-cut mass of ice some fifty feet high, under the shelter of which we sat down for a few minutes. It seemed a safe place in the event of anything falling from above. This lower mass could hardly count as a part of the main wall, and we were able to circumvent it on the right, and mount to its crest up an easy snow slope. It was at this point that the real work began.

Immediately above us rose an overhang of ice some eighty feet high. Above this was an icy shelf sloping upwards to the left and outwards to the edge of the overhang at an angle of at least fifty degrees. Above this shelf rose another sheer wall of ice. The shelf was the only break; we must gain it, and traverse it to the left to an easier slope that bore up to the foot of another ice pitch about one third of the distance up the ice wall.

The slope to the right afforded convenient access to the shelf. At first sight it appeared to be a snow slope, but actually it consisted of an ice slope evilly overlaid with a foot or more of floury snow. This snow had to be shovelled away, and firm steps cut in the ice substratum. It was an

easy enough place and a snow avalanche was not to be feared, but it took time.

The ice was, as usual, tough and glue-like, and an altitude of 21,000 feet discountenanced severe exertion. Wieland and I took turns at the cutting, whilst Wood Johnson and the porters enlarged the steps to the dimensions of Wapping Old Stairs. We drove three pitons in, and fixed ropes thereto to assist the loaded porters in the future. These pitons were of a special type advocated by that great German mountaineer, Herr Welzenbach. They are barbed like an arrow, and we drove them into the ice with a broad-headed metal mallet. This type of piton has fastened to its head an iron ring. In addition to pitons, we carried a number of clip-on oval rings. These we could attach to the permanent ring on the piton, and afterwards fix a rope through them without the bother, and possibly the danger, of having to unrope. The procedure was for the leader to advance, drive the piton into the ice, clip on to its ring one of the detachable oval rings, and clip the rope through the oval ring. Thus, he could be securely held on the rope at every stage of the step cutting. The detachable oval rings were not, of course, used to thread the rope as a permanent hand-rail. In this case, the rope was threaded through the piton ring, and then tied.

By the time we reached the shelf it was beginning to snow. The hours had passed like magic, and the afternoon was well advanced. Thus far, the work had been easy, it now became very different. First of all, it was necessary to cut out a secure "jumping off" place in the ice at the end of the shelf from which the party could be securely held if need be. Duvanel took this task in hand, and soon fashioned

a platform sufficiently broad on which to stand his ciné camera tripod.

It was while commencing to cut steps along the shelf that Wood Johnson's voice came up from below informing me that a hundred feet or so higher a large semi-detached flake of ice weighing a hundred tons or so was leaning unpleasantly over the route. I had already noticed this, and I am afraid, therefore, that I did not take Wood Johnson's information in the spirit in which it was meant, and after growling something about keeping up the morale of the leader and sundry damaging remarks anent the ice flake, which might justifiably have retaliated by falling upon me, I addressed myself once more to the task of step-cutting.

We were in a curious frame of mind. We knew that the place was dangerous. Had it been in the Alps, we should have gone back, but as the route was the only possible chink in the armour of Kangchenjunga the attack was persisted in, and the risks tacitly accepted. It was an understandable, yet false attitude of mind, but it is one that has warped the judgment of Himalayan parties in the past and will continue to exert its evil influence on other parties in the future. Suffice to say, that there will be many and terrible disasters before the greater Himalayan peaks are conquered, and before Himalayan mountaineering attains to any standard of sobriety.

Step-cutting on the shelf was weary work. First of all, the snow had to be cleared away, and beneath that a sort of flaky coating of ice before a step could be cut into the honest ice beneath. As in walking up-hill at high altitudes, so with cutting—rhythm. As each upward step in walking

must be attuned to the breathing, so must each swing of the ice-axe. It has often been said that Mallory had some trick of climbing at a high altitude. I wonder if this was a scientific cultivation of rhythm. Mallory was one of the most graceful climbers that ever lived, and grace is the child of rhythm. It may be that the rhythmical grace with which he was wont to climb on the most difficult rocks of Great Britain or the Alps proved of inestimable value to him on Mount Everest.

