of the question; it would require an expert burglar with the requisite tools to effect an entrance.

On our inserting the key the lock proved very stiff and our hearts sank; after some coaxing, however, the double lock yielded and we got in.

The Cecilia is a stone hut, therefore damp. Though there was a supply of wood we were saved the expense of using this as it refused to burn. The sleeping place is very comfortable, however, arranged like the cabin of a ship, and after a light meal we dropped off into dreamless slumber.

The next two days were occupied in getting from the Cecilia to the Zocca Hut and Vicosoprano to Maloja. The weather was bad, mist and heavy rain below; much new snow on the rocks.

We had regretfully to pass by all the first-rate climbing there is in this region and make our way, not without adventures, to Vicosoprano. We went via the Remoluzza Pass, an unmapped pass, and the Zocca Col.

We were much impressed by the rocky peaks of the Bregaglia and their great slabs and the splendid scenery of the Albigna gorge and waterfall. It is an ideal region for the rock climber if, as Dr. Wilson says, the provisioning of the huts can be arranged for.

Two Norwegian Couloirs.

By RAYMOND BICKNELL.

THE peaks and passes of the Horungertinder, viewed from the heights upon the opposite side of the gorge of the Utla, present a remarkable spectacle. The main central ridge, running east to west from Gjertvastind to Austabottind, can be seen from end to end and every peak upon it stands out distinct from its neighbours. The eye of the traveller, be he mountaineer or not, is immediately arrested by the culminating glory of the view, the black rock tower of Store Skagastölstind. But when the thoughtful mountaineer allows his eye to wander farther to left and right he may see other things, less obvious but no less interesting. Considering their altitude, he will see that the mountain faces opposite to him are extraordinarily free from snow. These peaks of the main ridge do not present their vulnerable sides to the south. It is true that the western

half of the chain is cut by several deep passes, but the eastern peaks are set upon an almost unbroken face of rock, which rises straight from the glaciers at their feet. Consequently a perpendicular white stripe, which cuts right through the black monotony, though small in comparison to its surroundings, is a conspicuous object to the initiated searcher after climbs. To him it will be clear that here is no ordinary couloir, for the face which it cuts is more than 2000 ft. high and the absence of snow and ice upon both sides of its straight and narrow course is evidence of an interesting steepness.

I saw it first from the forest above the Vettifos and made an inward vow to climb it. A day later we examined it from the top of Falketind and learned that its source was the gap between Styggedalstind and Gjertvastind and that it fell in one unbroken line of ice to the Maradalsbræ. Then followed research amongst the pages of Norsk mountaineering history and the minds of the natives. It had first been climbed seven years before by the Dane, Carl Hall, an early and able explorer of the range, who had used the gap at its head as a pass across the main chain. A year later the Norwegians, Thorgeir Sulheim and Anders Eide, with an English lady, Miss Green, had repeated the ascent and from the gap had followed the ridge to the top of Styggedalstind. No one had been there since and no local guide could be found who was not emphatic in his declaration that he did not mean to go there. Sulheim was sought and poured copious cold water on the idea. Hall's account of the first ascent was studied and was not encouraging. He had written: 'Here is the highest and steepest continuous ice slope which the author remembers to have seen in Norway. . . . It is, moreover, one of its peculiarities that the rock walls of Styggedalstind and Gjertvastind to left and right respectively appeared to us during the whole ascent to be so absolutely inaccessible that there was scarcely a single place where it would have been possible to set foot upon them.' * This was the final blow to the enthusiasm of youth, the art of step-cutting being as yet unmastered. The couloir was left unvisited but not forgotten.

Fifteen years later I was back at Skogadalsböen with P. Keith Murray and Peder Bjerk, of Fortunsdal, reindeer hunter, carpenter, house painter, porter and guide. Anyone who attempted to climb in western Norway in the August of 1909 will understand to what extreme limits mountain weather

* *Den Norske Turistforenings Aarbog*, 1888, p. 37.

can go. For a week we had lived in a torrent of rain, hail and snow, under or in a low canopy of cloud driven before a series of south-westerly gales. Austabottind, its upper rocks thickly covered with feather-formed ice, had been climbed though hardly seen. Previous knowledge of some of the easier passes near Turtegrö had enabled us to find our way across them, but we had done no more serious climbing. The hope of better weather had become faint and the move to Skogadalsböen had been made without waiting for it.

