

## NEW CLIMBS IN THE ALASKA COAST RANGE

BY FRED BECKEY

THE glittering icy peaks of the Alaska Coast Range, on the Alaska-Canada boundary, have received much mountaineering attention in the past, and their magnificence destines them to a wider devotion. While the highest giants, such as Mounts Logan, St. Elias, Steele and Fairweather have been conquered, hosts of somewhat lower mountains are as yet unexplored.

South-east of Glacier Bay the chain continues, at a lesser elevation, eventually to become the British Columbia Coast Range. This section of the Alaska Coast Range has been bypassed almost completely by mountaineers, a few explorations and the work of the International Boundary Survey being the only major accomplishments. The Survey in 1907 reached the central ice cap from the Stikine River, but more publicity was given the region by John Muir in his *Travels in Alaska*. The principal reasons for neglect of this 300-mile alpine range have been the difficulty of access, ignorance, and the magnetic influence of Alaska's highest peaks. The sinking coastline has provided approach channels from the W., but the tremendous precipitation has caused a dense forest growth, in addition to long crevassed glaciers to hinder access. There has been no practical link with civilisation from the E. apart from a few large rivers in British Columbia. These streams begin in the plateau regions of British Columbia and flow westward to the ocean channels, completely bisecting the mountain chain.

This southern part of the Alaska Coast Range reaches a definite climax north of Wrangell, culminating in Kate's Needle (10,002 ft.), Devil's Thumb (9077 ft.), Mt. Burkett (*ca.* 9750 ft.), and Mt. Ratz (10,290 ft.). The Stikine River, flowing from the interior to the N.E., affords a convenient approach to these peaks. An unbroken section of the boundary ice cap extends from the mouth of the Stikine 100 miles northward to the Whiting River and contains many unknown and unnamed peaks, in addition to the aforementioned summits.

The ice-covered Kate's Needle is the queen of this region, and Devil's Thumb, perhaps the most startling peak in North America, is just what the name implies. Both peaks have fathered many Indian legends and command much respect and fear among Wrangell sourdoughs. The only serious climbing programme, in 1937, fell short on Kate's Needle, when storms, described by Fritz Wiessner as 'worse than anything encountered in two seasons in the Himalayas,' handicapped the expedition. Weather is most unpredictable in this region, and spring seems to be the only period when any good weather of duration can be expected.

My dormant ambitions to attempt Kate's Needle, Devil's Thumb, and other peaks nearby had been deterred by the war, but became a reality the past summer, 1946. Definite plans were made early in

1946 that I should join Donald W. Brown and Fritz H. Wiessner, both of whom had been on the 1937 expedition. I took the Canadian steamship from Seattle to Wrangell, arriving in time to check on our equipment and met Brown and Wiessner as they flew in on the July 9 airplane. We shortly left the little fishing and totem-pole town on Al Ritchie's Stikine River boat. The two foot draught of the boat enabled it to cross the dangerous delta flats. Beyond, excitement always beckons while chugging up the eddying current. Dense forests and glaciated peaks stand behind both banks of the picturesque river. Curious grizzly bears are frequently seen at the river bank, without the least fear of the noisy boat, and seals are a common sight in the river. On July 10 we were landed on a sandbar 70 miles up the river, about halfway between Wrangell and Telegraph Creek. Two miles from the river was the 17-mile Flood Glacier, the third of the great valley glaciers almost reaching the Stikine from the ice cap. We established a permanent base camp and hung all food in bags suspended between two trees before beginning to relay loads through the forest belt to the glacier snout. The travelling with heavy packs became excessively difficult, and a stream forced us off our course. Troubles were perpetuated by an errant compass bearing, incessant rain, the thick forest brush with its 'devil's club,' mosquitoes, and a stream ford that required a pulley rope system to ferry across loads. Worse yet, Wiessner sprained his knee in the forest, causing us to question the advisability of continuing. Hoping his knee would improve, Brown and I took loads seven miles up the moraine and glacier on July 15. The next day we all moved camp to a green spur at the glacier's edge, 13 miles from the river. Except for two troublesome spots, the ice offered good travel. On the 17th Brown and I brought up the loads of the first relay, and just when our hopes had risen they were crushed by the news that Wiessner's knee had responded very unfavourably that day. We felt a prolonged rest would be necessary, and as our time was now quite limited, it was felt that turning back would be wisest.

