

NOTE.—After reading Captain Farrar's article very carefully, in the light of my own experiences with him on the Finsteraarhorn in 1907, I find myself in entire agreement with his conclusions. The following points seem to me established beyond doubt :

(1) Meyer's party ascended the E. flank of the S.E. arête by what is practically the route taken now, and reached it at what Captain Farrar has called 'Meyer's Peak.' To diverge to the right in order to strike the arête higher up would be sheer lunacy.

(2) From this point the 'minor peak' would be taken by anybody for the actual summit. I may add that there are many view-points on the S.W. of the mountain from which this peak looks as high as, if not higher than, the summit.

(3) If Meyer saw his guides hoisting a flag, it must have been on the minor peak.

(4) The guides cannot possibly have reached the true summit and returned in the time recorded, which is confirmed by the fact that the party descended the W. face and returned over the Gemslücke to their bivouac before dark.

Perhaps I may be pardoned for adding that, in my opinion, no one who has not actually done the climb in question is quite in a position to judge of the evidence.

H. V. READE.

THE FIRST ASCENT OF MT. SIR SANDFORD, THE
LOFTIEST SUMMIT OF THE SELKIRKS.

BY HOWARD PALMER

(Secretary of the American Alpine Club).

BESIDES the proud honour of being the monarch of all the Selkirks, Mt. Sir Sandford possesses three other claims to distinction among the prominent peaks of Canada. First the fact that directly or indirectly it has repelled more assaults by aspiring climbers than any other mountain in the Canadian Alps, no less than nine separate parties having retired discomfited from before it. Second, the circumstance that of all the known peaks of similar rank within these bounds, Mt. Sir Sandford alone compels its assailants to transport their equipment on human shoulders for the better part of a week as a preliminary to the attack proper, and to rely for their support during its

continuance entirely upon portorage in relays. And lastly, its clear title to be classified among the most majestic and the most beautiful mountains in the Rockies and Selkirks.

Owing to its remote situation in the depths of the unexplored wilderness included within the Big Bend of the Columbia River to the north of the Canadian Pacific Railroad, the mountain remained practically unknown until it was named and triangulated by the Canadian Topographical Survey in 1902, escaping therefore all such exaggerations of height as have so often been current concerning its neighbours in the Rockies. The altitude obtained was 11,634 ft., but as the massif lay well beyond the limits of the map, the prospective visitor was little better off than before as regards its relative position or the best means of approach. Certain it was, however, that natural barriers of no mean difficulty in the shape of narrow valleys, rushing torrents and pathless forests, choked with a disheartening tangle of undergrowth, filled all the intervening distance, and it is undoubtedly owing to these that the peak remained immune from visitation for so many years thereafter, despite the activity displayed by mountaineers in more accessible districts not very far away.

In the summer of 1908 I obtained a distant view of Mt. Sir Sandford from Mt. Hermit near the railroad. So alluring did it look that in the latter part of July I set out with Mr. B. S. Comstock, of New York, to discover, in so far as a brief journey would permit, where the mountain was and how to get to it. Eventually we succeeded in both these objects, locating a promising line of approach. The next season, Professor H. C. Parker having joined us, the mountain was reached by this route, notwithstanding the obstructions of the very dense forests. For much of the distance a trail had to be chopped out and it took twelve days to cover the same number of miles. The W. slopes of Sir Sandford were ascended over glaciers and snow to about 9,000 ft., but here unfavourable conditions forced a retreat which, owing to shortage of supplies, was presently continued to the railway.

The chief consequence of our three weeks' work was the discovery of the large glacier that has since been named the Sir Sandford.* It is probably the most important in the

* See 'Explorations about Mt. Sir Sandford, B.C.,' *The Geographical Journal*, vol. xxxvii. p. 170, February 1911 (Map and Illustrations). Also the same for 'Observations on the Sir Sandford Glacier,' vol. xxxix. p. 446, May 1912.

Selkirks, so that the biggest glacier and the highest mountain in the range are situated close together. Furthermore, a fine chain of lofty granite peaks lying just across the valley from Mt. Sir Sandford to the N.W. was examined at close quarters for the first time. Thus the expedition was not without definite topographical results of some significance.

