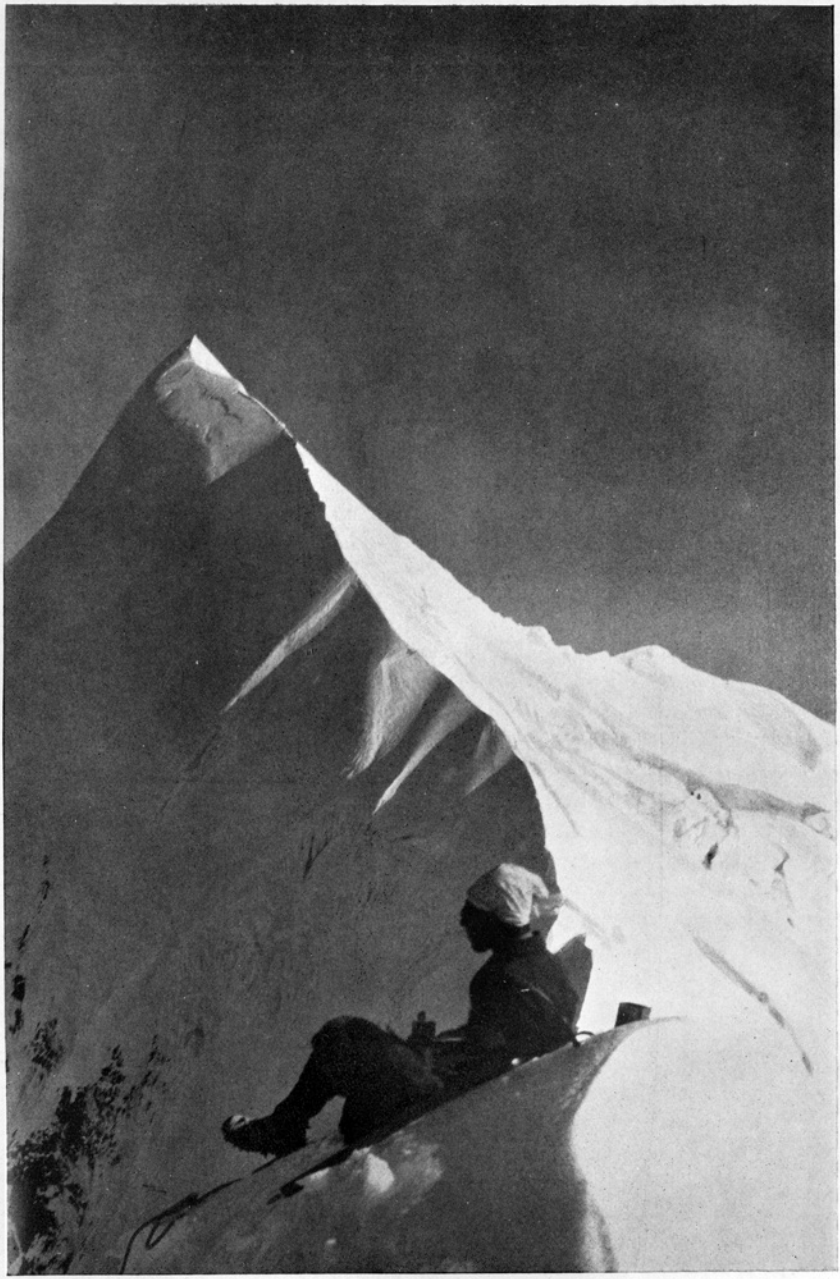
If there is a universal tragedy of life, it is, I think, that we spend the first half of it in crushing our passions, our ideals, all these delicately illusive emotions, longings and ambitions which are the halo of youth—and we spend the second half trying to recapture them. We are schooled and drilled to believe all such things to be illusions. We diligently pack them away and allow ourselves to be turned into tidy little machines which catch the morning train, perform clerical and similar income-producing functions, make suitable marriages, and compel our offspring to perform the same cramping evolutions. In middle life we shake ourselves—were they all illusions? We are more than doubtful; but, gripped in the vast machinery of convention, we carry on the conventional routine. We turn, however, more and more eagerly to the mountains. There, in solitude, we can nurse our souls back to youth and to the realization of its joys. And I think that to the old, mountains must be the perfect recompense, for even to a very advanced age they can be enjoyed. You take longer to get into training, you can only climb one or two in a season, but once again your body glows with vigour, and you rest on the summit bathed again in the illusion of youth. Turning your eyes inwards you distinguish with undimmed clarity of vision, lighted by experience, between illusion and truth. The trappings of convention fall from your mind; you sort the gold from the dross, and seem to hover in spirit between the real and the Delectable Mountains. An illusion of age perhaps: or perhaps the very essence of Truth. Who can tell?

Mount Tasman and its Satellites.

By H. E. L. PORTER.

(Read before the Alpine Club, November 1, 1927.)

MY first two visits to New Zealand, satisfying as they were, left a large number of objects of desire unattained, by far the most absorbing of which was the queenly Mt. Tasman (11,475 ft.), the highest peak on the main divide of the Southern Alps. Of all the mountains that I have ever seen in reality or even in dreams, Tasman is the most faultlessly beautiful, with the one possible exception of the Weisshorn. Though it has not the latter's pyramidal regularity, it yet displays a curiously



Phot. H. E. Porter.

THE S. RIDGE OF Mt. TASMAN

from the Silberhorn

at 7 a.m.

uniform appearance from almost every point of view, a feature which I hope to demonstrate to you to-night: for not only did we achieve our main ambition of getting up Tasman somehow, but, to our great satisfaction, we succeeded in making the first traverse of the mountain, and further stood on all but one of its immediate neighbours, securing fine photographs of it from east and west, north and south, far and near, above and below. From each direction it stands out in unique majesty, draped in a bridal robe of shimmering white, through which the rocky framework peeps out here and there to reassure one that the vision is not merely a creation of fantasy.

The structure of the mountain is simple. There are three pronounced ridges, south, north and west. The S. ridge, after a drop of 800 ft. from the summit, rises 100 ft. to the Silberhorn (10,757 ft.), continuing thence at a high level to Teichelmann and Dampier: from the Silberhorn another ridge falls steeply eastwards to the Grand Plateau, bounding the lower reaches of the Linda glacier. The N. ridge has a conspicuous shoulder 350 ft. below the top, from which it descends gradually to a nameless col 1000 ft. lower. During the season we descended this col on both sides, and, as practicable passes in the heart of the chain should have a name, we have suggested 'Engineer Pass' as a suitable title, and by this name, for convenience, I shall refer to it in my paper. To the north of Engineer Pass, the divide runs over Lendenfeld and Haast before dropping to Pioneer Pass, one of the three passes so far made between the Hermitage and Waiho. The E. flank of Tasman is a face of contorted ice with but one prominent feature, a rib running up to the N. shoulder, up which a route may conceivably be made some day. The third great ridge runs westward toward the coast for many miles, dividing the basin of the Fox glacier from that of the Balfour, and has some fine peaks on it, notably Torres, Le Receveur and Big Mac. This ridge remains to be climbed, and is by far the most difficult of access of the few remaining great untrodden ridges of the Southern Alps.

The history of Tasman, as far as human feet are concerned, is still very brief. It started on February 6, 1895, when Major E. A. FitzGerald with Zurbriggen and Clarke, then a young porter, ascended it via the Silberhorn after one abortive attempt ('A. J.' **18,** 69). They were wearing crampons, except for Clarke, who only had inefficient spikes. This is FitzGerald's summary of the day: 'The time occupied by the ascent and descent was 16 hours. The work of the day had been very fatiguing, as we had been nearly the whole time step-

cutting. Zurbriggen said that he had never known such toilsome snow or ice in Switzerland, or any ascent like this one for almost 6000 ft. on an ice-arête.' Six thousand, I may say at once, is an exaggeration. The point at which the ice-arête is struck is about 8850 ft. : deduct this from the total of 11,475 ft., and the arête dwindles to a mere 2600 ft. After an interval of seventeen years, Peter and Alec Graham conducted the all-conquering Miss Du Faur to the summit on March 24, 1912 : success came to them at the third attempt. It was a cold, windy day ; the final arête was out of the question, and they went out on the E. face to avoid the westerly gale, forcing a way up to the ridge at a point close to the summit. The third ascent was achieved on February 15, 1913, by Mr. Turner, guided by Peter Graham and Darby Thomson. The first two parties took 16 hours each, and the third 19 hours. All three followed the same route, crossing the Grand Plateau and striking the E. ridge of the Silberhorn half-way up, and then adhering to the ridge as closely as circumstances permitted.