Upon arrival in Wrangell on the 22nd I began telegraphing to Seattle, fervently hoping I could organise a new party. I felt quite elated upon receiving news that Robert W. Craig and Clifford Schmidtke would hasten via the next boat. We had previously anticipated another expedition in August, so luckily they were available. Craig and I had made a number of climbs together in Washington's Cascade Mountains some years ago. Schmidtke accompanied me on the first ascent of Nooksack Tower in the Cascades prior to my departure in July, and during the war he taught climbing and made a number of difficult ascents in the United States and Italy.

Wiessner and Brown left Wrangell shortly, and on the evening of July 29 my two new colleagues arrived. On July 30 we transferred our duffle on to the small river boat, purchased more provisions, and commenced the  $1\frac{1}{2}$ -day upstream voyage. Nimbo-stratus weather, prolonging the past ten-day rain spell, delayed our sandbar departure

a day. On the afternoon of August 1 we toted 65 lb. loads to the moraine camp, continuing the next day 11 miles to the cache at the green spur. To our astonishment the cache had been rifled, and missing was some delicious cheese, butter, and salami. In addition, sugar and some of my clothes had been dispersed among nearby rocks. We immediately indicated some nefarious goats, the atrocious villains now seen grazing on a distant hillside, safe from our hollow threats, as we were unarmed. They apparently applied considerable effort in their raid, for I had reinforced the cache with large rocks before leaving. Craig suggested a permanent name for the camp: Pilferage Ridge.

Clouds parted late the following morning, so we packed loads to the edge of the 6000-ft. ice plateau, a 3000-ft. climb up a rocky spur and glacier. While ascending heather slopes on the spur we encountered a flock of ptarmigan, and with amazing accuracy Schmidtke stoned three, somewhat vindicating our lust for carnal revenge. After leaving our loads in a sheltered rock cavity we made a few observations on the plateau, getting our first comprehensive view of the ice cap region. Mt. Burkett rose sharply 4 miles W., and some 16 miles N. was the Mt. Ratz area. Devil's Thumb was hidden from view, but we saw that our ski would be useful on the approach. The great cirque of the Flood Glacier, with the great walls of Mt. Gilroy, Pk. 9300, and Kate's Needle, dominated the icy scene S. A fierce gust of wind stopped our admiration, reminding us of the vagaries of Coast Range weather. Before we left for the Flood Glacier a white, misty cloud began to envelop Mt. Burkett.

It appeared that our immediate objective, Kate's Needle, might be approached directly from the head of the Flood Glacier via the N. face, instead of by the upper slopes via the ice plateau as in 1937. The quaint summit trio looked somewhat inaccessible, as the final ice faces were most precipitous on all sides. The three ice summits lie in an E.-W. line on a narrow crest. The only feasible route to the highest and centre summit appeared to lie over the W. peak. The latter's western arête, from our viewpoint, looked forbiddingly steep and corniced; we hoped the unseen S. edge of the arete would be gentler. The upper N. face was very steep and crevassed and topped by a great cornice; and we suspected that the surface snow was unstable, as was verified later. On the 4th the expected clouds blanketed everything, but the following morning was dazzlingly clear, our objective glistening in the sunshine. With ski we pushed a camp 4 miles across the flat glacier to the northern foot of the mountain, setting our tent at a height of about 3300 ft. The immensity of the ice walls above impressed us during our binocular study. The steep, pointed 7000-ft. spur seemed the only route through the jumble of icefalls to the upper slopes of Kate's Needle. It seemed like a major climb itself, but actually would be just a stepping stone. To climb this spur with any loads would be most arduous; and with the unpredictable weather, we all felt it most advisable to make the attempt from the present camp. The constant avalanches from the 6000-ft. 'Eigerwand' faces of



*Aerial photo by Maynard M. Miller.]*

DEVIL'S THUMB AND KATE'S NEEDLE FROM THE WEST.