A spell of twenty minutes' cutting was sufficient. I returned, and Wieland took my place. Twenty minutes' cutting, a few hard-won steps; it was not much. It was now snowing hard, but fortunately there was no wind, and it was reasonably warm.

Through the murk the great ice wall loomed coldly hostile. I have experienced fear many times on many mountains, but never quite the same dull, hopeless sort of fear inspired by this terrible wall of ice. I have often had occasion to remark how like men mountains are ; some are friendly and others unfriendly. Kangchenjunga is something more than unfriendly, it is imbued with a blind unreasoning hatred towards the mountaineer. Sir Leslie Stephen once wrote: "But we should hardly estimate the greatness of men or mountains by the length of their butcher's bill." Kangchenjunga has every claim to majesty, and though the mere slaughter of those who attempt to reach its summit can scarcely add to it, the deaths that have occurred, and will occur, testify to the greatness of the mountain, and its supreme contempt for its wooers. The beautiful is often dangerous. Strip Kangchenjunga of its icy robes, and it would become weak and

defenceless, a mere rocky skeleton. In its dangers lie its beauties, and no right thinking mountaineer would have it otherwise.

As we turned to descend, the mists thinned for a few moments. As though signalled by the rise of a curtain, a great ice avalanche blasted forth on to the snowy stage. Dimly, to the left, we could see clouds of wind-blown snow belch out from the mountainside, and the echoes boomed and crashed from precipice to precipice like the thunderous applause of some huge audience.

We returned to camp. Bad news awaited us. Owing to lack of local porters and our being unable to send back enough men to help him, Colonel Tobin was experiencing great difficulty in getting the transport to the Base Camp. We had sent back as many porters from Khunza as possible, but these were unreliable men. Not only had they refused to help Colonel Tobin, but they had looted a dump of stores at Dzongri, and stolen many articles of value. Colonel Tobin wrote that as far as Yoksam everything had gone well. There he had engaged local porters to bring his loads on to Dzongri, but these had refused to traverse the Kang La. He had experienced bad weather, and his assistant sirdar, Phuri, had died of exposure on the Kang La, whilst his chief sirdar, Naspati, had proved physically unequal to the task, and had returned ill to Darjeeling. Lobsang, whom we had sent back from Tseram, was now working with relays of men to get the loads over the Kang La. Colonel Tobin had laboured heroically against great odds, and as a result was physically worn out, and had lain ill for some days at Tseram. Also he had fallen and hurt his arm. He did not feel equal to the

task of coming on to the Base Camp and had decided to return to Darjeeling as soon as adequate arrangements had been made to send on the remainder of the expedition's stores and equipment.

No one could have worked more for the expedition than Colonel Tobin, but the task that had been set him was an impossible one, and he was in no way responsible for transport delays. With only a few porters at his disposal, he could not be expected to get his transport to the Base Camp. Worst of all, Wood Johnson and I were unaware of the arrangements that had been made between him and Professor Dyhrenfurth regarding the sending back of porters, otherwise such a situation could hardly have arisen as Wood Johnson would have arranged to send back local porters from Khunza. Thus, a serious situation had arisen.

Something had to be done, and done quickly. Already sahibs' food was running short ; there was only about a week's supply left, and we were lacking many vital necessities, to say nothing of those little luxuries which help to alleviate the rigours of high altitude climbing. At sea-level yak meat should be an excellent diet for those gifted with a cast-iron digestion, but at a high altitude it is totally unsuitable and difficult to digest. At the Base Camp, even Schneider had expressed a dislike for it, and had turned with obvious relief to Welsh rarebit, salad dressing, and Worcester sauce. We were still without many items of equipment ; the wireless set had not arrived, and it was sad to think that every evening weather reports for our especial benefit were being broadcast from Calcutta.