The couloir was the primary object of this move. From inquiry and reading we knew that during the intervening years many had become aware of its existence, that a few had examined it from above, but that no one had followed in the steps of the early explorers. The place had been untouched for 21 years. Surveyors had been at work in the district and their levels had proved that Hall was substantially correct when he estimated its height at 2000 ft. At Turtegrö the guides, who had seen it from the peaks upon the other side of the Maradalsbræ, declared that there were few years when there could be any chance of getting to the top ; the rocks at the side were unapproachable and the space between usually filled with hard ice. It was obvious that steps could not be cut up 2000 ft. of hard and steep ice within the limits of an ordinary day, but we had comforted ourselves with the reflection that a rock face, viewed from a point exactly opposite to it, frequently looks impossible where it is in fact easy. Moreover, instances could be recalled where the first climbers of a couloir, absorbed in the stern struggle with the ice immediately in front of them, had failed to notice high roads upon the rocks at their side. The more serious questions of falling stones and avalanches were not forgotten. The guides spoke of stones. At one time, faithful to the almost unbroken tradition amongst English climbers in Norway during the last thirty years, I had consulted the ever courteous and helpful Slingsby on the subject. He knew the place well, had indeed looked into it both from above and below and thought it somewhat suggestive of avalanches. On the other hand there was no direct evidence as to these things having been seen. The best place at which to investigate the stone question was the flat glacier at the foot of the couloir, and we had determined that so far at least we would go.

On the morning after our arrival we had climbed Gjertvastind, the most easterly peak of the chain. This day there had been fitful intervals of clearness and sunshine and we had been able

to examine the details of the slopes around us. Not knowing that we had collected knowledge which was soon to save us from a night upon the mountains, we had come home that evening feeling that we should have been better occupied upon a less easy climb. Then the weather had relapsed and a day had been spent in an effort to find interest in swollen waterfalls reached through dripping woods. That night, in the desperation known to those who have seen half a climbing holiday wiped out by rain, we had decided that, come what might, we would at least look at our couloir on the morrow. Hence it was that at 8 o'clock the next morning the three of us set out from the hut at Skogadalsböen in a steady rain which descended from thick clouds close above our heads. For a few hours we had waited vainly for an improvement, and then, firm in our resolve, had gone out regardless of the weather.

The upper snows of the Maradalsbræ accumulate upon the south-eastern slopes of Centraltind, so named as being the peak upon the main chain where two of the most important subsidiary ridges come in at right angles from north and south. One of these ridges runs down in a southerly direction and then, sweeping round to the south-east, forms the right bank of the glacier and forces the ice into an easterly course with its left side close under the southern faces of Styggedalstind and Gjertvastind, the last two peaks of the main ridge. It was with this southern face above the left bank that we were now concerned.

Upon arriving at the glacier we found that thick clouds were lying close upon its surface and hiding the cliffs at each side from view. There was some difference of opinion as to the position of the gap between the two peaks and the couloir coming down from it, in relation to the glacier below. Howard Priestman's excellent map, though it is on the whole of immense value to anyone climbing in the range, did not give us much help here. None of the party had ever been on the glacier before and it was not surprising that we failed to identify the narrow entrance to the couloir and walked far beyond it. At 12 o'clock we were stopped by an immense crevasse which ran into the mist to left and right as far as we could see. We were probably close under Centraltind, but it was impossible to obtain a glimpse of the mountain walls which we knew to be around us. Then followed a long and cold wait upon the snow in the hope that the clouds might lift. At 1 o'clock there was still nothing to be seen, so we turned our faces sadly towards Skogadalsböen and began to grope our way down the glacier.