Mt. Gilroy and Pk. 9300 behind camp added a lively note to the clear afternoon. We cooked and retired early to catch a little extra sleep.

At midnight it was raining lightly, so after a premature breakfast we resumed our sleep. However, the ever fickle weather changed again while we slept, and on waking up I was astonished to see bright sunlight on the ice slopes above. At 7.15 A.M. we left camp, much concerned over our late start. The névé was hard, so we travelled quickly in the shade until slowed by a crevassed maze. A precariously thin snow bridge gave us cause for concern, and shortly thereafter we were confronted with a diagonal cornice which blocked the route to the upper arête of the spur. After trying wet rocks to the left we decided to climb it directly. A most unsound bergschrund crossing had to be made, and then followed a delicate upward traverse above the bergschrund. To safeguard this difficult stretch I placed three ice pitons before working over the cornice. The remaining 1500 ft. of the spur was relatively uncrevassed, though at times very steep, and the climbing was laborious when the névé crust softened and we continually broke through. At noon we ate part of our huge lunch at the head of the 7000-ft. spur and then crossed a long flat of the upper glacier in a torrid heat. From here to the upper W. ridge at 9200 ft. there were no difficulties, but wading through unsettled knee deep snow was exhausting for the last 1000 ft.

We now could see the summit trio close above, with their tremendous cornices and beautiful ice flutings. The final W. arête of the W. summit was blocked by a cornice, but a less imposing ridge approached the W. peak from the S. This we planned to reach in its upper extent by a steep upward traverse from the W. to S. ridges. Thus it appeared that the only possible route, unseen until now, was the one we had hoped would exist. However, our optimism was modified by rapidly changing weather. Valley mists had developed into a stratus layer covering all but the highest summits, and cigar-shaped lenticular clouds began appearing frequently. Our ascent was a race against darkness and storm. We hurried up the W. ridge, clambering in deep snow, and then traversed right on 50° windcrust above the S.W. face, which dropped very steeply to an unmapped glacier. A steep névé slope led to the S. ridge, whose icy crest we ascended by alternating leads. A few feet beneath the W. summit we carefully traversed eastward, constantly belaying. We were forced to stay uncomfortably close to the great cornice, as the S. face dropped very steeply to our right. The exposure decreased when we reached the W.-centre peak notch. We traversed right a few more feet and in three rope lengths of 50° hard ice we stood triumphantly on our newly won summit, the time being a few minutes past seven. We had a dull sense of joy, but the imminent battle with weather and darkness lent little atmosphere for elation. The great S.E. and N. faces of our peak dropped relentlessly to the Mud and Flood Glaciers, but occupied only a moment's downward glance. After the darkening clouds we glimpsed with interest the summits of Devil's Thumb,

Mt. Ratz, and the high peaks E. of the Stikine. The view was somewhat disappointing in that early darkness from the grey sky, while the lower clouds concealed all but a few noteworthy summits.

An uncomfortably strong, though irregular wind spurred us to leave quickly. Fifty feet below the summit we left a ski pole and register can. Our well kicked ascending steps were a blessing as we made quick time on the steep traverses and ice arêtes, always alert for a slip. Luckily all went well on our hurried descent of the steep upper slopes, and as we wallowed and plunged down the unsettled lee slopes below 9000 ft. inky darkness engulfed us. At the spur top we stopped for a brief meal, and before leaving the sharp wind brought a biting rain. Kate's Needle was having its revenge! Descending the steep spur with flashlights was painfully arduous and we had to be constantly on the alert for a false step in the wet, windy darkness. The rain was loosening the slope so that it would have been impassable in a few hours; we began several small slides already. When we were below the steepest part of the upper spur a short rest was made at a rocky outcrop, largely to quench our thirsts from a melting snowpatch. Being uneasy about the night descent of the cornice we decided to attempt an alternate route which we had noticed on the ascent. However, we gave this up after an hour's groping among giant crevasses and séracs and decided to descend via the cornice. While one man belayed, the third would shine a flashlight for the moving rope member. Ice pitons were again used as a safeguard above the rotten bergschrund. We found our way successfully through the dangerous crevasse maze as the sky began to lighten. At 4.30 A.M. we crawled into our 'home' and fell asleep without even bothering to eat. Even the avalanches pounding down the E. face of Mt. Gilroy were unheard.