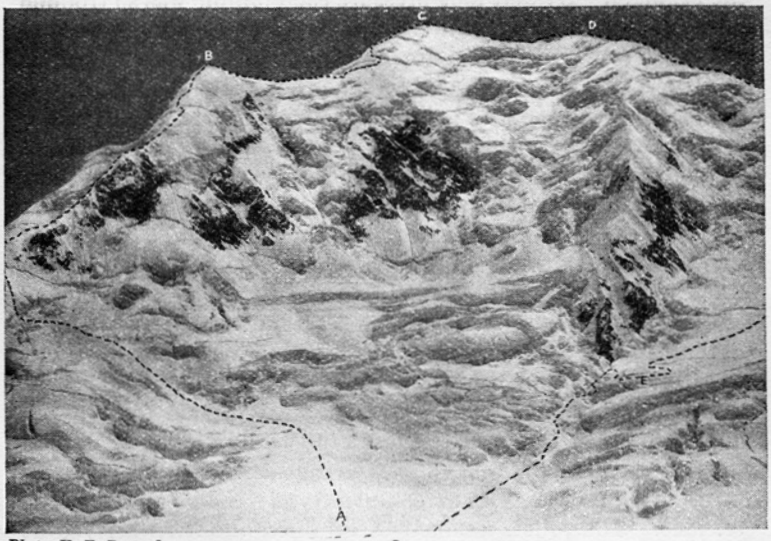
In my previous seasons I had travelled out alone. This year I was fortunate enough to lure Marcel Kurz away from his favourite winter pursuit with the bait of a new mountain range, whereon to feast his cartographic eye. Tasman being our main objective, we went to the Hermitage on December 8, hoping for plentiful snow and small schrunds so early in the season. The weather, however, was atrocious. After one completely wasted journey up the Tasman glacier, we got to the Haast hut on December 18, a beautiful day, only to see the fatal cloud, no bigger than a man's hand, appear in Lendenfeld Saddle within an hour of our arrival. This cloud almost invariably portends a raging nor'wester within 24 hours, and the present occasion was no exception to the rule. We made a desperate bid to scale the Silberhorn next day, before the storm broke, but prudence forced us to retire at 5 A.M. at about 10,000 ft. in the face of furious gusts of powdery snow. The ridge, to my surprise, was in bad order, the ice being overlaid with unattached snow : despite our crampons many steps had to be cut, and we were making slow progress when we retired. In the 17 days before Christmas we only achieved two minor peaks, Sealy and the Footstool. I might aptly compare our efforts during this period to a Shakespearian battle ; scene after scene of marching and counter-marching, but remarkably little bloodshed or execution as a result of all the activity. But the knowledge we gained of each other's methods and ideas laid the foundation of our successes in the following weeks, and

incidentally Kurz had a chance one day on the Mueller glacier of showing me how an expert skis.

After Christmas festivities at the home of my future wife, which did not improve our training, we returned with a firm resolve to change our tactics. Before Christmas we had fled from the storm back to the comfort of the Hermitage. We decided now to dig ourselves in, when we got to a hut, and lay regular siege to the peaks of our desire. Pursuant of this resolution, we arrived on January 6 in dubious weather at the Haast hut, and at once the weather-demon, realising that we were not in a mood to be trifled with, placated us with a perfect day on the 7th, a day such as only occurs twice or thrice in a New Zealand season. At 1 A.M. stars were shining through a light mist. We were away at 1.50, and with somewhat creaking joints crawled up Glacier Dome in snow so soft that the crampons on our backs seemed a mere mockery. On the Grand Plateau, however, they were put in their proper place, and worn for the next twelve hours without touching a rock. Following the line we had selected on a reconnaissance the previous afternoon, we steered through the breaks and crevasses of the E. face, till we struck the E. ridge of the Silberhorn at 4.30. An hour later we reached our highest point of December 19, finding the condition of the ridge so much improved that so far we had hardly to cut a step. This was most inspiriting, and our knees began to resume their proper elasticity. The schrund near the top of the Silberhorn, which in some years assumes gigantic proportions (two years ago Milne and I had examined it from a distance through glasses, and thought it impassable), fell easily at the first assault. At 6.35 we emerged with delightful suddenness on the delicate cone of the Silberhorn, and halted till 7.10 for a meal and photography. Seen from here, the 800 ft. of knife-edged ice, the straight and narrow road high-perched in space, that leads to Tasman, is a vision to make the heart of a mountaineer thrill and throb with anticipation of battle. It looks appallingly steep, narrow and acute, more so than it is in reality owing to foreshortening, though the reality is grim enough. Miss Du Faur has a graphic account of her impressions of the same scene. 'Naturally,' she says, 'our first thought was for the Tasman arête. With one accord our glances swept it searchingly. The silence that followed was ominous. I felt cold shivers running up and down my spine, as I viewed the last thousand feet of our proposed climb from close quarters. From the Tasman glacier the ridge seems to rise out of the Silberhorn in a gentle, softly-inviting slope. From our

newly-gained summit it rears a knife-like edge for 1000 ft. at the most appalling angle I had ever beheld or imagined.'

There is a descent of just over 100 ft. to the col between the two peaks. Half-way down it we stumbled on a huge unsuspected schrund. We stamped warily down its steep upper lip, and jumped an 8 ft. gap on to a sloping floor of iron-hard snow, the jar whereof unfortunately did some damage to a tendon in Kurz's right knee. Looking up we found to our



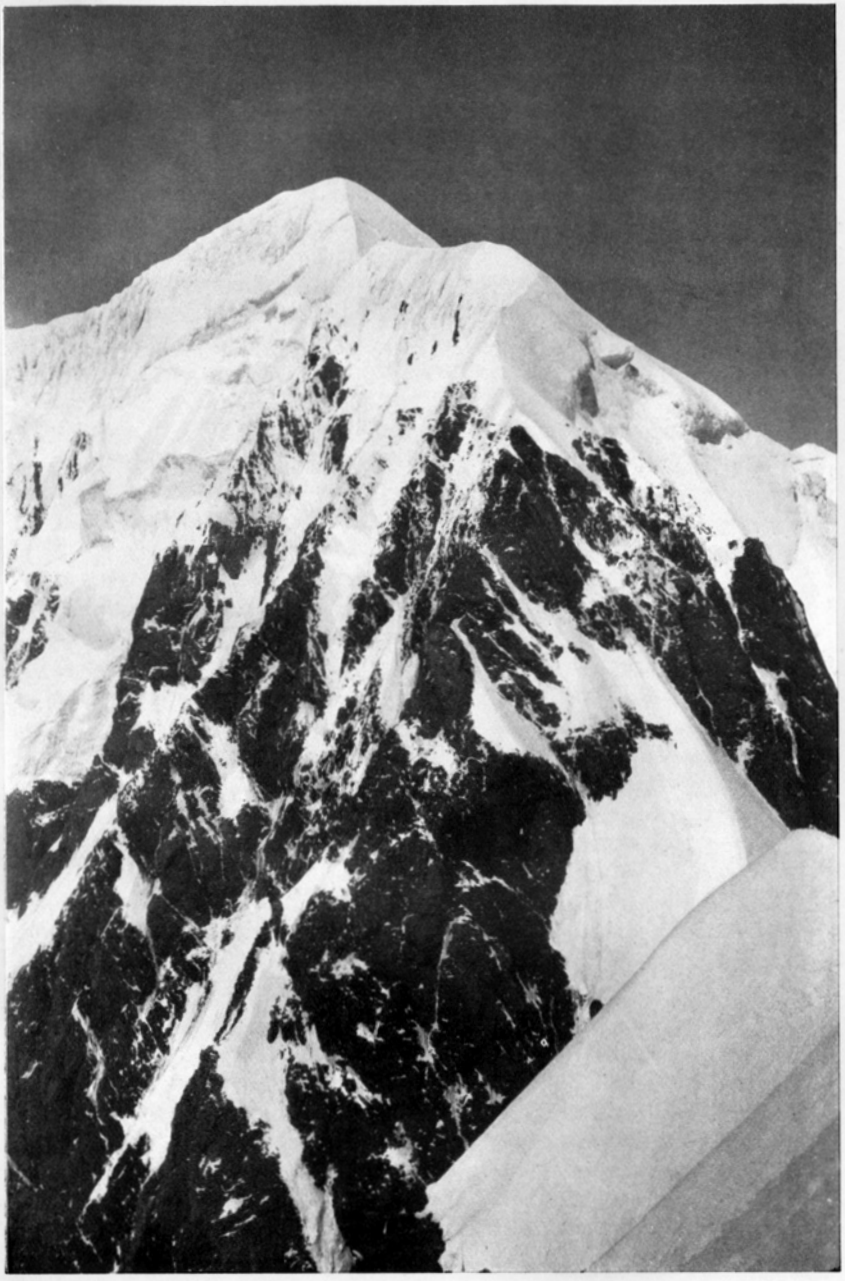
Photo, H. E. Porter.]