There was nothing for it but for Wood Johnson and Hannah to leave Kangchenjunga, collect local porters at

Khunza with the assistance of the Nepali Subadar, and return over the Mirgin La to the help of Colonel Tobin at Tseram. It was extremely hard luck for them to have to leave Kangchenjunga when at grips with it, but it was some consolation for them to know that the work they would be doing would be of the utmost value to the expedition. Hannah had already come up to Camp One, and had moved it to a site a little farther up the glacier where it was less exposed to ice avalanches from the Twins. He had returned to the Base Camp directly he had received news of the transport difficulties. We had got back to camp too late from work on the ice wall for Wood Johnson to do likewise, nor could he be expected to do so after such a heavy day. Some time later, when he returned, after successfully helping to solve the transport problem, he told me that though it had seemed hard to have to abandon climbing he had somehow felt that what had transpired was all for the best. And perhaps that is so, for had he remained with the climbing party, he might have lost his life.

We slept fitfully that night, awakened at frequent intervals by the thunder of ice avalanches. During the nineteen days that we were on Kangchenjunga ice avalanches seemed to fall more frequently at night than in the daytime. At first sight, this may appear strange. The coldest period of the twenty-four hours should serve to knit together the unstable masses of ice. Actually, this tendency for avalanches to fall during the coldest hours is probably due to expansion owing to water freezing in cracks in the ice and forcing the masses asunder. Another avalanche period is in the early morning. In cases where freezing water has wedged the ice apart without forcing a fall, the

frozen water tends to bind the ice together. Thus, a mass on the edge of a hanging glacier may not be forced to part from its parent glacier until it is well past the point of unstable equilibrium, owing to the ice mortar that is binding it to its parent glacier. It may be just a matter of a few pounds that prevents it from falling. When the sun penetrates the crack the restraining influence of the ice mortar may be removed, and the mass of ice, with nothing left to support it, topples to destruction.

A striking illustration of this thesis occurred on Mont Blanc. We were ascending by the classic Brenva route, and halted on the Col du Trident to watch the red glow of the dawn sun creeping down Mont Blanc. We were debating as to the advisability of following a French party who were making a short cut to the crest of the Brenva Ridge, or of going the longer and safer way round via the Col Moore, when the rising sun touched a mass of hanging glacier above this route. Almost at the same instant that it did so a great avalanche was let loose, which swept the route between us and the French party. The slight warmth of the sun had been just sufficient to tear the unstable mass of ice from its parent glacier. After that we went the longer way round.

The next day, May 5, dawned gloriously. It was with great regret that we parted from Wood Johnson. Only Wieland, Duvanel, and I were now left to continue with the work of making a route up the ice wall. Carrying with us several hundreds of feet of rope, and two or three dozen pitons, we returned to the attack.

The previous day we had cut steps to a point about half way along the shelf. The work was useful in one respect for

we were becoming acclimatised, and were climbing every day with increasing vigour.

We went to work on the shelf with a will, the leader cutting fair sized steps, the second man enlarging them, and lastly the porters, who seemed positively to enjoy the work, hacking out platforms large enough for an elephant to stand on. An hour or two's strenuous work and the traverse to the shelf was completed. From a snowy ridge at its end we could gaze back with satisfaction at the long line of steps, and a comforting hempen hand-rail of fixed rope. The most formidable ice slope loses much of its terrors when so decorated.

The snowy ridge we were on led upwards for one hundred feet without difficulty. It was a gift from the gods of the ice wall, and we accepted it gratefully. Our gratitude was a trifle ill-timed. We should have realised that the gods, like the morbid inventor of a cross-word puzzle, had only invented this easy bit for a joke. The joy departed from our hearts as we stood on an almost level ledge of snow. Above the ledge, the ice wall rose in what a mountaineer, despairing of a suitable descriptive term, might call a "vertical overhang." It was certainly vertical for twenty-five feet, and, about fifteen feet up, the ice bulged out forming a genuine overhang. To left and right the ledge thinned out into precipices of ice. Only from the point where we were standing was there the remotest possibility of climbing the wall. Twenty-five feet above our heads it "eased off" to an angle of about 70 degree. This "eased off" portion extended through a vertical height of about two hundred and fifty feet ; crowning this slope and leering down upon us, rose a final and vertical barrier of ice fifty feet high.