Half an hour later there is a sudden break in the clouds and we catch sight of a long white stripe running up to the left. Is it the couloir? We can certainly see that the ice reaches up into the clouds for three or four hundred feet, but who can tell what is higher up? Even if it is the right place we have little hope of getting to the top, for 1.30 is not the best time at which to start such a climb. At any rate we must go and have a look rather than go back without doing anything. The beginning is not too promising. We try to get on to the rocks to the west of the couloir but find smooth slabs upon which the leader can get no hold. There is nothing for it but to make a start on the ice. This entrance is certainly exposed to any stones which may come down, but it is soon past and the ice becomes wider. The rocks to our left look by no means inaccessible and in a few minutes we are on them and climb up several hundred feet without difficulty. Then they suddenly become steeper and the only way to advance is on the ice. We stop a moment to discuss the situation. 'Is it worth going on?' The clouds are as thick as ever but the rain has stopped and anyhow we can go a bit farther and yet get back without difficulty. Out on to the ice again, which is harder and steeper now, but this time we keep close under the wall to our left and are able to save some step-cutting by working up in the crack between ice and rocks. There is no doubt that the centre of the ice is a place to be avoided, for though we see no falling stones they must come down at times. Soon there is an opportunity of getting on to the rocks again and we do so without delay. Here we find climbing which needs care but offers no great difficulty, and we gain height steadily. It begins to look as if we were in the right couloir, for an unbroken line of ice still rises into the clouds and to our right we can see a smooth, perpendicular black wall, which must be the great cliff on the S.W. side of Gjertvastind. Perhaps we shall get to the top after all. Once more on to the ice but back on to the rocks again after half an hour's cutting. Doubt vanishes as we begin to see the outline of the gap above us dimly showing through the clouds. The gully begins to open out to the left; we climb up over easy ground, and 3½ hrs. after leaving the glacier we are upon the main ridge looking down upon a sea of cloud which we know must be floating over Gjertvasbræ. There is not much time to spare, but the ridge to our left looks easy, and we make a dash for the top of the peak which cannot be far away.

While the excitement of the ascent had lasted, the question

of how to get down had not received much attention. By the side of the cairn upon the top of Styggedalstind at 6 o'clock ı the evening, in bad weather towards the end of August, t began to be obtrusive. The prospect of darkness in the couloir or even amongst the crevasses of Maradalsbræ was not attractive. Below us to the north lay the flat surface of Gjertvasbræ, but we knew that it could only be reached through a maze of steep and broken névé, not too easy to cross in clear daylight. Someone suggested Gjertvastind. We had all climbed it by its eastern slopes two days before. Now if we could get to the top before dark there was still some chance of a night in bed, and five minutes after we had reached the cairn we were hurrying back along the ridge to make the attempt. Success seemed by no means certain when the limited time at our disposal was considered. Gjertvastind rises from the gap in a perpendicular cliff, the word perpendicular being here used in its unusual but literal sense. Slingsby has recorded that at one part of this cliff a stone dropped from the top falls through the air for 9½ secs. before striking the ice below.* Immediately above the gap it is not so high but it is no less steep, and there could be no thought of climbing it. To our left it terminated in the northern face of the mountain; cliff and face joining in a precipitous north-western ridge. The lower part of this ridge looked impossible and we therefore skirted round its base on to the northern face. One of the first party which climbed this face has described it as 'a solid and almost perpendicular wall of hard ice.' † A member of the second party was contented with—'the slope is extraordinarily steep (angle about 60°) and consists of clean hard ice.' ‡ We found the ice both solid and hard but an unemotional clinometer would only record 52°.

A hard ice-slope at 52° is amusing at times. As a way home when one is late for dinner it is inconvenient, and after we had spent an hour on this one we were forced to the conclusion that, if we did not soon get on to the rocks to our right and so up on to the ridge, we should be out for the night. The first of the parties, whose words have already been quoted, had recorded that this ridge was 'too steep to go,' and both parties had taken 4 hrs. to get down the ice to the gap. We had not so much time to spare and we remembered that, two days

* *Norway the Northern Playground*, p. 144.
† *Den Norske Turistforenings Aarbog*, 1891–2, p. 70.
‡ *Ibid.* 1895, p. 69.

before, when we had looked down upon the ridge from the top, we had thought that there would be some chance of climbing it. Consequently we had now kept close under the rocks in the hope of seeing the desired weak spot, but so far we had found their appearance distinctly unpromising. Now, however, they were divided by a narrow square chimney, cutting deeply into the face as it rose and filled at the back with ice. It was one of those abominable places where it is possible neither to swing an axe nor to advance an inch without using one. Still, though its walls could not be climbed, the left arm could obtain some balance from one of them while the right arm dealt with the ice. The chimney ran right up to the edge of the western cliff and ended at an overhanging rock platform, pierced by a remarkable hole through which it was possible to look straight down into the great couloir upon the opposite side of the ridge. If we could now climb the rest of the ridge our troubles were at an end. It rose in a series of slabs, excessively smooth and steep, but frequently broken by good horizontal ledges on which there was plenty of room to stand firmly. In such a place, where time is the enemy, the rope becomes the best of friends. It is folly to disdain its help merely because it is well within one's powers to do without it. The man who will learn to climb a slab with true *abandon*, trusting to a well-held rope and wasting no time in seeking for holds which do not meet him on his way, will again and again arrive at the top in a fraction of the time which has been required by even the most skilful leader. Nor need a leader disdain a safely given and helpful shove merely because he knows that by looking for a better place he can reach his goal unaided but five minutes later.