In addition to its possibilities for interesting mountaineering, the region about Mt. Sir Sandford was seen to possess manifold opportunities for scientific investigation. Accordingly, in the summers of 1910 and 1911, Professors E. W. D. Holway and Frederic K. Butters, of the University of Minnesota, joined me in journeys thither. We aimed to make both lines of work mutually complementary. In the course of some two months we carried out nearly a dozen ascents to points above 9,000 ft., two being of about 10,500 ft. and one of 11,000 ft. We observed the topography, took photographs, measured the new peaks with a transit, and in general collected all data we could for a detailed map. We studied Mt. Sir Sandford constantly from every side within our range of action, examined with powerful glasses each possible way of ascent, and made no less than four assaults upon its exceedingly steep, icy slopes where the clinometer gave readings between 48° and 50° for 1,000 ft. However, it was all to no purpose, for wind, cold, avalanchy snow, or belts of glare ice, singly or in combination, drove us back on each occasion at about 10,000 ft. Despite much bad weather in both seasons, we gained all our ends except the fascinating sharp white apex of Sir Sandford. It is a remarkable characteristic of the mountain that, owing to the lofty cliffs which almost completely engirdle it, there is but a single line of approach offering any inducements to the mountaineer. Accordingly he does not have the option of selecting a route to fit the conditions prevailing at the time of his attack as may often be done on other peaks, but he is limited to one general locality, and when this is in a dangerous state he must perforce await a change for the better.

During these and earlier years we were not the only assailants of Mt. Sir Sandford. Others succumbed to its fascination, no less than six expeditions setting out to win the coveted prize between 1906 and 1911. Only two actually reached the mountain; the others from one cause or another had to retreat when many miles away—in one case with the loss of a life through the overturning of a canoe in the treacherous waters of Gold River and with the near loss of another on account of a broken leg. In all, no less than sixteen assiduous



Howard Palmer, photo.

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SIR SANDFORD, from the N.W.



Howard Palmer, photo.

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SIR SANDFORD, from the North West,

showing route of ascent, and route of previous attempts rendered unavailable in 1912 by ice conditions. Dome-topped rock conspicuous in centre; large butress in arête to the right just opposite.

The attempt of 1911 by Mr. Culver was made by the left sky-line ridge.

Alpinists, excluding guides, have sought to capture this relentless peak—a record that is believed to be without a parallel in the annals of Canadian mountaineering. It may be appropriate to make brief mention of the two expeditions which succeeded in overcoming the obstacles of approach.

The first consisted of Dr. Charles H. Shaw and Mr. Reuben T. Shaw of Philadelphia. Packing all necessaries for the journey upon their shoulders, this intrepid pair left the railroad at Six Mile Creek station in August 1908, crossed Gold River on a felled tree, and finally, by dint of herculean efforts, reached the top of a small peak (about 9,000 ft.) at the extremity of the S.E. ridge of Sir Sandford. From here it was seen that the tremendous, sullen precipices which guard the massif everywhere on this side offered a problem far beyond their resources, and that under the circumstances there was nothing to do but turn back. This is probably the first visit to the near vicinity of the mountain.

As time went on, by reason of these reverses, Sir Sandford developed a reputation for difficulty among the mountaineering fraternity and a wide-spread interest in the peak began to manifest itself. It is not surprising, therefore, to find men of experience in Alpine work among succeeding suitors for the honour of treading its virgin summit snows. In the summer of 1911, Mr. G. W. Culver, of Winnipeg, entered the lists, having in his party the Swiss guides Edward Feuz, jun., and Rudolph Aemmer. After a very arduous trip via the same route, they established a camp on the S. slopes of the mountain and made spirited onslaughts against the E. and S.E. ridges, but owing to the exceeding steepness and smoothness of the rocks they were unable to get higher than about 10,600 ft. on the former. These guides were the first of their craft to enter this section of the Selkirks.

Such in ruthlessly condensed form is the history of Mt. Sir Sandford down to the close of 1911.

The winter of 1911 and 1912 in British Columbia proved to be of unusual mildness. The snowfall was light, and when spring came it rapidly disappeared under the influence of a long period of clear weather. News of these auspicious conditions came to the writer and fanned his smouldering resentment against Mt. Sir Sandford. The finishing touch to our work in the Selkirks—the capture of this uncompromising peak—yet remained to be accomplished, and now it seemed that the opportunity was at hand. After the atrociously bad weather of 1911 doubtless the pendulum had swung to the other extreme

and the continuance of these settled conditions might reasonably be counted on for some time to come. Accordingly, I broached the matter of another expedition to Messrs. Holway and Butters, but they were unable to entertain the idea at this time. Nevertheless, I decided to persevere and, to this end, engaged two of the Swiss guides imported by the railroad and completed all preliminary arrangements. Happily, at the last moment Professor Holway found himself in a position to go, so I had the pleasure of sharing this culminating success with the companion of many another.