THE EAST FACE OF MT. TASMAN FROM GLACIER DOME.
(Dotted line shows up and down routes.)
B = Silberhorn. C = Tasman. D = 'Shoulder.'

surprise that the last 10 ft. of the upper lip were nothing but a thin overarching gable of congealed stalactites of ice: inside was a wondrous icicle-fringed grotto, wherein our bodies threw shadows of deepest ultramarine in the dim light. A short way up the final ridge, we shirked an attack on an overhanging schrund, and skirted along its lower lip on the E. face for quite 200 yards, before a chance of success presented itself. Here the obstacle ran up into a bay, to the apex of which we mounted. To our left the schrund forked, the upper prong narrowing rapidly to a thin crack. The day was won if we could attain the floor of the upper fork, which was choked with snow.

Direct ascent to it was impossible owing to the unbridged chasm of the lower prong, but we could cross the main schrund on débris straight in front of us. The almost sheer wall opposite was blotched with some frail snow-pimples, which formed a precarious and irregular ladder, whose stability seemed to me insufficient to withstand our weight. I was leading at the time, but felt doubtful whether my icemanship was delicate enough for the job. Kurz, who was more hopeful, stepped gallantly into the breach, and with brilliant skill mastered the problem. By deft foot-pressure each pimple was so trodden down as to give the maximum support, but the rungs were so awkwardly spaced, that I for one found it extremely difficult to raise my weight from one to the other without a dangerous thrust from the hind foot, the ice being too hard to allow of a driven pick to help the leverage. None of the essential steps on this 15 ft. ladder collapsed under us, and at the top of it a more substantial traverse landed us on the sloping floor between the prongs, whence, breaking through a screen of icicles, we emerged on the face, walked round the end of the crack and cut our way back to the ridge about 80 ft. above at its steepest and acutest point. The edge here was too adventurous even for my new ' Eckenstein ' crampons without steps, but we found below the slight corniche on the E. flank a convenient groove where hard snow gave good footing, till the angle eased off. On the last lap, wildly elated at certain victory, we did a vigorous spurt, the right foot treading squarely on the edge and the left driven firmly into the steep ice of the W. face. The proud moment of attained ambition arrived at 8.50, exactly 7 hours after the start, 7 hours as intense with hopes and fears as I have ever spent on a mountain, for I confess without reserve that the conquest of Tasman had been an overmastering obsession of mine, ever since I first set eyes on its glorious majesty.

Our preliminary reconnaissance from Glacier Dome had satisfied us that, granted perfect conditions, there was nothing to prevent us from descending the virgin N. ridge, and, at its foot, either dropping direct from Engineer Pass, or else traversing Lendenfeld and descending from the next col which has twice been reached from the Grand Plateau by parties led by Peter Graham, and looks less steep and less dominated by hanging ice than the first alternative. In point of fact there was no symptom of undue danger in either of these broad open couloirs at this time of year, though when we traversed Haast and Lendenfeld a month later the sights and



Phot. M. Kurz.

MT. TASMAN FROM MT. TORRES.

Showing the unclimbed West Ridge, and on the left the top of the North Ridge.

Phot. M. Kurz.

MT. TASMAN FROM LENDENFELD.
Showing the North Ridge and Shoulder.

sounds visible and audible in the channel to which we committed ourselves on this occasion were enough to freeze the marrow in the bones of two cautious mountaineers with a strong dislike of perilous situations and a vivid memory of Captain Farrar's last words of advice to us before we left England: 'Achtung, immer Achtung!'

The N. ridge now lay before us in all its enticing length. The conditions could hardly have been better, the weather was certain and the day still young. After 15 minutes on top, spent chiefly in studying the magnificent N. face of Mt. Cook, we started down it, moving one at a time, but without finding it necessary to cut steps, the ridge being gentler in angle and less acute of edge than its sister on the S. The W. face in the upper part presented an Alpine phenomenon which neither of us had seen elsewhere. It was draped with row upon row of gigantic leaning columns of porous ice, perforated by deeply-cut funnels of almost circular section. The cause of them is obscure, but they are a permanent feature here, being visible in the earliest photographs. It is curious that the W. face of Mt. Cook too has a peculiar ice-formation, to which I shall refer later, also permanent and also unique in our experience, but quite different from that on Tasman. The E. side, as usual, was heavily corniched, and we had to proceed warily between the scallops of the W. and the oubliettes of the E. At 9.50 we paused for a meal on the N. shoulder, after which our cameras recorded faithfully a scene of Alpine beauty, which for me is unforgettable. Below us lay the immense névé of the Fox, and beyond it the west-coast bush and the illimitable ocean: to N. and W. a vista of ice-clad peaks, many of them all the more lovely in my eyes for having permitted my feet to wander up and down them: behind us the ridge which has been the subject of many day-dreams in the past years. The remainder of the ridge calls for no special comment, and we reached Engineer Pass without incident at 11.30. This col had thrice been attained from the W. by Canon H. E. Newton and Alec Graham between 1904 and 1907: they had been rightly confident that the N. ridge provided an easier route to the summit than the S., and only very bad luck in their weather robbed them of the first ascent.

Kurz's damaged knee was now becoming very swollen and painful, and no amount of auto-suggestion could deceive me into believing myself at my best. Accordingly we relinquished the traverse of Lendenfeld, and set about the direct descent of the 3000 ft. concavity leading to the Grand Plateau. Below the col

was a vast schrund, too deep to jump. Kurz had thoughtfully cut and carried some wooden stakes about 30 in. long in case of such an emergency, and round one of these well-planted in the upper lip we doubled the rope and slung ourselves down. The steep snow face was interminably long, as hot as an inferno, and not too secure. The snow was balling badly under our crampons, and the tapping of ice-axes against boots to loosen the balls became monotonous. The next 2½ hours were not, strictly speaking, enjoyable in such a windless furnace. Near the plateau the fairway contracts to a gut, bounded on the N. by the cliffs of Haast and on the S. by the séracs of the E. face of Tasman. The gut itself is seamed with gigantic crevasses, from the clutches of which we escaped only by the narrowest possible margin, to slide thankfully down the last 300 ft. to the plateau by an easy groove. The plateau has a slight southward tilt, and seldom appears to soften into a morass: in virtue of which the 500 ft. of ascent to Glacier Dome, though tiresome, were not so exhausting as they might have been. At 3.20, 13½ hours after our start, we regained the hut, and were welcomed by Mahan, a Dunedin student who was acting as our cook and porter, with a delighted grin and handshake.

Three days later we made the second ascent of the S. peak of Haidinger, the higher of its two summits (10,178 ft.) The party had been augmented on the 9th by the arrival of Mr. Clive and Miss Doris Barker, who toiled up the Haast ridge under a grilling sun with a large supply of extra food, including four 4 lb. loaves of bread, a commodity of which we still had plenty. If only it had been tinned fruit, they would have been even more welcome than they were. We followed FitzGerald's route almost exactly ('A.J.' **18,** 73), except that after traversing from the Haast ridge on to the upper névé of the Haast glacier we went straight up to Pioneer Pass, which the former party appear to have short-circuited. Three years ago Milne and I found the pass defended by a most repellent schrund. This year we walked across it without any trouble. The long ridge from the pass to Haidinger was as entrancing as I had imagined it to be, when I regretfully turned back from it in 1924. The ascent took 7½ hours as compared with FitzGerald's 8¼. On the top we found the bottle deposited by his party, and patiently extracted the decayed slip of paper which it contained. A few isolated words in a neat hand were still legible after 32 years, and the whole of the date, viz. February 8, 1895. The summit was calm and warm, but the steep ice-slope that leads to it was swept by a frigid wind, which made the descent of the forty ice-steps hewn therein excessively trying to a cramponless

party. Lower down, too, the snow-slopes, by which one regains the Haast ridge from the glacier, were in a distinctly dangerous state, so that altogether the descent took slightly longer than the upward journey. The climb, however, is quite first-class, and Miss Barker may be proud to be the first lady to have reached this summit.