As we stood, gazing silently, I tried to recall to my mind climbing of a similar nature in the Alps. I was unable to do so. In fact, it is probably safe to say that ice work of this nature had never been tackled in the Alps. Why should it be when it can always be avoided? The most continuously exacting ice climbing on record is that done by the Munich expedition on Kangchenjunga, but some of our porters, who had been with that expedition, assured us that though the work had been much longer, there had been nothing to equal this ice wall for *continuous* difficulty.

It is a well-known optical illusion that a slope looked at from below appears considerably less steep than looked at from above. The ice wall before us was a notable exception ; it looked steep and it *was* steep.

A few mouthfuls of food, a drink of hot tea from a Thermos flask, and we set to work. At one place, a shallow splayed out chimney ran up the ice wall. It was too shallow to be of any use for body-wedging purposes, but we preferred it to the more exposed walls of ice on either side. Higher up, however, it became overhanging, and an upward and outward traverse to the right would be necessary. We debated whether crampons would be of any assistance, but decided that they would destroy the steps and would generally be more dangerous than useful, especially in view of the possibility of the leader falling off and spiking any unfortunates who happened to be beneath.

It was on Mont Blanc that I had undergone the exquisite torment of having a man stand on my shoulders in crampons. Even tricouni nails are bad enough, and I can sympathise with Wieland, and his request for me to be as quick as possible, as I stood on his shoulders. Reaching

upwards, I hammered a piton into the ice, and clipped the rope into the oval ring. Supported by the rope running through the ring, I cut steps from the bottom of the wall. The easiest method of doing so was to place the feet in the steps already made, and leaning outwards and backwards on the rope, cut the next step above. Having reached the level of the piton, a fresh piton was driven in above, and the rope clipped into another oval ring. The lower piton could then be removed.

It was hard work ; two or three steps at a time was as much as a man could manage. Leaning back on the rope did not improve matters, for it compressed the upper part of the body and made breathing difficult. The ice was white and flaky on the surface, but underneath of a blue-black transparency, like the cold depths of the ocean. It was difficult to swing the axe effectively, and we had to peck at the ice like an aged chicken seeking grubs in a farmyard. At the altitude, every stroke represented a definite piece of work, and every step a stage in a day's hard labour.

To the mountaineer who revels in the art and craft of icemanship, there is no music finer to his ears than the ringing thump with which an ice-axe meets the yielding ice, and the swish and tinkle of the dislodged chips beneath him. But æsthetical and poetical sentiments were not for us. We wearied of the dull thud, thud, as the pick struck the ice. The musical ring of pitons driven well home found no answering ring in our hearts. We felt no excitement, no enthusiasm, no hope, no fear. We became mere dull automatons, as dull and as automatic as the driver of a racing car towards the end of an attempt on a non-stop distance record. Such is difficult ice work at 21,000 feet.

THE GREAT ICE WALL

The day was drawing to a dull close, and the usual snow-storm was pouring vials of snow powder on the world, as we stood together at the foot of the pitch, eyeing the scene of our labours. We had done eighteen feet, no more, but the steps were good ones. We would finish the lower wall on the morrow, and the day after that get up to the foot of the last wall. Yet one more day should see us up the final wall. Five days for five hundred feet of ascent ! Was it worth it ? Even with fixed ropes could laden porters ever be got up to the terrace above ?

We returned to camp tired and dispirited, there to meet Schneider who had come up that day from the Base Camp, and a Schneider brimful of energy and enthusiasm. To me his presence was doubly welcome, for, as the most experienced member of the party, I had felt myself to be saddled with more responsibility than I cared for. The difficulties and dangers were too obvious to be ignored. The porters realised the former, but did they understand the latter ?

The next morning, May 6, found us once more at the foot of the ice wall. Wieland and I were tired mentally and physically, and it was a relief to us to see the business-like way with which Schneider went to work. He is a splendid iceman, cutting steps with a methodical neatness and quickness equal to that of a first-class Alpine guide. He uses a short ice-axe with such a long and heavy pick that only a man with his strength of wrist and forearm could wield it effectively.