When we awoke in the evening, ceiling was zero, so we cooked a huge meal and went back to sleep. There was no rain on the 8th, so we skied and walked back to Pilferage Ridge Camp. The weather was still gloomy the next day, but we decided to push camp to the plateau edge, as we were eager to attempt Devil's Thumb. The loads were quite heavy for the rock scrambling and steep heather slopes of the spur, and ski were also cumbersome until we donned them at the 6000-ft. level. Near our previous cache we built a rock base on ice and pitched the tent alongside a rock slope. The wind, which always was much stronger on the plateau than on the glacier below, became violent in the late evening. The next day was one of raging storm, and only the heavy rocks anchoring the tent guys kept us intact. Two more days passed likewise, and it became evident that before pushing on to Devil's Thumb we would need to supplement our food. On the 13th we left camp standing, skied to the spur, and sped down the glacier in the rain in record time. At base camp we found Ritchie had left our mail beside a good stock of food. On August 14 we each toted 30 pounds of light foods back to our plateau camp. Upon our arrival a snowstorm began, a N. wind causing a

large temperature drop. In the morning when we looked out of our icy, snow-plastered lair, it was a pleasant surprise to see blue skies.

Thawing out delayed departure for Devil's Thumb. Shouldering very heavy and cumbersome packs, we skied across the relatively flat ice fields, decked with a sprinkling of dry snow. The hot sun and an uphill climb called for a lunch stop at a 6700-ft. pass. Here we had our first close view of the Thumb. This remarkable shaft of granite diorite looked magnificent, sheer and beautiful, like a truncated Matterhorn, only steeper. While munching a dry lunch we studied the E. ridge and S. face, these having been our tentative choices from photographs. We were all impressed with the fact that this peak would require good conditions and luck before succumbing to a first ascent. The S. face rose about 2000 ft. from a high glacier salient, the N. face, with its ice-plastered sheer rock, rose 5000 ft. from the S. arm of the Baird Glacier. Both the N. and the vertical, polished W. face were practically unapproachable from the ice cap. We could see the S. face was less plastered with snow and ice than the N., but we were soon to learn that all the strata tilted sharply down. A roped downhill ski run through crevasses soon brought us to a granite buttress at the N. edge of the ice cap,  $5\frac{1}{2}$  miles from the previous camp. In a wind eroded ice hollow we pitched the tent, anchoring it again with rocks from the buttress. We went to sleep with climbing plans for the morrow, for all signs pointed towards another fine day.

At 3 A.M. we left camp with rucksacks full of food and climbing equipment. After a few moments of clambering out of the ice hollow we halted, undecided whether to continue. The sky had become thinly overcast and the wind seemed unusually warm and humid. We expected a weather change, but not until later in the day, so decided to continue with the hope of at least a thorough reconnaissance. From our 6000-ft. elevation we crossed a mile of flat ice and then climbed through the crevasses of the high glacier salient at the S.E. corner of the Thumb. At 7000 ft. we crossed a bergschrund by a thin, untrustworthy snow bridge and stepped on to the glacier at the base of the Thumb's S. face. A few hundred feet of plodding brought the steep wall into full view, the spidery-iced upper rocks towering grimly in the dim morning light. In the other direction the sunrise had an evil red colour. Our immediate object was to reach a projecting rock buttress 1000 ft. above, so we climbed a glacier tongue, crossing one delicate snow bridge, to the bergschrund at the foot of the steep buttress. The crossing proved not difficult, but the snow which choked it was so rotten that it was a wonder that someone did not step through. The ensuing  $50^{\circ}$  ice slope required good steps, for we did not use crampons as we expected to climb some steep rock shortly. The rock proved impracticable at first contact, so we climbed along the base of the rock, cutting steps in the ice, for several hundred feet, carefully belaying all the way. When the rock angle decreased sufficiently we left the ice and climbed several rope lengths of difficult rock to a sharp rock arête. Though this was not as steep as the rock