The best route of approach to Mt. Sir Sandford is to leave the railroad at Beavermouth station, descend the Columbia by canoe to its tributary, Gold River, and follow the valley of the latter inland to the base of the mountain, a distance of about 95 miles. After caching the canoes at the head of navigation on Gold River, there are about 15 miles of heavy going before the final camp near timberline within striking distance of the peak is reached. Over this portion of the way everything must be conveyed by pack harness, and for a prolonged stay at this camp supplies must be relayed in by a supporting party.

Our expedition of 1912 set out from Beavermouth on June 17. The party was six strong, including besides the principals, the two Swiss guides just mentioned, and P. Bergenham and S. Brown of Golden, as packers and canoemen. We had provisions for three weeks, but expected to accomplish our objects in much less time. In clear, hot weather, we worked our way up the valleys of Gold River and its W. branch, arriving at the upper camp, elevation about 5,800 ft., on the morning of June 23. The mountain is not visible from this point, so presently we walked out on the glacier to inspect it. Near the farther margin we found a grassy bank whence a good view of the splendid W. face was to be had, and we ensconced ourselves here for a careful study with the glasses. It was plain at once that there was less snow on the peak than ever before in our experience. Its condition looked more appropriate for September than for June. The steep upper slopes were icy, crevasses numerous, and bergschrunds pronounced. Evidently our former route up the roof of the large buttress would serve only as a last resort, owing to the amount of step-cutting necessary, but a traverse beneath a hanging glacier to the dome-topped rock at the left offered a promising alternative, since the danger from falling ice appeared considerably less than in former years. After completing our examination we returned

to camp and set about preparations for the climb, for we determined to try our luck the very next day, lest the settled weather should desert us.

At 1 A.M. on June 24 our silent line of shadowy figures might have been seen wending its way along the stony margin of the great ice stream by the twinkling lights of candle lanterns. At the most favourable place we took to the ice itself and headed out towards the centre in order to obtain the easiest possible going in the dusky half-light. After about two hours we reached the beginning of the ascent proper at the junction of a tributary glacier. Here we came to a halt to leave the lanterns and to put on the rope. The guides, with Feuz in the lead, tied themselves on first, so that they could change places easily in dividing the labour of cutting and trampling steps; I came next, and then Holway. The rope was 100 ft. long and we spaced ourselves at even distances, wearing it continuously except at halts during the whole climb. The palest tints of dawn were now playing delicately over the great uplift ahead, defining an inspiring vision of alpine splendour. From the frigid grip of the tributary glacier that swept down towards us and formed a stately approach like the staircase of some gorgeous temple, the mighty complex of ridges, buttresses and precipices—a truly formidable pile—rose higher and higher, until at last it culminated in the broadly obtuse but none the less sharply defined summit, which seemed infinitely beyond the reach of mortal man. However, Mt. Sir Sandford was a prize without a price, and we proposed before the advent of another day to leave no stone unturned to prove the fallacy of its seeming inaccessibility and to show that mortal man could, as a matter of fact, reach and tread its haughty crest.

Continuing without any real delay, we made for the end of the pronounced snowy shelf which swings down from the summit ice-field on the W. and forms the only obvious connection between the upper and basal glaciers of the mountain, which elsewhere is surrounded by exceedingly difficult, if not impassable, cliffs. On the steep snow slope leading up to the shelf we encountered our first obstacle in the shape of a bergschrund that extended completely across our line of march. Luckily, it occurred in two sections which overlapped and left a horizontal connecting sliver of snow between, else we must needs have retreated and made a wide detour.

The passage of this slender bridge with dark caverns on either hand was exciting work and, owing to the wet, greasy

condition of the snow, imposed extreme care upon the part of all, as we edged along above the yawning jaws. Just above the fissure the snow gave out entirely, exposing an abrupt bit of glacier where a zigzag staircase had to be chopped out with the axes. However, it was short, and presently we found ourselves on the shelf headed directly toward Sir Sandford.