It was only by a free acceptance of these principles that our narrow victory was won, for at 8 o'clock, as we crossed the top of our second peak, the light was fast failing. Guided by our two-days-old footprints, which were still just visible, we hurried down the easy snow slopes upon the other side and in half an hour were able to take off the rope. Once we strayed on to the head of the little glacier which runs down in the direction of the Maradalsbræ, but here the compass soon righted us. Before 10 o'clock we were glissading down the last snow into Guridal and just as it was becoming inconveniently dark we had reached the track and were within an hour's walk of the hut.

Though the expedition described above was, on the whole, easier than had been expected, it brought about another which

was the reverse. During the day it was discovered that the giant couloir was not alone in its glory. On the opposite side of the glacier was just such another, not more than half its height, it is true, but evidently steeper and bounded by walls which gave little promise of extensive wanderings from the ice.

It has already been mentioned that the right bank of the Maradalsbræ is formed by a ridge running down from Centraltind. This ridge, which is exceedingly narrow and jagged, rises again half-way down the glacier and forms the two peaks of the Maradalstind, colloquially known as Manden og Kjærringen—the man and his old woman. Upon the Maradalsbræ side they fall in sheer precipices to the ice and between them is a deep gap in the shape of an attenuated V. It was here that we found the second couloir, rising like its larger companion direct from glacier to gap. It had been seen early in the day, and at one time, when we had been unable to find that which we sought, there had been talk of trying to climb it. Records were subsequently searched for information. The gap between the two peaks can be reached without much difficulty from Midtmaradal upon the other side. One party, who had found themselves there at 6 o'clock in the evening, recorded that they had looked down upon the Maradalsbræ, had thought that a descent might be made, and would have liked to try. They would have met with a surprise had they done so, but discretion had prevailed. There was no doubt that the gap had never been reached from the north. It would be affectation to pretend that this was not an additional attraction in a district where little has been left unclimbed, and two years later the allurement of the couloir proved irresistible.

The base of operations was the same as before, the month—August 1911. Peder Bjerk was again of the party, but Keith Murray had been detained in Scotland and Miss Kathleen Field had taken his place. The weather had been almost perfect for weeks and after a summer of brilliant sunshine there was every prospect of hard ice and much step-cutting. There are, however, many and almost insuperable difficulties in the path of those who wish to get away early from Skogadalsböen and it was nearly 7 o'clock before a start was finally made. The snout of the glacier was reached at 9.50 and after a second breakfast the walk up the ice began. For a glacier so flat, the Maradalsbræ is crevassed to an extraordinary degree and we had been on it for more than two hours when we reached the foot of the couloir.

A glance was sufficient to show that the task in front of us was not going to be an easy one. Two years before there had been slight indications of a snow-filled bergschrund. Now it had become a huge chasm, the upper side of which was a vertical wall of ice 30 or 40 ft. higher than the lower lip. A hundred feet above this a second schrund looked almost as impassable, and above this there were traces of yet a third. For fully half its height the ice was black: not that mingling of black and grey and white which indicates intermittent patches of hard ice, but an uncompromising, unmitigated blackness, which belongs alone to clear smooth ice, reflecting the tone of the rock walls at its sides. The upper half appeared to be immensely steep, but here there was an almost unbroken whiteness which at least held out hope of easy step-cutting. We also noticed that there was no sign of a stone shoot down the centre and that only a few small stones were lying on the ice around us.

The ascent began at 12.15. The single bridge across the first schrund, seen at close quarters, was instantly rejected. Its thickness could be reckoned in inches. A glance to right and left, and there was no further thought of crossing by ice or snow. If the rocks to the left would not go, our expedition was at an end. These rocks, reached over blocks of ice jammed at their base, were climbed by a steep slab somewhat sparsely supplied with outward sloping ledges wide enough for the first two joints of the fingers. The leader had an eighty-foot rope fully extended beneath him before he reached a spot where it was safe to turn round. The second schrund could boast of no bridge, thick or thin. The rocks to the left, sublimely perpendicular, showed clearly that they would not be defeated twice in the same day. The only hope was a point to the extreme right where the upper wall had collapsed and partly choked the chasm. Here there was no great difficulty in getting down on to the heaped-up debris of ice and clambering up it to the other side, but it had been necessary to cross the entire width of the couloir, and this second obstacle was not left behind till an hour after the start.