*Photo, R. W. Craig.]*

DEVIL'S THUMB FROM N.E.  
Note sharp E. arete up which ascent was made.



SUMMIT OF KATE'S NEEDLE.

below, the holds were scarce, so it was necessary to continue belaying and climbing one at a time. When we reached the tip of the buttress we gained a fine view of the upper 1000 ft. of the face and scanned the glazed rocks for routes. Swirling mists closed in on the summit before we had an opportunity to study the face carefully. We pushed on another few hundred feet up a steep ice tongue, but turned back after a brief encounter with the wet, down-tilted rock slabs. At least we had obtained a taste of what lay ahead. At the buttress tip we ate and cached some food and climbing equipment. The mists almost reached our position as we began the descent, roping most of the way down the steep rock and ice slopes. Shortly after crossing the bergschrund at 7000 ft. the wind brought a sudden onslaught of sleet and rain, giving us a thorough soaking before we reached the tent. We spent the afternoon shivering and wondering when we could dry out our garments as the rain pounded against the tent. The following day brought both snow and rain, with a noisy, whipping wind.

We awoke rather late the morning of the 18th to find the sky clear and the buttress rocks above the tent gleaming in the sun. Craig rushed up to the ice cap and shouted that the Thumb was all clear. Owing to our late sleep and attempts to dry our wet clothes, we were unable to get under way until 10.30. We packed extra food and clothing, fully expecting to be benighted if the weather continued clear. The glittering grandeur of Devil's Thumb, with its great icy N. face in stupendous profile, increased our admiration of its beauty. We wore ski to the bergschrund at 7000 ft., crossed gingerly, and plodded up the glacier tongue in stifling heat. New snow on top of bare ice had become slushy, causing extra step-cutting and care, so we were happy to reach the smooth rocks of the arête. Beyond the cache we climbed the steep ice tongue to its tip, crossed right over a difficult rock stretch covered with *verglas*, and clambered up a snow and rock depression. We decided to forgo attempts to reach the summit direct by the S. face in favour of attempting the upper E. face. The upper S. face would offer a more direct climb, as the summit was at the W. end of the crest, but the *verglas*, the fresh snow, the smooth exposed slabs appeared most forbidding. From a notch in the upper E. ridge we hoped that the decreased angle of the upper ridge would permit a traverse to the summit, but we were worried about its icy condition and a number of pinnacles. After climbing some more glazed rock and thin, insecure snowpatches, we climbed a slabby stretch of rock with tennis shoes, using two safety pitons. From this notch in the E. ridge we had our first glance down the fearsome N. face. From the notch (*ca.* 8600 ft.) three rope lengths of difficult belayed rock climbing along the ridge took us to a tilted sheer pinnacle, a problem which had previously aroused our apprehension. At first the difficulties seemed hopeless, so we descended a few feet on the S. face to study the great slabs again for a summit route. If anything, they looked worse, but from our position there appeared a slim possibility of working around the overhanging face of the pinnacle. Back on

the ridge, we established ourselves at the foot of a subsidiary block beneath the pinnacle. *Verglas* and sheer granite precluded any possibility of traversing the N. face around the pinnacle, even though it did not overhang. We had no hope of reaching the summit that day, as it was already evening, but believed that we could accurately estimate the remainder of the E. ridge once beyond the pinnacle. We were now in the shade and a blast of cold wind called us to activity.