For the next two hours we plodded up this shelf, making altitude rapidly. Once, at a favourable place, we halted in the snow and enjoyed a second breakfast, but otherwise the advance was steady. As we progressed conditions confirmed us in the opinion that the best route was to keep straight on for the protruding tongue of hanging glacier, swinging to the left for the dome-topped rock at the earliest opportunity. Close inspection of the cliffs indicated that the glacier was not discharging avalanches with any frequency. The cleavage surfaces were rounding rather than freshly cut, and although here and there moderately large fragments almost ready to fall could be picked out, there was an entire absence of the soft but incessant crackling sounds from beneath the ice which had been so audible on our last visit to the locality and which had prompted us to discard the route at that time.

Gradually we approached the threatening cliffs. Aemmer, who had relieved Feuz during the halt and was now at the head of the line, avoided the actual channel worn out by falling fragments as long as he could, but at last there was nothing for it except to make directly for the rocks on the other side. Now the snow under foot became hard and rough from the impact of tumbling masses, and almost every step had to be cut. The only sound was the continuous pick, pick of the axe as Aemmer bent to his task. Mere scratches were all that could be afforded, but these Feuz enlarged whenever it seemed necessary.

'Keep one eye up there,' he exclaimed, turning to me for an instant and nodding towards the crystal wall. I needed no prompting, as my eyes had been glued to the cliffs for some time. One piece in particular, about the size of a hog's head, chained my attention, since it projected somewhat and seemed on the verge of dropping off. If it had we could hardly have escaped the thousand pieces into which the rocks would have shattered it. Luckily, the slant was gentle, somewhere about 30° or 35° , so that there was little distraction on this account. Lower down, however, the declivity steepened into a giddy drop over the line of ice cliffs which edged the



On the long slope, leading to the top of the large buttress.



H. Palmer, photo.

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MT. SIR SANDFORD.

The awkward place near summit; Aemmer cutting out the path.

shelf. Incentive to maintain a solid footing, therefore, was not lacking.

With shortened rope we crowded close upon each other's heels, ready at a second's warning to seize such chance for safety as the exigency might present. We seemed to crawl along. Actually, however, we must have advanced about as fast as a man would mount a long, steep ladder. Now we are at the rocks. They are round and smooth from the grinding of the ice, but the foothold is sufficient. Aemmer loosens a few cakes of ice from the crevices and is up in a twinkling. The hard part is over. Not so the danger, for ice blocks are scattered all about on the ledges. We others swarm up as best we can, yet not without such scratching of boot nails and whanging of ice axes against the rocks as to call forth echoes from the grim, greenish cliffs. Next ensues a rough-and-tumble run along a rocky shelf to its outer extremity where safety awaits. As expected, it turned out to be the broad top of the dome-faced buttress and by common consent a brief respite was decreed.

It was 6.30 o'clock and the aneroid indicated an altitude of 9,600 ft., almost two-thirds of the way up. There was a rise of some 2,000 ft. to come. We congratulated ourselves upon such good progress and then turned to examine our surroundings. Against the rugged spur which formed our eyrie perch, the vast mass of the upper ice-field cleft itself in twain as it urged its sluggish way valleyward, leaving a gently rising wedge of rock exposed. The tongues thus formed on both sides ended in vertical escarpments of ice having a thickness of perhaps 200 ft. each. One of these it was that had prompted our recent praiseworthy haste. The dome-faced rock itself however, did not appear to be subject to falls of ice, and accordingly we now determined to ascend it and to effect a passage thence to the ice-field somewhere behind the dangerous cliffs.

Putting ourselves in motion once more, we succeeded in accomplishing this without difficulty. The ice, though broken, was not steep, and only a little axe work was required to land us safely on the broad expanse of undulating snow that covers the summit ice-field in a mantle of solid white. It seemed to stretch upwards and outwards interminably, for glittering battlements and leaning towers of ice on the skyline cut off the view overhead, and neither rock nor ridge suggested a boundary anywhere else. But the route, as we knew from previous inspection, led to the right in a long gently ascending

traverse, so no time was lost in turning our steps in this direction.