Even with three men on the job, it was a day's work to climb the last few feet of vertical or overhanging ice.

From the top of the shallow chimney it was necessary to traverse across a slightly overhanging bulge to the right.

Here the ice was of a slightly more flaky nature than lower down, and it was not altogether pleasant leaning outwards, trusting that the piton would remain firm, and not pull away from the ice. Duvanel had come up with us, and took a number of " shots " of our struggles on the ice. Surely no film camera has ever been used in quite such a situation. We might have got farther that day, but we were hampered by a heavy snowstorm that set in soon after mid-day. So thickly did the snow fall that within an hour or so it was six to eight inches deep.

By the time we turned to descend, so much snow had fallen that our upward steps and fixed ropes had been obliterated completely. The steps along the shelf were difficult to find. Duvanel and his porters carrying the cinema apparatus were the first to descend. They were about half-way across when Duvanel slipped, and slid quickly downwards towards the eighty feet overhang beneath. Apparently, he had not reached the hand-rail when he slipped. It seemed that the three porters with him must be pulled off too, but the porter next to him, I think it was Sonam, an old Everest " Tiger," had such a tight rope that he was able to hold him and stop him before he had slid more than ten feet. It was a splendid bit of work—none of us could have done it better—and shows to what a state of mountaineering efficiency these porters have been brought by their experiences with former expeditions. But the slip had the effect of unnerving the remainder of the porters on the traverse, and one of them promptly followed Duvanel's example. This man had no ice-axe, but fortunately he was held from the platform at the end of the traverse, and was drawn

up on the rope wriggling like a fish by two lusty porters.

Roping on to Nemu, I followed the first party. The new snow made the traverse treacherous. Unfortunately, the fixed rope did not extend the whole distance across, but only stretched across the steeper portion. For several yards the passage had to be made without its aid. The newly fallen snow made the going distinctly tricky; not in all cases did the steps made by the descending porters correspond with the ice steps below, and one of them collapsed beneath me. I was well supported by my ice-axe pick, and driving it in, was able to arrest the slip before it was properly started. But never shall I forget Nemu's agonised "Oh, sahib, sahib!" It was a relief to get hold of the fixed rope, and walk across the remainder of the shelf.

The snowstorm was an unusually heavy one, and looked as though it might continue all night. But as we ploughed down the snow slopes towards the camp, the snow stopped falling, and the clouds, relieved of their burden, began to dissolve. Below, grey mists swirled and eddied in the glacier valley; and above, the peaks stood forth in the radiance of a perfect evening. It was one of those transformation scenes that mean so much to the mountaineer. For hours we had wrestled with the ice wall, wrestled in gloom and snowstorm, and now, like love in a world of hate, the sun shone through to cheer our downward march.

The mists beneath became less turbulent and ceased their eddyings and swirlings, lying in the valley like November vapours over a sodden meadow. The last cloudy rags were being thrown into the purple dustbin of the evening sky as we reached camp.

As I stood outside my tent after supper, watching the unity of earth and sky in the bonds of night, the harsh labours of the day were forgotten. Strange imaginings possessed me. In the profound quietude I heard the whisper of small voices ; the liquid notes of some strange harmony stole across the glacier, seeming to rise from the very snow I was standing on, then—a shattering, bellowing roar from Kangchenjunga ; snow whirling upwards and outwards ; a grinding thunder of echoes rolling and crashing from peak to peak, booming, murmuring, dying into an affrighted silence. But the voices and the music I heard no more.

The party had been further strengthened by the arrival of Hoerlin, and Wieland and I felt that we could justifiably leave him and Schneider to continue with the attack on the ice wall. Since leaving the Base Camp, we had worked solidly for six days, and a rest was necessary if we were not to crock. Such ice work at high altitudes as we had been doing is not of a type that can be kept up indefinitely, and coming thus early in the expedition, we were both feeling the strain of it.