Well belayed I came to grips with the holdless block. To climb it without piton aid was impossible. I hammered two pitons in a minute vertical crack, and using slings with tension, managed to rise a few feet and insert another piton at arm's length. I worked up, augmented this with another piton, as gravity forced me on to the sharply overhanging left face of the block. Leaning out on the highest piton I found a left pressure hold and with very delicate manoeuvring climbed above the pitons. The next ten ft. were of steep and almost holdless slab, requiring exacting balance and hand pressure. Now I was at the base of the tilted pinnacle and after considerable effort placed a key piton for the descending traverse of its S. face. Using rope tension and a knotted sling I lowered myself down the slab at the edge of the pinnacle, dangled down a ten-ft. overhang, and moved by pendulum on to a tiny ledge on the overhanging pinnacle face. I immediately anchored myself with pitons placed in a convenient crack and belayed Schmidtke to my position. His rubber cleated Bramanti boots would be necessary for climbing the V-shaped crack running to the ridge behind the pinnacle, so we exchanged leads. An ice bulge in the crack forced the use of an ice piton for aid. Once above this difficulty he stemmed the sloping rock walls and clambered up a crusted snow-patch to a notch. I belayed Craig to my position, who tied the knotted sling to a piton to facilitate the return, before Schmidtke belayed us upward. I was glad to don my boots again as my feet were almost frozen in tennis shoes. The cold wind and mental tension had contributed to make the past hours of trying work of the utmost difficulty.

Light was rapidly fading, so we looked for a bivouac spot, finding a potential one 100 ft. further along the ridge. A reconnaissance further up the ridge led to uncertainty and an even sharper wind, so we returned to the potential spot. The ridge crest was some 15 ft. wide here and covered with sufficient snow for us to dig a hollow with the one ice-axe we had taken up the ridge. By 11 P.M. the work was completed and we spent the hours until daybreak shivering in this cramped hole. We were anchored by two ropes from the rocks above to insure against any disaster from sleepwalking. Of more concern was the perfidious weather. Until midnight all seemed well, but then stars began to disappear, and the wind veered from N. to S. We could see purplish mists forming among the peaks to the N. and on Mt. Burkett. Before daylight we left the bivouac and, led by Schmidtke, climbed 100 ft. of quite difficult and steep glazed rock. We climbed a rope length up the steep ridge crest to a little rock step. I clambered over this and kicked steps up the steep and icy snow crest



*Aerial photo by Maynard M. Miller.]*

SOUTH FACE, DEVIL'S THUMB.  
Route up ice tongue and right skyline.

*[To face p. 146.]*

to a point. In the grey morning light a forbidding ridge step appeared ahead and the summit some distance beyond, on the knife-edged ridge. Hopes of snatching victory before the storm engulfed us, as on Kate's Needle, were dashed when snow began to fall, so I returned. There was no sensible alternative but to retreat, as the wind was turning the snowfall into a mild blizzard. Retracing the exacting route across the pinnacle was very trying, but roping down and climbing the knotted sling made it easier than the ascent. The cold driving snow made the descent very miserable. By numerous long *rappels* we reached the buttress at 9 A.M., whereupon the storm suddenly abated. As we rested and ate in the calm, the weather began to improve, and soon the sun was streaming through the broken clouds. The decision to return to camp was vexatious but, as events later proved, wisest. We were discouraged, tired from the difficulties and exposure, our camp food supply low, and the weather not wholly trustworthy. After a hot meal in camp Craig and Schmidtke skied the  $5\frac{1}{2}$  miles to the plateau edge to augment our almost negligible food stock, returning after dark.