For the most part, this portion of the way proved to be merely an easy, though fatiguing, walk through soft snow. The only obstruction worthy of mention was a large crevasse about 8 ft. wide that forced each of us to resort to a flying leap in order to pass it. Hereabouts we caught a downward glimpse of the small upper buttress that had so often been the goal of vain efforts in the past. Its steep ice slope was now practically bare of snow, and we could see to good advantage by what a narrow margin wind and cold had triumphed over us. Above and farther back the frosty brow of Sir Sandford's ponderous S. buttress peeped out, with the final arête sharp cut against the glowing sky, swinging ever upwards from its crest.

Altering our line of march thither, it was not until 9 o'clock that we actually ploughed over the edge upon the broad, flat top of the buttress and came face to face with the morning sun and the immense panorama to the S. Naturally, our first concern was the nature of the remainder of the way to the summit, but one glance thither sufficed to dispel apprehension. True, the ridge was badly corniced in both directions, but it did not look at all difficult and not one of us had a suspicion of the actual obstacles in store. Accordingly, we at once took off the rope and devoted ourselves to the pleasant diversion of assimilating both mental and physical refreshment simultaneously.

Of the highly delectable nature of the latter it is needless to speak. Of the view, however, something must be said, for it turned out to be the finest of the day. Seldom have I beheld such a perfect sea of mountains, moulded into every conceivable form and adorned in every conceivable pattern with everlasting snow. Though, owing to Sir Sandford's isolation and supremacy in height, the panorama lacked effective foreground and so suffered somewhat in picturesqueness, yet these very circumstances intensified the feeling of almost overpowering vastness and savage grandeur which it inspired.

A short half hour had passed all too quickly when we set out toward the lower or S. peak over gently ascending snow. Prospects for success appeared excellent and our spirits were correspondingly high. But, alas! we reckoned without Sir Sandford, for as we moved along the ridge what was our surprise to see an unravelling and readjustment of its parts commence,

which revealed only too soon the deception of the previous view. Instead of an easy walk along broad-backed cornices, we now perceived that the arête was like a long, irregular wall, that it was piled up high on the top with snow which overhung for a great distance on the N. and sloped down steeply to the edge on the S., and that our only possible route lay along this very slope.

At first all went well, but as we progressed the tilt steepened and the condition of the snow grew worse. Soft and slushy from its full exposure to the glaring sunlight, it not only afforded the scantiest of holds, but at the same time exhibited a decided tendency to slip off the substratum of hard ice upon which it rested. Aemmer was constantly forced to dig away the snow and cut footholds directly in the ice itself. Not entirely pleasant was it to watch the fragments thus loosened start down the slope, disturbing more snow as they gained headway, until finally, far below, a full-sized avalanche poured over the cliffs.

Under such impediments a party's progress is like that of a garden sloth, yet in time even this becomes surprisingly effective. Turn after turn of the scalloped parapet fell behind us, but still the summit remained pertinaciously hidden. At length, when nearing a rocky, jutting promontory, buttressed by high cliffs below, we felt certain that its disclosure could no longer be postponed. A moment more and Aemmer was on the knob, peering around the edge of slanting snow that formed our skyline. Not a word of encouragement did he vouchsafe, however, but instead commenced a lively interchange of Swiss patois with Feuz, who at once moved up and joined him in an intense study of what lay behind. Standing room being limited, Aemmer presently cut himself a niche in the ice higher up, which allowed me to advance.

'There is a nasty place here,' said Feuz, when I arrived, and nasty enough it looked. I found myself on a projecting rock at a point where the ridge made an abrupt turn at right angles for twenty feet or more, before resuming its course. It was as if, after having been cut vertically, the further section had been shoved bodily sidewise along the cut for this distance, leaving the rock and snow sliced cleanly off, but without any actual break in the continuity. Above this sheer face an ugly-looking cornice depended. From the top a large mass of soggy, melting snow had just fallen, and water was dripping down like a shower bath. Clearly there was no way up there. On our own level, along the line of junction between snow

and rock, the two came together so nearly flush that all chance of passage seemed utterly hopeless, while immediately beneath us a cautious look revealed smooth, ice-coated rocks ending in a tremendous snowy slope which shot the eye directly into the valley a mile below in one breathless jump—all most impressive, but scarcely calculated to afford much assistance to the matter in hand.