The weather now broke, and we returned to the hotel for a day or two of rest and ablution. On the 17th we went right through to the Malte Brun hut. This attractive little hut has only eight bunks, but that night, tempted by the cloudless day, eleven people congregated in it. One of them was Miss Beattie of the Ladies Alpine Club, who had crossed Graham's Saddle under the guidance of Peter Graham. We had discussed the possibility of such a meeting a year before in England, and the event was all the more pleasant for being quite unrehearsed. The fine day was only a flash in the pan. Next day Kurz and I, defying the omens, made a cramponed dash at Elie de Beaumont (10,200 ft.), and got to within 1000 ft. of the top, before a fierce sou'-wester caused a precipitate retreat. The tiny hut groaned beneath the weight of wet clothes hanging from its rafters by the time the last party to return had shed its paraphernalia. Despite the constriction and the steam we were a very cheerful party. Peter Graham's inexhaustible fund of climbing anecdotes kept us all interested and amused, till fine weather dispersed us in different directions on the 20th. That day the Barkers and we climbed Aiguille Rouge (9731 ft.), and on the next Malte Brun (10,421 ft.) by the favourite W. ridge.

For our last full week at the Hermitage, Kurz and I elected to bivouac up the Hooker valley. There are three tempting expeditions to be made at its head : La Pérouse, David's Dome, and the W. face of Cook. The Hooker hut is too low and too distant to be a good base for these peaks, while the upper bivouac-site on a slab at the head of the glacier at an altitude of 8000 ft., though extremely convenient to climb from, is horribly exposed and isolated. The alternative is to camp on the Pudding Rock (approx. 5800 ft.) 3 hours lower down and a short 3 hours above the hut, from which retreat is possible in almost any weather. Two years ago I had spent the best part of a day in helping to extend the diminutive camp-site, build a solid wall and weed out angular débris from the floor. Here, with the aid of two strong and cheery porters, Mahan and Sheeran, we established ourselves with provisions for five days on January 24. It was not altogether without misgivings that we committed ourselves to the shelter of my frail tent : so far we had not been favoured with more than two consecutive fine

days, and the Hooker endures the first fury of every storm that swoops upon these Alps. We had the truly amazing luck to get into camp on the first of seven rainless days running: most of them, it is true, were marred by high wind, but two were perfect climbing days. On the 25th we went half way to Baker's Saddle, where Kurz made a rough sketch of the W. face of Cook, which helped us greatly on our traverse later in the week. On the 26th we made the third ascent of David's Dome (10,443 ft.), whose rounded hump to the left of Cook is so familiar to all frequenters of the Hermitage. The first ascent was made on February 9, 1906, by Canon H. E. Newton, R. S. Low and Alec Graham from the La Pérouse glacier on the W. side of the divide by the N.W. arête to its junction with the main W. ridge and so to the summit. The second was by H. C. Chambers, H. S. Wright, and Conrad Kain in January 1916, from the upper Hooker bivouac to Harper's Saddle, and then by the very steep but sound rocks of the W. face, till they struck the W. ridge high up. Our route was a variation between the two. From Harper's Saddle we mounted the névé-field, which runs up into the W. face, crossed the W. ridge at the lower of two obvious notches, reached the upper notch by a somewhat icy couloir on the far side, and then climbed easy, broken rock-ribs on the N.W. face, rejoining the W. ridge at the point where it becomes a narrow but fairly level snow-arête. We had meant to start at 2.30, but I had put my alarum watch for safety into my hat, a stuffy receptacle which it so much resented, that it failed to go off with its usual regularity, and we did not get off till 4.45. The loss of these hours probably robbed us of the conquest of the formidable Dampier (11,287 ft.) by its unclimbed W. ridge. We did not reach the top of David's Dome till 11.10. The ridge to Dampier was long, serrated and icy in the upper section. Our minimum estimate was 3 hours up and 2 down, and that meant a night out, a prospect we did not relish. As it was we did not get in till 5.15, just before the sun retired behind Baker's Saddle. We had designs on Cook for the morrow, and got everything ready, so that it was 8.30 before we retired to our hard beds, leaving only 4½ hours for sleep after a tiring day. When I woke at 1 A.M., clouds ominous of high wind dappled the sky. This prospect, combined with lack of sleep, determined us, after an agony of indecision, against starting. We woke again at 8 to face a glorious sun, and were torn in two between the fear of having lost our chance and the relief at having escaped the torture of driving tired muscles up 7000 ft.

of a great mountain. Eggs and bacon assuaged the mental conflict, and inaugurated a day of pure joy and perfect rest. We had an early evening meal, put everything ready again, and set the alarum for 1 A.M. At that hour the sky was again mottled, but this time with a perfectly uniform mackerel formation, almost motionless, which to my mind portended no evil. In fact, I was rash enough to predict a fine day and the probability of a break to-morrow: the calm day, indeed, materialized, but not the break. Kurz did not like the look of it himself, and in his abstracted study of the weather-signs allowed the eggs to get too hard. Realizing that the cause of the oversight was nothing but his intense anxiety to achieve Mt. Cook, I was easily able to forgive him. At 2.25 the tent was shut up, all our gear being stacked inside ready for removal later on. Rope and crampons were adjusted outside, and at 2.30 we were off on our supreme adventure.

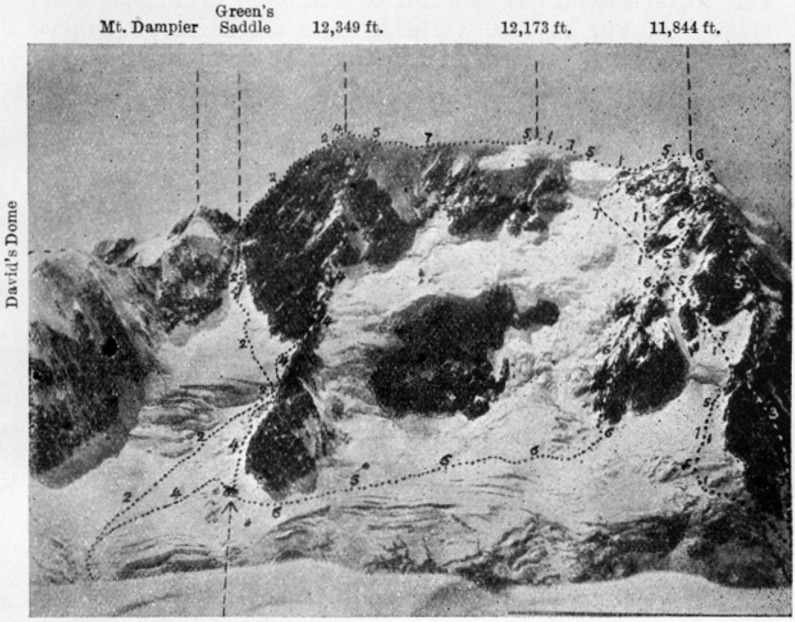
The traverse of the three peaks was done for the first time on January 3, 1913, by Miss Du Faur, Peter Graham and Darby Thomson. In her book she quotes a letter written to her after the climb by a member of the A.C., who says: 'That ridge of Mt. Cook would be shuddersome at the best of times. I have walked underneath it on both sides, and looked along it from the top, and I can confidently say that there is not a ridge like it in Switzerland: mixed rock and ice, perhaps, such as the Teufelsgrat of the Täschhorn and maybe others, but nowhere that endless stretch of knife-edge snow, perched far above everything else in the world as it must seem.' Her own account of the central part of it is as follows: 'Ever since we had decided to attempt the traverse, the steep knife-edged ridge between the middle and high peaks had been to me a haunting horror. From wherever you look at it, it appears impossible. Now the moment I had dreaded had arrived, and the reality was all that imagination had pictured it.' At the end she expresses a doubt whether mortal being could be found bold enough to repeat the ascent. The challenge was accepted on January 31, 1916, by the dauntless Conrad Kain alone with Mrs. Thompson of Wellington, a marvellous feat unequalled for daring in the annals of the Southern Alps. Years afterwards Mrs. Thompson wrote a brief account of it in the 'N.Z.A.J.,' and her impressions may be summed up in the verse she quotes therein:

> 'My mountain calls, its floors are shod
> With rainbows leading up to God.
> But ah! the rugged ways and bleak,
> That give upon that icy peak.'

The third and last traverse was made on February 24 of the same year, by Mr. S. Turner, Frank Milne and J. Lippe. The first and third parties had ice to contend with all along the ridge, while the second was favoured with good snow. The first started from a bivouac at about 7500 ft. at a point I shall refer to as Pt. 'A,' below the rock-ridge leading to the low peak. The others started from the upper Hooker bivouac at 8000 ft. None of the three had crampons.