The serious work of step-cutting, destined to go on for nearly nine hours, then began. The angle of an ice slope, viewed in the cold figures of print, is not very imposing. Most climbers, who have made a practice of carrying a pocket clinometer, will share the belief that many of their brothers, trusting to their own unaided senses, have, in all good faith, often made exaggerated estimates as to angles of inclination. Our slope

began at a steady 52°, before long it had changed to 55°, and there it remained for hours. The ever-present hope of better things was unfulfilled and worse was in store for us above. Even at 52° hard ice must be treated with the utmost caution and respect and our progress was necessarily slow. At 4 o'clock we were still in the region of blackness but the white part of the slope was close above. It was not till this whiteness was reached that its origin was disclosed. The ice of the surface was certainly soft but it was a distinct and loosely attached crust, perhaps an inch in thickness. No sooner was it touched by the axe than it began to come away in large flakes, its presence increasing the labour of forming a safe step in the hard stuff below. These flakes, which were sometimes a foot across, bounded down more often in the air than on the ice and were a constant source of danger to those below. Moreover, the angle no longer maintained its even 55°. The ice, rising far above our heads in a vile upward curve, finally ended in a rock wall a few feet below the gap. What the clinometer would have recorded upon this slope was never known, for the problem of reaching the top in safety crowded out all other thoughts. It can only be said that its lower half was distinctly steeper than 55° and that its upper half was distinctly steeper than its lower half.

How long it takes to cut steps in hard ice at such an angle none know but those who have had to stand behind and watch. To the leader all sense of time is lost. He only knows that, though the step never reaches that ideal stage of breadth and smoothly inward sloping floor which his mind has so often pictured, it is at length good enough and the upward movement to renewed work is made. This is his unit of time. He may know that he has cut fifty or sixty steps from one turning place to another and will have a dim idea that it has taken a long time. The unfortunates who are standing below may be painfully aware that it has taken more than an hour.

So our work went slowly forward hour after hour, without a moment's pause, except when the leader's rope was extended and he stopped to take it in as the other two came up. Rain clouds hastened the approach of darkness and we found ourselves engaged in a grim struggle against time. In such a struggle the mind becomes concentrated upon the effort to get forward quickly and safely. Memory lapses and retains no connected whole, though incidents stand out clearly. At one point an incipient crevasse, running horizontally across the slope, served as a secure shelter for two of the party while the other cut up

to a hollow between the rock and the ice which promised well for a standing place. Every available inch of our 120 ft. of rope was required, and before the leader had reached the hollow, it had been necessary for Bjerk, who was third, to untie. The time came for him to ascend and the rope was thrown down to him. 'Can you reach it?' 'No.' 'How much more do you want?' 'About three metres.' 'You can't get them.' 'I must have them; come down a bit.' 'I can't move an inch; come and fetch it.' The hollow, barely sufficient for standing, was not adaptable to free movement; time was of vital importance and the man below had often enough shown his ability to come safely up a few feet of steep ice. Hence, after more altercation and some murmurings, he emerged upon the open slope, cautiously ascended enough steps to bring his head on a level with the end of the rope, leaned slightly to the left and picked it up with his teeth.

Another impression was received through the ears rather than through the eyes. At a similar hollow farther up it was necessary to throw out a large stone. It instantly bounded off the surface of the ice and with a growing hum and a few dull thuds disappeared in gigantic curves into the gloom below. No one who has not heard the like can ever have dreamed that a mere falling stone could produce the scream which rose out of the depths a moment later. It was echoed time after time from the cliffs at both sides of the narrow gorge, and no words have power to describe its noise.

At 10 o'clock the last step had been cut and a quarter of an hour later, having crawled in semi-darkness up a bank of rotten rock, which threatened to slide down at every touch, we were standing in the gap. It was snowing lightly and there was a brisk north wind, but the battle had been won and we were in safety. Some hours before the idea of a downward retreat had been definitely abandoned. Inches were of value and the distance between each step had been stretched to the utmost limit. To the lady of the party the vertical height between them must have been trying in the extreme. From start to finish, when her turn had come to move, she had never hesitated for a moment, and to her unwavering steadiness we owed our escape from a situation which might have become awkward as the light failed.