I freely confess that I was nonplussed. The whole situation looked almost prohibitively dangerous, for there were no real holds or anchorages whatever, even if some way around the *mauvais pas* could be devised. Aemmer, however, mindful of their defeat on the mountain the previous year, was not to be deterred by such considerations, and while Holway and I were establishing ourselves on the rocky knob he commenced of his own accord to hack away at the ice along the base of the snow wall in an absolutely fearless manner, with Feuz paying out the rope from the ice step near us. We held our breath as we watched him, for to all intents and purposes he was on the brink of eternity. If another piece of that cornice should fall . . .

As for ourselves, we were safe enough sitting there on the rock, even though holds were conspicuously absent, and our feet dangled in empty space, for the rope had been taken off in order to give Aemmer the necessary length. Time seemed to stand still, but after what must have been about fifteen minutes he got out from beneath the cornice and came to the less perilous locality where the ridge resumed its original course. Meanwhile I had managed to extract my camera from the rucksack and took several photographs of him as he worked, an operation in itself not entirely easy under the circumstances.

At length nearly all of the 100-ft. rope was out and it was time for the next man to follow, so, moving up to Feuz, I tied myself to the end. Aemmer now had fairly good footing on the sloping rock, but still lacked axe or hand hold to serve as a quick grip in case of need. Nevertheless, the most hazardous part, the actual construction of the path, was over. The evil spell of the place was broken to that extent. Surely after such a gallant exhibition of pluck and skill in the making of a way, it would be ungracious to balance the pros and cons of safety too nicely, so I started off, Aemmer cautiously taking in the rope as it slacked.

Of the next few moments I have but a vague recollection. I know that the first steps were extremely difficult to negotiate,

owing to a soft, bulging boss of snow beneath which one had to duck sideways, making at the same time a long stretch into a small ice-step full of water beyond. After this came a stride to an outward sloping bit of smooth rock for which the balance could only be maintained by thrusting one's hands straight into the snow. Then the wall eased off, allowing one to stand upright and to face forward once more. The ensuing steps were on the outward-rounding rim of rock, slushy, sandy, icy and wet. But, in comparison, the going was straightforward enough, a matter of careful balance merely, and not many minutes elapsed before I stood beside Aemmer on the rocks. While passing beneath the cornice I heard a vicious swish just behind me, which they said was due to about a bucketful of falling snow—a somewhat thrilling escape.

Having taken off the rope, the next step was to throw it back across the couloir for the use of the others. Fortunately, Aemmer accomplished this on the second cast and then Holway worked over. The following attempts, however, did not succeed until the eighth cast, for so little surplus rope remained and so awkwardly was Aemmer placed that it was extremely difficult to land it within Feuz's reach. When he finally joined us we found that more than an hour had been consumed in gaining this 100-ft. advance.

But the summit was not far away, because we could see a bit of its cornice above the arête ahead. Roping up at once, we started towards it. Presently, beyond the even slope of snow that formed the skyline before us, we looked down upon the ridge that rises gently to the summit from the pointed E. gable, and I knew that the culmination of the four years' siege was at hand. Aemmer now redoubled his precautions, for evidently the actual top was on the cornice that jutted out a goodly distance into space on N. and E. and he desired to get as near as possible without leaving *terra firma*.

Finally he came to a halt and, driving in his axe, said, 'Here is the top.' It was a moment of glad triumph, of course, yet there was no enthusiasm, no congratulation, no shaking of hands, scarcely a spoken word. Neither our position nor the knowledge of what lay in store below was provocative of such demonstration. No doubt apprehensions might have been forgotten for the time being, had our surroundings looked like the top of anything. But they did not. About half the horizon was hidden by the snowy crest that extended for a rod or more above and beyond us and the tremendous overwhelming sensation of standing on

the very highest point of the Selkirks in all that great panorama was lacking. Nor was there time or space for lining up so that someone might venture out on the extreme apex in safety.

Our situation may be compared to the upper corner of a steep roof with one slope carried up beyond the ridge-pole so as to overhang the other, the whole being tilted slightly upward at one end. The overhang would correspond to the cornice along the arête; the projecting eaves, to the descending cornice in the other direction. We were standing in a horizontal line as near to the crest as we could get without trespassing upon the overhang. Below, the slope swept down to the valley at about 45° without visible interruption—a smooth sheet of snow. Only intuition would suggest the precipices to one who did not know. There was not a bit of rock within reach; there was no place to sit down; it was 11 o'clock; nothing urged us to remain, everything urged us to go. So, after complying with the customary formality of burying a tin box containing our record in the snow, we simply turned in our tracks and started back, Feuz now being in the lead. At the first patch of rocks Aemmer piled up a few fragments into a small, insecure cairn.