At 2.30 we started traversing on an upward slant a stretch of glacier towards Pt. 'A' by lantern light, and soon had reason to regret our complete idleness yesterday. We ought to have trodden out a foolproof track while the sun shone. As it was, in attempting to avoid the vast schrund, which guards the portal between the rocks of Pt. 'A' and the ridge above, we ran into an *impasse* and had to wait for dawn to show us what proved to be the one possible through-route. We passed Pt. 'A' at 4.15, and proceeded without further setbacks through the wild ice-scenery above, following almost exactly the route marked '5' in the illustration to its junction with route '6.' Near this point we halted for breakfast from 7.15 to 7.40 at a height by aneroid of 10,070 ft. Above Pt. 'A,' the snow had been for some distance tiresomely crusty: on the steeper slopes above, however, it was so hard that Kurz with his shorter, blunter spikes, found the going a great strain on his leg muscles. After our meal, disliking the look of the upward traverse marked '1,' and still more the ice-clad rocks leading direct to the low peak, we struck out a line of our own more to the left towards what we deemed an easy spot to cross the final schrund. It proved very far from easy, however, and Kurz had some very awkward left-handed cutting to do, before it yielded. He then cut back to the right to turn the impending ice-wall above our heads, working at express speed: for the place was dangerous, and despite the early hour a small volley swept our route behind us a few minutes later. After some 50 steps he called me forward. I cut 30 more, and then found I could adhere safely without steps—thanks to my 'Eckensteins.' So I went to the end of my rope, cut a big step, and held firm while he scrambled up. By this method we saved much hard labour, and attained the ridge about a furlong N. of the low peak at 9.5, having accomplished 5800 ft. of ascent in slightly under six hours of marching. The low peak looked temptingly close, but we refused to be enticed, partly because we had no idea how long the rest of the climb would take us, and partly owing to the feeling that to diverge from our line just to bag an extra peak

would spoil the symmetry of a perfect traverse. So we set our faces northwards, and soon gained the foot of the great break, which bars approach to the central peak. Thanks to Kurz's colossal reach this grim obstacle was taken in our stride. Immediately above is the minor hump, to which the still unclimbed ' Anzac ' ridge ascends from the east. Milne and I



Photo, E. Teichelmann.]

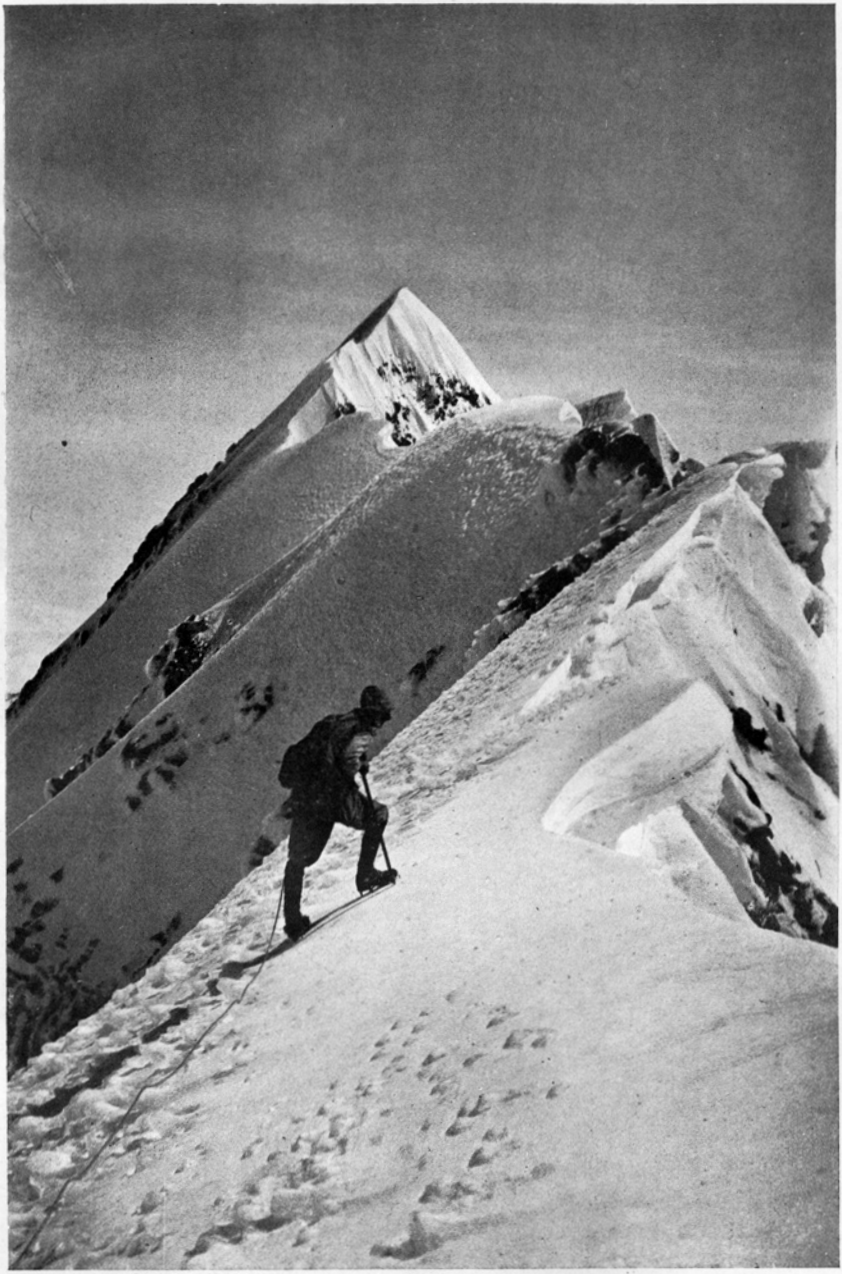
THE WEST FACE OF MT. COOK FROM SUMMIT OF LA PÉROUSE.

Routes from the Hooker side.

1. Fyfe, G. Graham and Clark. 20 Dec. 1894.
2. Fyfe, Graham and Clark. 28 Dec. 1894.
3. Mr. H. Sillem and P. Graham. Feb. 1906.
4. Mr. Earle with P. and A. Graham and J. Clark. 1909.
5. Miss Du Faur with P. Graham and D. Thomson. 1913.
6. Mr. S. Turner with P. Graham and F. Milne. 1914.

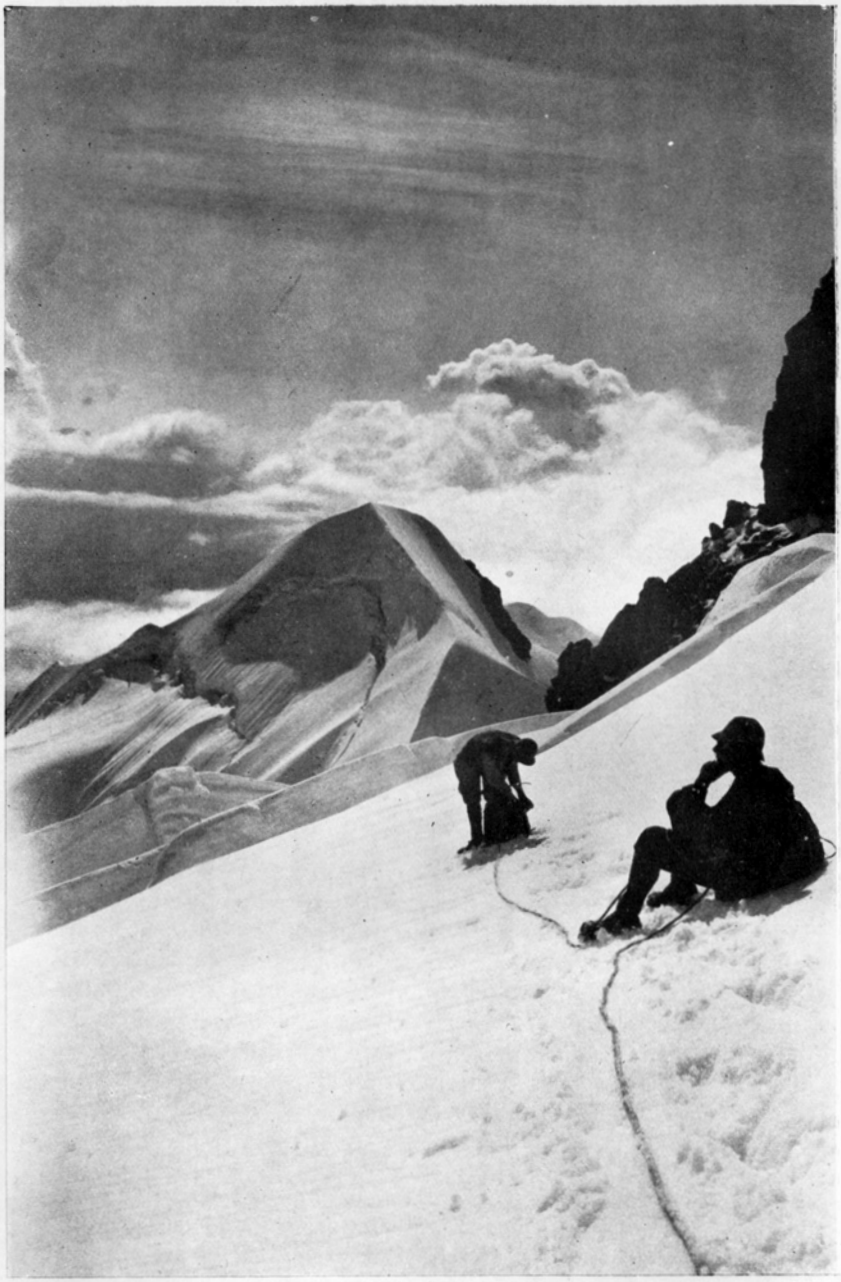
had had designs on this ridge two years before, and doubtless others before us, but I believe no party has ever started for it. Now that I have looked down its final 200 ft., the crux of the problem, my enthusiasm to be the pioneer of this new route has lost most of its edge. After several photos we mounted easily to the Central Peak (12,173 ft.) and there spent five minutes