During the whole ascent the walls to right and left had been eagerly scrutinised in the hope that they might afford some help. The hope was ill founded for they were uncompromisingly smooth and steep. The solitary weak point in their

defences was near the top, perhaps 100 ft. below the gap, perhaps 200 ft., where the wall is split by a deep vertical crack which probably leads to easy ground above. The place did not look promising and was left untried. Success would have saved us from much step-cutting, but failure would have given us a night upon the ice. In most couloirs one can count on some help from the crevice between the ice and walls. Not so in this one. At various points, which looked promising as they were approached from below, an inspection was made. Occasionally a useful standing place was found, but the few attempts which were made to use the crevice as an upward path met with complete failure and the open slope had once again to be faced.

Half an hour was spent in working cautiously round the S. face of Manden above Midtmaradal searching for the least unsuitable ledge on which to await daylight. The search was not successful. At eleven o'clock we remembered that no one had thought of eating since we had finished breakfast below the snout of the glacier, 13 hrs. before. An overhanging rock was seen and we sat down to lunch beneath it.

The dangers of the day are over and it is time for the usual anecdote with regard to food. By the flickering light of a lantern I handed the large package of marmalade sandwiches to Bjerk, in the belief that it was the unsavoury cheese with which he is always provided. He ate them without a murmur. The English members of the party then resolved that the marmalade sandwiches be reserved for breakfast. Owing to the confusion of tongues the true state of affairs was not discovered till the morning when we found that our only remaining provisions were three beef lozenges 'particularly recommended,' so ran the most appropriate inscription upon the tin, 'where long abstinence from regular meals is unavoidable.'

The process of awaiting daylight on a wet and windy night beneath a dripping slab which has at one time been regarded as an overhanging rock is too well known to need description. At 3.30 the weather had cleared and it was light enough for us to make a move. Fifteen hours before there had been thought and talk of the difficult rock climb which leads from the gap to the top of Manden. Now it was silently postponed to another year. Some time was spent in trying to get round to the north-eastern ridge which has been climbed at least twice. We soon found, however, that the smooth and precipitous eastern face completely cut us off from this ridge, which could only have been reached by an ascent almost to

the top of the peak. The alternative was a descent of the southern face into Midtmaradal. This face is not very steep but consists of slabs so smooth and large that a tired and cold party could not afford to treat them with disrespect. An ice axe, dropped at the top of one of them, slid down 100 ft., and where an ice axe can slide a human body may do the same. Consequently progress was slow and the rope remained in use for 2½ hrs. more, by which time the bed of the valley was reached. In another hour we had walked down the stream to the point where it falls down the cliff into the Utla 1000 ft. below. Then followed a traverse of some miles along the usual Norwegian valley side, a steep and trackless slope thickly strewn with rough boulders concealed beneath a mass of immense ferns, herbaceous plants and dwarf shrubs with tough horizontal branches. From time to time a dense alder thicket. Everyone who has climbed in Norway knows what a trial such a place can be. Between the 25th and 28th hours of a day's climbing it becomes an inferno. The pace became slower and slower, bilberries more and more seductive, and it was 11 o'clock before the sæter huts at Vormelid were reached.

The New Edition of Ball's 'Alpine Guide,' 'The Central Alps,' Part II.

It is our pleasant duty to congratulate the Rev. George Broke, the General Editor, and his able helpers, amongst whose names that of our Honorary Secretary Mr. J. J. Withers appears most frequently, on the publication of this long expected work.

It follows the lines of the previous volumes on the Western Alps and the Central Alps Part I, and includes 'those Alpine Portions of Switzerland, Italy, and Austria, which lie S. and E. of the Rhone and Rhine, S. of the Arlberg, and W. of the Adige.' The best known of the districts included are the Bernina, the Ortler and the Adamello groups.

As was the case in Part I of the Central Alps the maps are taken from the general map of Switzerland by Herr Ravenstein of Frankfurt on the Main on the scale of 1:250,000. The volume contains 432 pages, or over 100 pages more than Part I of the Central Alps, which ran to 326 pages.

We do not propose to criticise the volume, but we may be allowed to express our staisfaction that Ball's accounts of the