The morning of August 20 was gloomy and grew darker as the hours passed. By noon the threatened storm blossomed from the incipient stage into a torrent of wind and rainfall. We estimated the gale at 70 miles per hour. This was the worst storm any of us had ever experienced in the mountains. Rain poured through the tent and at times it seemed as though we should all be blown into space. The fury continued for three more days with unabated vigour, snow supplanting rain. We later learned that the Stikine River had risen three feet during this time. The rain had eaten away nearly all our peripheral tent platform and a crevasse opened four feet from the tent door. Hopes for any success had disappeared, for we were scheduled to catch the river boat on the 27th. In fact, we spent considerable time planning next summer's expedition to Devil's Thumb. The temperature dropped considerably on the 23rd, the wind bringing increasing quantities of fresh snow. A 20-minute lull gave us a chance to repitch the Logan. Our sleeping bags were soaking wet and the unusually cold night hardly added to comfort. During the night the cold front had cleared the skies, and the morning greeted us with a cloudless sky and powdery white scenery, not unlike what could be expected in winter. A curiosity to see how much snow actually was on the Thumb spurred us into climbing to 7500 ft., where we found the steep ice slope unduly hazardous. During the day the hot sun melted much snow off the rocks, though a binocular study showed the upper rocks still quite wet and snowy. We decided to make a final attempt on the morrow, though this would leave us only one day to make the return to the river and meet the boat.

We were off at 3 A.M. on the 25th beneath a crystal clear sky. A brisk N. wind for once seemed to presage continued clear weather. The climb to the buttress head went uneventful, although difficult as usual. Fresh snow on the ice added to the treachery in steep places. For once we were confident the weather and luck would be with us.

I still had a few qualms about the last step in the E. ridge, so we devoted over an hour to exploring the possibility of climbing diagonally the S. face slabs to the summit. With very slow climbing and the danger of thin snow on rock we abandoned this project, and climbed direct to the piton passage on the E. ridge. Schmidtke assumed the lead here and did an excellent performance in scaling the block and working around the pinnacle by the previously placed pitons. The ice in the V-crack had been dislodged, so this stretch was less difficult. The climb to our previous high point was as difficult as before, but a warm sun made conditions very different now. At noon we passed the point and spotted a possible route over the sharp ridge step. A little delicate balance climbing and ridge straddling brought us to the foot of the vertical step. From an icy little notch I traversed left on a tiny ledge on the overhanging S. face, placed two safety pitons, and by a few scanty holds worked upward to a belay spot. A traverse over steep snow-covered rock on the N. side took us to the crest again. This traverse and several ensuing ones required considerable clearing of snow off the rock before holds could be found. Now the worst was behind and only one awkward step remained, that being a short diagonal descent on the N. side of the knife-edged crest. The crest was quite narrow, the S. side generally overhung and the icy N. face dropped almost as steeply, so we took adequate climbing precautions while traversing the last 600 ft. to the summit. Most of this stretch was relatively easy, though several places required delicate ridge straddling, and we were able to climb simultaneously for the first time.

At a few minutes past 2 P.M. our goal was realised and we built a cairn on a ledge 10 ft. below the highest granite summit block. We spent an enjoyable hour lunching, taking bearings, and studying the grand panorama. The day could not have been clearer, and even Mt. Fairweather, 230 miles N.W., was discernible. Beyond the ice fields to the W. were the enchanting islands and forested channels of the coast, the ocean further in the background. In every other direction were hosts of peaks and glaciers, most of them unnamed and scarcely known. The view to the S.E. was familiar, with Kate's Needle dominating the peaks. We had fine views of the other high peaks nearby, which but for the inclement weather we should have also climbed. But we had scaled our two principal objectives. Beyond the glaciers to the W. we noted the small town of Petersburg, from where travellers can see the Thumb on a clear day. The descent was begun at 3 P.M. The main difficulties were avoided by roping down, usually from a convenient block or knob for a sling, although we had to use pitons several times. We avoided the intricacies of the pinnacle by roping down a 100-ft. overhang to a steep snow patch on the S. face. From here we traversed some steep snow and rock to get the two cached ice-axes before resuming the *rappels* down the S. face and the buttress. After roping down across the bergschrund at the foot of the buttress we felt relieved that the difficulties were largely behind. We reached camp about 8 P.M. in a jubilant mood and had a victory supper.