(9.50 to 9.55). Before us lay the glorious mile-long undulating ice-ridge to the high peak, the most marvellous aerial highway I can ever hope to see. In all its length there are only two little rock-teeth. The E. face, if our photos do not lie, has an inclination in its upper part of just over 70°, while the W. slopes lie back at an angle of about 50°. The formation of the ice here was most curious. Imagine a mushroom with most of its stalk removed, bisected vertically and stuck into a bank: myriads of such ice-mushrooms dotted the slope as far as eye could see. No doubt the ever-recurring nor'westers are responsible both for these mushrooms and the ice-pillars on Tasman, but I am not enough of a scientist to understand the process which produces them. Our crampons bit well, and progress was fast, as long as we kept the rope quite taut: a moment's inattention, and it embraced lovingly as many mushrooms as it had time to lassoo. It would have been pleasanter to utilize the rim of snow above them, the inner edge of the extensive corniche that hung its frozen waves over the Tasman face, but prudence, of course, vetoed the idea. Such was the merit of our spikes, however, that we cut not a single step along the whole ridge, and, despite several pauses for photography, which were richly rewarded, we had breasted the last sharp rise and occupied the throne of Aorangi by 10.30. With the serious part of our undertaking behind us and at peace with ourselves and the world, we feasted on delicacies worthy of such a mountain. How calm the summit was, may be gathered from the fact that the subsequent pipe was ignited at the third match. As we smoked, we studied the extensive panorama before us, and I came once more to the conclusion that, however interesting topographically, it has not half the charm of the view from lesser summits. Since 1913 every descent of Mt. Cook, save one, has been made by the Linda route, and we had no idea of varying the procedure, especially as it was familiar ground to me. Starting again at 11, we had put the ice-cap behind us by 11.30. The summit rocks gave more trouble. There had been enough snow on them the previous week to repulse an amateur party, after they had ascended the Linda glacier in remarkably good time. There had been a storm since, and we found a mess of water-logged slush filling all the crannies: but there was no *verglas*, and the rocks are so easy in themselves that the descent only occupied an hour. Thereafter, having plenty of time in hand, we sauntered down the glacier, only bestirring ourselves at the obvious danger-points, and stopping whenever the whim seized us to eat or smoke or photograph. The heat was now



Phot. M. Kurz.

THE ICE-RIDGE AND HIGH PEAK OF MT. COOK
From near the Central Peak.



Phot. M. Kurz.

LE RECEVEUR, FROM BELOW THE WEST RIDGE OF Mt. TORRES.

intense, and the light so strong, that all our Linda negatives were badly over-exposed. From 2.30 to 3.10 we had a last halt in a safe spot above the Silberhorn corner. Below, in the gut of the Linda, we had the nearest approach to a hold-up that we experienced all day. We came to a place where only one line of advance was possible, over a horribly soft bridge. After some hesitation, though we could see no way through below, we crossed it, myself on all fours and Kurz by a method which combined dignity with caution. There was, indeed, no alternative, and, as usually happens, the vice relaxed its grip, just when the pressure was beginning to get uncomfortable. This was the last effort of the mountain, and beyond we slid rapidly past the corner and out on to the Grand Plateau. Still vigorous, I kicked up the 600 ft. to Glacier Dome, whence we sank speedily to the haven of the Haast hut. At 5.30 two happy men fell upon two tins of pears and apricots, and lubricated the inner furnace with oceans of tea, before retiring to sleep on a delicious mattress after four nights of a stony couch.

It may be of interest to give a table of the times taken from point to point by the various parties on this route :

Party	Bivouac	Start	Low Pk.	Cent. Pk.	High Pk.	Hut	Total
1	Pt. A. (7500 ft.)	02.00	07.00	09.30	13.30—15.00	22.00	20 hours
2	Upper (8000 ft.)	03.40	*11.00	(?)	14.40—15.25	21.40	18 hours
3	Upper (8000 ft.)	01.05	04.30	09.05	14.05—15.00	03.00	26 hours
4	Lower (5870 ft.)	02.30	*09.05	09.50	10.30—11.00	17.30	15 hours

* Ridge N. of Low Peak.

I have given these times merely to convince New Zealand climbers of the immense advantages conferred by crampons, particularly on amateur parties, few of whom, I believe, could tackle the immense labour this traverse entails without them, and complete the climb within 24 hours : and also to refute the heresies promulgated on the subject in New Zealand by Mr. Turner. ' I don't believe,' he says, ' in crampons, staples, or any artificial means of climbing whatever, as it makes it necessary to watch one more thing, and the risk of overbalance, or a crampon coming off, on one of our steep slopes is a risk not worth taking.'

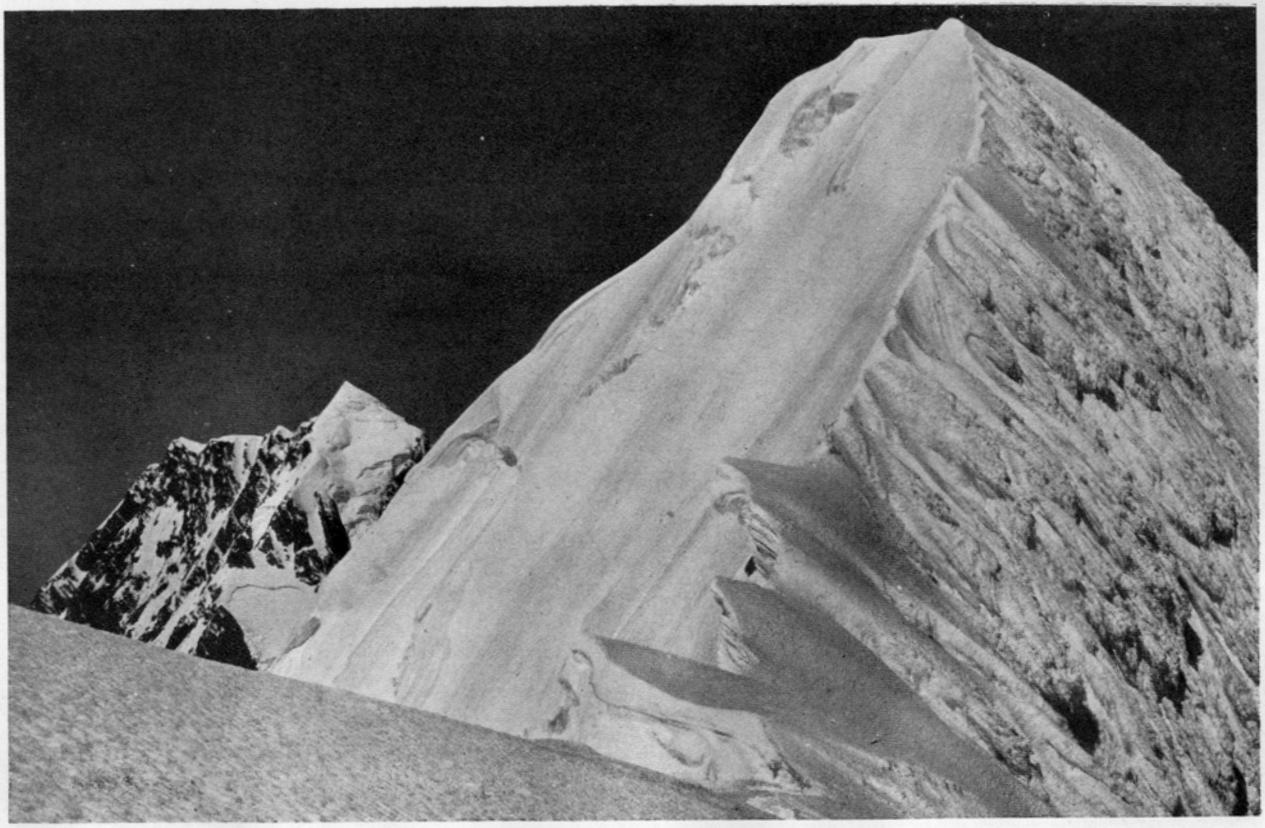
The next day was fine for our return to the hotel, and the following for the recovery of our camp from the Pudding Rock, which was done for us by the Hermitage staff. Then a not unwelcome storm gave us three days to rest and prepare for our crossing to Waiho, where we were due to meet Hugh Chambers about February 4. We had been altogether nearly