Arriving at the difficult corner, owing to the impossibility of throwing the rope back uphill, we crossed without unroping, using the most exquisite care and moving only one at a time. Although, before starting, we succeeded in dislodging part of the cornice by hitting it with stones, this traverse in our tracks of the morning was the most delicate and dangerous operation of the day. It proved to be much more serious than before, for the whole party was on the rack at once and had anything happened to one all would have had to suffer the consequences.

Since the situation differed from that presented at the approach, a few additional lines of description may perhaps be permitted here. On the right, a porous bank of melting snow was piled up on the rock wall, leaving exposed nothing but a narrow strip of outward sloping stone along its base. This, Aemmer had previously cleared of ice to the width of about a foot, forming thus a meagre pathway, whose outer edge, to the left, was the precipice. In negotiating this strip of rock the snow bank was too soft to afford any hold and consequently there was none. Everything depended upon balance alone and this in turn upon the absolute solidity of

each step. The rocky ledge ended at the vertical face of snow before mentioned, and across this the steps were in ice with a few cut handholds.

After Feuz got by and upon the rock knob where we had perched earlier in the day, the worst was over, for the others then had at least the moral support of the rope. Although the place teemed with possibilities for catastrophe it seems to me that it transgressed but little, if any, the line where skill, coolness, and absolute faith in one's companions can assure safety. It is questionable whether a party lacking any of these elements is warranted in engaging in serious mountaineering at all; but having them, almost anything within the bounds of possibility can be accomplished and accomplished safely.

Our one concern now was to get down as quickly as we could, for in that warm, intense sunshine we had no business to be lingering on high with slushy slopes and pendulous ice cliffs below. After leaving the ridge, the descent to the rock cleaver was a combination of artless plunges on easy slopes and gingerly negotiated passages on icy slants. The wide crevasse without a bridge yielded to a skilful spring by Feuz, using Aemmer's knee as a take-off. We arrived at the rock at 1.25 P.M., and unroped for a short stay. I immediately adjusted my camera for a few pictures of the cliffs, but, to my alarm, several pieces of ice fell off and rattled down over our line of steps in plain view below. Presently another small fall occurred. Evidently the sun was already playing havoc with this face of the peak. There was nothing for it but to keep on and pass the place at once.

Reassuming the rope, we descended the rocks, and walked across the ledges towards the cliffs to gain the point where our step-ladder commenced. It was a thrilling moment as we entered the danger zone, for the ice tongue looked quite appalling in the glaring sunlight and the lumps of ice about had a most stimulating effect upon the imagination. We were rejoiced to find that the steps had melted little, so comparatively rapid progress was possible without further cutting. Except in a few places, we were able to face forward and thus to make better time. Fifteen or twenty minutes took us out of the line of fire and on the thick snow, where relief from the nervous strain found expression in gay, but duly restrained, charges down its yielding surface.

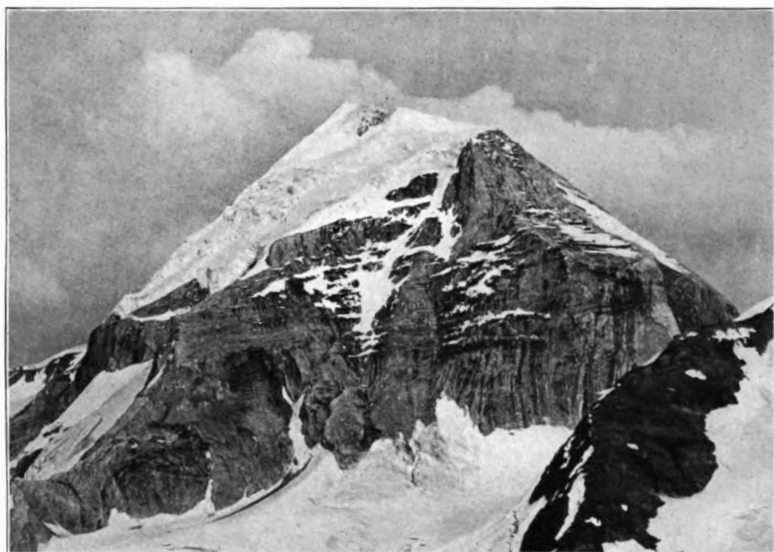
Although the remainder of the way was not without its

difficulties, it is needless to dwell upon them, for they were as nothing in comparison to what had gone before. By constant alertness everything was safely passed and at half-past four, after an absence of $15\frac{1}{2}$ hours, we were enjoying the comestibles and the congratulations of camp.