Hoerlin and Schneider put forth a great effort, and climbed the slope to the foot of the final wall. During the day we watched them, mere specks crawling upwards with the slowness of an hour hand. While they were at work, a large avalanche broke away from the left-hand extremity of the wall, and swept the lower part of the sloping terrace which we had decided was too dangerous to be climbed.

They returned with the news that there were two possibilities of getting over the final wall. One was directly up it, and the other by engineering a way up a crack, which

separated the lower portion of the ice wall from the ice of the terrace. It would be necessary to keep as far to the right as possible, in order to avoid getting beneath some unstable-looking ice pinnacles on the terrace. On the other hand, they regarded with disfavour the crack, which seemed to suggest that the portion of the ice wall outlined by it to the right was breaking away from its parent glacier. They considered that the work would be completed on the morrow, and the terrace reached, and proposed to take up all the porters with loads, to establish Camp Three on the terrace. If the upper wall turned out to be harder than was anticipated, the loads would be dumped as high as possible. They had roped up all the upper part of the route, but it remained to be seen whether the porters could go safely up and down. Even if they could, keeping up the communications would be a much harder task than on Everest, where porters were able to go up and down unaccompanied between camps. Here every convoy must be under the charge of a European.

But would it be possible to maintain such communications at all? As we had seen two days previously, a slight fall of snow had altered the complexion of things completely. A heavy fall would undoubtedly isolate Camp Three. And what of the other camps above that? At least six were anticipated between the Base Camp and the summit, and this number might well be increased by the difficulties of the climbing and the altitude to eight. With the beanstalk severed just above the root, it would both cease to climb and die.

Apart from snowstorms, something worse than an awkward situation might be created by the collapse of any

part of the ice wall involving the route. Even supposing no immediate deaths resulted, it might be difficult, or even impossible, to descend.

One primary fact had not been realised, and that was that Kangchenjunga is something more than an Alpine peak on a large scale. Not one of the party could deny that the route was liable to be swept by ice avalanches, but it was not realised exactly to what an extent risks were being taken. A party in the Alps sometimes deliberately incurs a risk of being overwhelmed by an ice avalanche when passing beneath a hanging glacier, or under an unstable ice pinnacle in an ice face, but such a risk is seldom incurred for longer than a few minutes. We had been exposed to these risks for four consecutive days, and were to be exposed to the same risk for yet another day. And this was not all ; the risk would last as long as we were on the mountain. Communications between camps must be maintained, and porters go to and fro. Thus, the ice wall and the slopes beneath would have to be traversed not once, but many times, and the probability of accident was greatly increased thereby. As I have pointed out, Himalayan porters appreciate difficulty, but not danger. They place implicit confidence in their sahibs, whom they are prepared to follow anywhere. This confidence should not be abused.

That day, and late into the night, I sat in my tent writing up a sadly overdue diary, and also a dispatch to *The Times*, which last was sent down the same day to the Base Camp. In the former I wrote :

" Our camp is pitched on the only safe place in the cirque, for the hanging glaciers that cling precariously to

the hollows of precipices frequently let loose enormous ice avalanches that sweep the snow slopes beneath with cataracts of ice blocks. Yet were one of these catastrophic ice avalanches—the collapse of a hanging glacier—such as are common among the Himalayas, to take place, we would be brushed like a speck of dust from the earth. Even as I write there comes at almost regular intervals, the boom and roar of ice avalanches from Kangchenjunga. It is almost as though the mountain was pulsating to the fierce beats of her restless heart. Unhurriedly masses of ice are riven by the downward motion of the ice-fields from the edges of the red rock cliffs. They totter forward, masses as great as the Houses of Parliament, breaking up into disintegrating ice masonry, which strikes the precipices beneath with an appalling crash, and pours down in an irresistible torrent of ice, concealed by billowing clouds of snow dust flung before it."

My dispatch to *The Times* concluded with these words : "As I write, avalanche after avalanche is roaring off Kangchenjunga, each one seeming to proclaim defiance and warning."