seven weeks at the Hermitage : during all that time Mr. Clarke, the manager, Clem Williams, the chief guide, and his brother Vic, and the whole staff had done everything in their power to ensure our comfort and further our plans, even when these entailed inconvenience and extra work to themselves. It was not without a feeling of real regret that we set out on February 3 to tramp up to the Ball hut for the fifth and last time. On the 4th with 30 lb. swags we toiled against a strong gusty wind over Graham's Saddle, on the crest of which we met a gale so violent that we could not have surmounted the final ice-slope without the anchorage of our crampons. We had started at 3.15, and reached the Almer bivouac above the great ice-fall of the Franz Josef at 2.30 in rain which threatened to get worse. After an hour's rest and a brew of tea we took advantage of a temporary clearing to make a dash for the Defiance Hut, situated on the left bank between the two falls. Peter Graham had warned us in January that the upper fall was quite impassable this season, and had given me explicit directions how to avoid it : we were to ascend a spur from the bivouac, and cross the tributary Almer glacier on an obvious bench, contour across the head of the Carrel creek, and descend the perversely named ' No Go ' creek, whence an easy passage across the glacier to the hut was assured. Lapse of time had muddled my memory, and when we arrived at the head of Carrel creek I assured Kurz that our instructions were to commit ourselves to the repulsive gorge that fell away at our feet and disclosed beyond a vista of cruel and wicked sharks' teeth. He naturally demurred, but I was adamant. Down we went, and by dint of our good crampons and much exciting saltation, endured without reproach and with exemplary patience by my trusty companion, we laboured through the lower half of the fall and entered the hut at 6.45. Next day we had more excitement, skirmishing with the lower ice-fall, to get to the bush track on the right bank. From the hut to the path took 2 hours, and at the end, having escaped finally from the wilderness of séracs, Kurz held his crampons aloft and uttered the dramatic words ' My crampons, I kiss you ! ' Chambers met us on the track and led us to Waiho, where we received a warm welcome from the Grahams. Our plan now was to bivouac high up the Fox glacier, and try to repeat some of the successes which fell to Canon H. E. Newton, Dr. Teichelmann, and Alec Graham in 1906 and 1907. The rest of the day was well spent in studying photos of the scene of our proposed activities. Next day was wet, but the camp-

gear and commissariat were arranged, and on the 7th we drove down by service car to the start of the Fox track with Dave Graham, a nephew of the famous brothers, and a Maori, Joe Bannister, to help us carry the stores necessary for six or seven days' absence. When all our separate packages were cast forth from the recesses of the car, rucksacks and sugar-sacks, ropes and paper parcels, imagination boggled as to how they were going to be stowed on our backs. The load to be divided must have been close on 250 lbs. Our porters shouldered a liberal 60 lbs. apiece, and the rest adhered somehow to us three. At the slow crawl such burdens enforce, we slouched through the bush, then along the right bank of the Fox river to the snout, stumbled across its dreary moraines, and a little later established our first camp on the left bank under an old moraine cliff, which looked and was perfectly safe, until a mischievous kea spotted our camp from a distance, circled round for a bit forming his plan of campaign, and straightway began to prise out loose boulders directly above us with his beak and launch them at us with screams of delight. Having scared him away with some accurate sharp-shooting, we lay down to sleep, trusting that if he returned the missiles would bound over our prostrate forms. Next day we mounted the glacier till the lower fall forced us into the gully between the ice and the hillside. Above the fall is a fairly level section, on which we crossed to the scrub-covered bench on the side of the Chancellor ridge, near the head of which we pitched our second camp. The shortest way to reach the upper névé of the Fox from here is to skirt the edge of the glacier below the continuation of the Chancellor ridge: late in the season this becomes impossible, and a long détour must be made to the top of the ridge and down on to the névé from above. To save time in the morning, the porters and I with all the tinned goods explored the short route, and, with two deviations on to the steep rock-wall that bounds the glacier, managed to get through to the névé, where we made an oasis of tins in the league-wide desert of snow. On the morrow we were on the move at 4.15 and reached the dump at 5.20. Here the porters had to leave us to secure their own retreat to the Defiance hut, a complicated route for which clear weather and plenty of time are essential. They unloaded the heavy stores which they had carried so patiently, and left us with hearty good wishes. Dismay seized us, as we gazed at the hateful bulk of the burdens our own shoulders had now to bear. True that the final camp-site looked comparatively close: true also

that the total load had by now diminished to some 170 lbs., thanks to consumption of food and reduction of camp-gear. But it is a problem to stow over 50 lbs. into and on to even a capacious sack, and when we had filled, as we thought, every inch of available space, we looked round and discovered that the bread and butter were still on the ground, looking most forlorn. Finally all was got on board somehow, except some broken bread, and we staggered off, soon to find ourselves in a maze of crevasses, the threading of which was nervous work with so much top-hamper. Three hours later we came to an end of our travail under the cliff of Pioneer Ridge. Of our bivouac the less said the better. We rejected the old 1906–1907 site, disliking its extreme exposure and lack of water, in favour of one where we obtained fair protection plus water, but suffered the acme of discomfort on a rocky floor strewn with large sharp scree. Though we were at over 7000 ft., the cold was not severe, and I found that I could sacrifice some of my clothes to pad my back without freezing in my light sleeping-bag, so that, though the boon of sleep was denied, I procured some alleviation of a torture which a Spanish Inquisitor would have been proud to invent.

The same afternoon, while Chambers, who without training had manfully borne his share of the common burden, rested and ordered the camp, Kurz and I climbed the virgin Le Receveur, the next peak to Torres on the ridge running W. from Tasman. Its height is given on the latest map as 9562 ft. Besides securing a first ascent, we gained knowledge of the W. side of Torres, which was of great use two days later. From camp we went to the col between Torres and our peak, whence an interesting little snow-ridge took us to the top. A depressing drizzle thwarted our design of attacking the next peak, Big Mac, as well, and sent us straight home, the whole expedition taking only 5 hours. On our return we found that Chambers had erected one end of the tent on a clothes-line of string, secured to crevices in the rock-face by sardine-tin openers, while the entrance-end was strutted on an ice-axe and tautened by some odd bits of spunyarn knotted together. This crazy shelter might have supplied a Heath Robinson with every detail for a caricature of a Mountaineers' Paradise, especially if the artist had caught me crawling out of its wholly inadequate doorway in my old climbing suit, by now in a lamentable state of decomposition. Supper was also ready, the chief attraction being one of Chambers's famous tomato soups. This is a mélange of many ingredients, blending into a delicious whole,



Phot. H. E. Porter.

MT. TASMAN FROM THE NORTH SHOULDER

Showing the final 350ft. of the North Ridge. Behind, on the left, is Mt. Cook.

Phot. H. E. Porter.

MT. TASMAN FROM DAVID'S DÔME.