Thus fell the haughty monarch of the Selkirks, the last of the big unclimbed peaks of the Canadian Alps within fair working range of the Canadian Pacific Railroad. Virgin peaks of the 10,000-ft. class there are still in moderate abundance, but even these are for the most part remote and difficult of access. Until trails have been opened up into the more distant sections, further reports of first ascents may be expected to be limited to new routes and to mountains of minor height.

I hope that I have made it clear that the character of the work on Sir Sandford is dependent upon the amount and condition of the snow. The route lies almost entirely over glaciers, and when, on the critical slopes, the snow is thick and well attached to the ice, no special difficulty need be apprehended, and the dangerous passage beneath the ice cliff may be avoided advantageously by returning to the W. arête. On the other hand, in years when a scanty snowfall is combined with hot weather, the greater part of the 5000 ft. ascent to the summit arête will be glare ice, even if none of the lower bergschrunds prove impassable. Had we been a month later in 1912, there is little doubt but that this state of affairs would have confronted us. Likewise conditions at the couloir in the final arête depend upon the amount of snow and upon the vagaries of cornice formation. Ultimately it is not unlikely that a route may be discovered up the rocks along the S. face of the W. arête, but the rotten, granular limestone (steps may sometimes be chopped in it) is exceedingly disagreeable to negotiate, and, as often as we tried it, we always returned to the ice.

I may perhaps add as a postscript that two days later (June 26), the same party ascended Mt. Adamant in the fine granite range 5 miles to the N.W. of Sir Sandford. It ranks next to the monarch in the vicinity, being almost 11,000 ft. high by triangulation. Although safer, this peak proved to be much more difficult than Sir Sandford, the expedition consuming $18\frac{1}{2}$ hours, of which ten were spent in the great 2000 ft. couloir that scars the S. face (six upon the ascent and four on the descent; the descent was made at top speed in the face of a severe thunderstorm). Two climbs



Howard Palmer, photo.

Swan Electric Engraving Co., Ltd.

SIR SANDFORD, from the S.W.,
showing precipices that guard this side.



Howard Palmer, photo.

Swan Electric Engraving Co., Ltd.

THE GRANITE PEAKS, from the S.E.
Mt. Adamant (11,000 ft.) at the right, showing 2,000 ft. couloir
by which ascent was made.

could hardly be more diverse in character. Sir Sandford was wholly snow and ice work; Adamant practically all rock work. The guides (from Interlaken) compared it with the Schreckhorn to the disadvantage of the latter. *

SOME NEW CLIMBS AT COGNE.

BY THE EDITOR.

(Read in part before the Alpine Club May 6, 1913.)

PUNTA FENILIA.

FEW of us wish to say anything of last season in the Alps: that summer of our discontent recalls all the pangs of delay and of disappointment which patient merit took of the unworthy weather of 1912. But visitors to the Italian side did not fare quite so badly as those who went to Switzerland. Yet even in Italy one might say of the great peaks, as of conspirators,

Their hats are plucked about their ears,
And half their faces buried in their cloaks,
That by no means I may discover them
By any mark of favour.

Or, to put it in another way, one might say that in the sulky absence of the great mountains the little peaks as understudies essayed to play their parts, and with a considerable amount of success.

On August 9, 1912, we—*i.e.* Benjamin and Augustin Pession and I—got as far as the Grandcrou glacier, when a heavy snow-storm came on, and consequently no expedition came off.

On Saturday morning, August 10, I came down quite late, and, strolling out into the sunshine after breakfast, the Punta Fenilia suddenly attracted my attention. I knew it had not been climbed from the Valnontey: it is evidently

* For a full account of this expedition and of others in the surpassingly fine alpine country of the Northern Selkirks, see the writer's volume *Mountaineering and Exploration in the Selkirks*, with maps and numerous illustrations from photographs, soon to be published.