On the left is the West Ridge descending to Mt. Torres; on the right the South Ridge and the Silber Horn. Below is the La Pérouse Glacier.

which courses like nectar through the veins. 'Eat soup and keep well,' says Campbell's popular American advertisement, 'Let no day go by without its plateful of hot, nourishing, delicious soup.' We took Mr. Campbell's advice, but to the profit of his rival Mr. Heinz of the 57 varieties. There was absolutely no temptation to linger in bed, the tent being a tight fit for three even on perfect ground, while here we had to conform our three big bodies to the accidental deformities of the mountain side. I was out before dawn to start the cooker. There was a high wind on the divide, and after breakfast we gave the weather an hour to make up its mind. It decided in our favour, and we set out at 8.15 to traverse Haast and Lendenfeld *via* Pioneer Pass. I had twice reached the pass from the other side, and each time the upper névé of the Fox had appeared to be a gently-sloping, almost unbroken snow-field. In reality it is furrowed with immense crevasses, which are invisible, as one approaches from below, almost to the very lip. The two miles from camp to pass took $2\frac{1}{4}$ hours. After a halt on the pass we started again at 11.5 to make a new route up Haast (10,295 ft.), which so far had only been ascended once, by Canon H. E. Newton and Alec Graham in February 1907 up the S. ridge. Haast has at least three summits of over 10,000 ft., of which, as far as I know, only the lowest, that on the main divide, has been climbed. Having scaled an easy rock-buttress above the pass, we attained the great E. ridge at noon. It had formerly been one of my ambitions to climb this ridge in all its length from the Haast hut. We had followed the lower third of it for two hours on our ascent of Haidinger, and we now spent $1\frac{3}{4}$ hours on the final section, leaving the central and probably most difficult part still untouched. I fancy the whole climb from the hut would take a strong party not less than 8 hours, and as very little of the ground is easy, almost as much time would be required for the descent. The portion we now wrestled with proved to be an exceedingly sharp snow-arête, broken by passages of ice. Near the top we were confronted with a most sensational step, where the snow rose at a steeper angle than any of us had ever met before on a sharp ridge. It was a difficult task stamping steps up it with one's body hard against the slope. After some 40 ft. it turned to ice, and I had to cut across the steep face to a rock-patch, from which vantage-point peering round the corner I was relieved to find a gentler slope of rock and snow, by which to turn the obstacle. The summit fell at 1.45, too late for us to explore the rock-ridge to the other tops, unless we renounced once

more the traverse of Lendenfeld. The latter made the greater appeal, and after a short halt we donned crampons and set sail down the ridge to the col, for which we agreed to suggest the name of Haast Saddle: then up again to Lendenfeld (10,456 ft.) and down to Engineer Pass. On completing this stretch Kurz and I had a thrill of pleasure at the thought that in three expeditions we had trodden every foot of the divide between the Silberhorn and Haidinger. All day long there had been a wonderful blue light on Tasman and Cook, which pleased the eye so much that one assumed that it would also please the camera. In this belief I expended films prodigally, but with much less success than usual. It was now 4 P.M., and high time to think of home. The ensuing descent for quite 500 ft. needed great caution: the route lay between two dangerous couloirs, at first on rock, then on bad snow with ice close beneath the surface. Below we wisely resisted the temptation to make a bee-line for our camp, and struck off at right angles to rejoin our morning tracks. We got in at 7.15, to enjoy a picturesque, robber-band sort of supper by lantern-light, which was unduly extended owing to our disinclination to writhe on our Procrustean couches for a second night.

Gladly I hailed the first glimmer of light on the 11th, and crawled out to welcome another fine day. This time we were away by 7.20 with Torres (10,376 ft.) for our objective. The only previous ascent of this mountain was by Canon H. E. Newton, Dr. Teichelmann and Alec Graham on February 4, 1907. Starting at 3.40 from a bivouac very close to ours, they had taken to the rocks before the rise of the glacier to the col between Torres and Le Receveur, and then followed the W. ridge throughout, reaching the top at 12.15, and regaining camp by the same route at 8.40. Alec Graham had suggested to us that we might find a shorter route on the S. side of their ridge, and we had confirmed this idea from Le Receveur on the 9th. We gained the col at 9.25 and after a halt till 10.5 sped on our crampons up the glaciated face. A mile-long crescent schrund guarded the heights above, which could only be crossed far away to the right, so that we were forced on to a subsidiary ridge, where unexpected ice impeded our progress. The W. ridge, when we got to it, was another of those narrow snow-arêtes, to which we were now so well accustomed. Along it we stamped a cautious way to a solitary patch of rocks, where Chambers, who for some time had been combating his enemy, *mal-de-montagne*, regretfully decided to rest and await our return (12.30). The top seemed only an hour away, and we

went on, promising to be as quick as we could. The snow-arête after some hundreds of yards impinged on a rock-buttress, which had several concealed gendarmes in its upper reaches; these rocks would be quite exhilarating, if only they could be swept clean of surface débris. At 1.50 we gained the top, a delicate snow-cone, from which we once more worshipped the majesty of Tasman, still looming far above us, and only attainable, as far as we could see, by a party willing to sleep out on the ridge. When we rejoined Chambers, we found him feeling almost vigorous again, as a result of deep-breathing exercises. Diverging nowhere from our morning route, we re-entered the bivouac at 6.25. The clouds seemed ominous of approaching storm, but a third night had to be endured before we could start to escape. We had hoped to return by the high-level route from the head of the Fox to the Franz Josef over Mts. Roon and Moltke, with the tracks of our porters to guide us. But these had completely vanished, and a mistake, only too easy in bad visibility, might be too costly to tired men, still heavily laden. Kurz, it is true, was as fit as ever in body and mind: but we had put Chambers's untrained muscles to too severe a test, and lack of sleep had robbed me of my mental alertness. So we descended the Fox, taking our time, as the weather held up after all, and despite some rebuffs and anxieties in the ice-falls got through to the ramshackle tourists' hut at the entrance to the bush before nightfall. Tired though we were, the insect life of the hut proved too venomous, and we soon migrated to a stretch of sand on the river bank, where the pests dared not pursue us, and there enjoyed a perfect sleep. Sometimes excessive greed for blood defeats its own object, and the disgusted victim breaks away from the toils of the blood-usurer. Next day we returned to Waiho in bright sunshine: we arrived there feeling like Lord Fleetwood in 'The Amazing Marriage' after his first mountain walk. 'Up there,' he says to the man who had introduced him to new delights, 'one walks with the divinities. . . . You're right over and over again, when you say the dirty sweaters are nearer the angels for cleanliness than my Lord and Lady Sybarite out of a bath, in chemical scents.' For all that we did enjoy our baths, and still more the reflection that we had once again utilised every single day of a week's fine weather, and had concluded our investment of the enchanted ground, of which Tasman is the citadel, with a success which outdid my most optimistic dreams.

How much of that success I owe to Kurz's splendid

icemanship and equable temper will, I hope, have appeared in the course of my paper. For the success of our last campaign a special word of thanks is due to the Graham brothers, whose encouragement and expert knowledge were invaluable to the party on ground completely new to them, and who supplied our needs with such detailed thoroughness that nothing of importance was missing in our camp. Nor shall we forget the pleasant days we spent after our return, when we could afford to laugh at the teeming rain, which kept us not unwilling prisoners indoors. One last word of thanks must be rendered to the demon who presides over Friday. Sealy, the Silberhorn and Tasman, Malte Brun, Cook, Graham's Saddle, Torres, all these succumbed on that reputedly unlucky day. But the secret of how we won the demon's favour is a mystery, which I cannot reveal to the uninitiated.

Some Spanish Mountains.

By W. T. ELMSLIE.

The Sierra Nevada.

TOWARDS the end of last July we [1] made a brief visit to the Sierra Nevada—the highest range of mountains in Europe, it will be remembered, after the Alps. We ascended the two highest summits, and traversed the ridge between them, thus seeing what is admittedly the finest scenery to be found in those parts.

The range is distinctly disappointing, and has been overwritten, although Charles Packe's article in 'A.J.' **4** gives a good general impression of the district. John Ormsby's remark ('A.J.' **3**, 12) that 'the north face of the Wetterhorn . . . is soft pastoral scenery compared with the Corrál de la Veleta' is simply grotesque. Though on a much larger scale, the main range is little wilder than the ridge of Helvellyn. The crags are for the most part composed of rotten outcrops of rock, divided by slopes of shale; and though many of the corries are fine and impressive, they are more akin to British hills in character than to the Alps.

An electric tram now runs at frequent intervals from Granada up the Genil valley to a terminus ('Sierra') a mile or two beyond Güejar. The valley presents imposing gorge scenery

[1] Messrs. G. Manley, R. G. R. West, and the writer.