found ourselves on the ample track made by numerous parties descending from the Bosses. Down we went, across the Petit Plateau, and down again—a long way it seemed—till at last the rocks of the Grands Mulets came in sight. No doubt we were all pretty sleepy as well as tired. I was leading and had to keep awake to find the way ; but Bradby and Wicks both saw ghosts upon the Grand Plateau—other parties near us, and that sort of thing. When our goal was in sight I suppose my vigilance also was relinquished, for I saw a curious sight, at which I marvelled, and thought how foolish of the parents to allow it, even in daylight—children playing and running about on the glacier, among the great crevasses below the hut. I kept my eye on them, and when we got near they were great blocks of stone lying on the snow, the relative position of which naturally kept changing as we zigzagged about among the crevasses higher up.

At 10.30 P.M. our long day came to an end, and we knocked up the kindly caretakers, partook of excellent soup, and went to bed prepared to sleep if need be till the following afternoon. However, in spite of most comfortable beds, we were all awake and ready to get up at 7 A.M. next day, and at 11 we reached Pierre Pointue. Here we had hoped for a good lunch, as we had been most frugal since our truly ' Royal ' meal at Courmayeur 39 hrs. previously. But we had grown fastidious, and learned with disgust that the Pierre Pointue could produce no salad. Consequently we did the two extra hours of up and down, which seemed so needless seeing that the two inns are almost on a level, and lunched admirably on salad and other delicacies at the comfortable little shanty on the Plan de l'Aiguille, and dined excellently later on among the many friends we found at Montanvers. And so to bed.

Mont Blanc by the Brenva and other Traverses in 1911.

By W. R. CAESAR.

(Read before the Alpine Club, June 4, 1912.)

WHEN asked to read a Paper on the Brenva route and other climbs of last season, my natural trepidation was somewhat calmed by the reflection that the subject would enable various slides to be shown. Thanks to the kindness of

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Sydney Spencer, photo. *Swan Electric Engraving Co., Ltd.*

MT. BLANC, FROM COL DU GÉANT.

several members of the Club, I hope the screen will hide my own shortcomings.

Early last year—months before going out—Harry Runge and I had quite made up our minds that the weather would be fine continuously. It was so much easier to make plans. Our visionary list included the Brenva. We worked westward from the Engelhörner, but to-night I propose to start with the Brenva and to hark back if time permits.

The early history of Mont Blanc is well known to you. By 1863, France—or rather the explorers on the French side—had claimed five routes—or six, if the international Mont Maudit route is included. But the first ascent confined to Italian territory was not made until the year 1865, when the Col de la Brenva was first reached from Italy by Messrs. F. and H. Walker, A. W. Moore, and G. Mathews, with Melchior and Jakob Anderegg. They threaded the seracs of the lower Brenva glacier and ascended by the route which, with some variations, appears to have generally been adopted by subsequent parties. The expedition has not been repeated so frequently as most of the discoveries of those early days; indeed, in some years the Brenva route has remained untrodden.

Since the above was written, I have read with the greatest possible interest Captain Farrar's Paper in the May number of the JOURNAL, in which he had unearthed and brought together all the known ascents by the Brenva. I am sure we all feel very much indebted to him for this.

In 1909, it was the intention of our party—rather a large one—to pass the night at the Rifugio Torino. Some were proposing to traverse Mont Blanc by the Mont Maudit route; others meditated crossing the Col de la Tour Ronde and making an attempt on the Brenva route. The weather however postponed this. 1910 was—well, you remember it. Last season however the omens were favourable, and for mountaineers it was a year of fulfilment.

Harry Runge and I had been so roasted in other valleys that the proposal to try this tour without enduring the heat of Courmayeur and the trudge up to the gîte was accepted *nem. con.* Moreover, at a gîte, when sleep will not prevail, moon and stars, however romantic, are but counter-irritants, while at the Rifugio Torino there was the possibility of some hours of sleep. Let no one think I have any grudge against Courmayeur. Quite the reverse, as the curlers say, 'I like it.'

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We arrived at the Rifugio from Montanvert about noon on August 4, and our guides, Abraham Müller, jr., and his brother Gottfried, were not to be deterred from going to the Col de la Tour Ronde to see if the bergschrund were likely to be a source of delay. While they were away, the weather was not quite up to the mark. Clouds were driving across Mont Blanc, and most of the route was obscured. But the wind was northerly, so we did not despair. Next morning, the 5th, we set out from the hut at 2.5 A.M., crossed the Col des Flambeaux, and soon were straggling up the gentle slopes of the Géant glacier into the bay leading to the Col de la Tour Ronde.

Before an alpine audience there is no need to dwell on the glories of the dawn. Its first gleams were now rising over the ridges of the Triolet. We turned from time to time to gaze on the perfect colour gradations, not without foreboding of cold, owing to the prevalence of green tints.

The bergschrund was reached at 3.40 A.M., and then rocks led up the left side of a narrow ice gully. Though somewhat loose in places, they afforded pleasant and not difficult climbing. At 4.25 we were at the top of the Col, and Mont Blanc was revealed in all its grandeur. The descent on the S.W. side was quite easy, and occupied only twenty minutes. We bore considerably to the right to avoid crevasses in the Brenva glacier, which we crossed to a spot at a respectful distance from the foot of the Great Couloir or Upper Brenva glacier, and a halt was called at 5 A.M.

Crossing the Col de la Tour Ronde may be the longer way round, but it seems to us to have several advantages over the Brenva glacier route, some of which I have already referred to. Moreover, it afforded a clear view of the general line of ascent. This is generally spoken of as the Brenva *ridge*, but the route that appears to have generally been adopted is largely a *face* climb. The ridge work, whether rock or ice, usually ended with the famous ice ridge. Above that—I speak subject to correction—it became principally a face climb, and earlier parties, I believe, endured much cutting on steep ice. Our party however took a rather more easterly route for part of the way.

It is, of course, not easy to estimate distance, altitude, or inclination with any degree of accuracy from alpine photographs, and it would scarcely be practicable to obtain a photograph showing the whole Brenva route in profile, so that its general inclination could be seen. The view from the

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East ridge of Mont Maudit shows the middle portion. Perhaps two or three figures will assist the eye :

	ft. high
The foot of the rock buttress is about . . .	10,800
Rocks we reached about 10 A.M., nearly the highest on the ascent, are according to the Imfeld map about	12,750
The summit of Mont Blanc is about . . .	15,770
So that the difference in height between the foot of the rock buttress and the rocks referred to is a little under	2,000
and between the rock buttress and the summit about	5,000

Now, with a given altitude and a vertical base of known length, the third side—in this case from the summit of the mountain to the foot of the rock buttress—*must* subtend a certain angle or, in this case, almost a curve. Fortunately, I do not know the figures accurately, so I will leave all responsibility for exact calculations to mathematicians. But I believe the angle from the rock buttress to the summit is over 40°. As everyone knows, the upper part of Mont Blanc consists largely of plateaux, never very steep, and in places almost level ; so that it is pretty obvious that the *lower* part of the route must be rather steep, and it *is* so.

After breakfast there was a crampon competition. The first to get them on won a bottle of wine in far-away Chamonix —I forget who paid.

At 5.45 we started again, and for a short distance ascended over avalanche débris (2*) fallen from the Upper Brenva glacier.

At this hour nothing was falling. In fact, we only heard two falls during the day—a small one about 6.50 and a huge growl about 10 A.M., when we were on the upper rocks.

Nevertheless, we left the débris track so soon as possible, and cut up a very steep slope of hard snow and ice on our left, and gained the rock buttress at number 3. About 100 steps had to be cut.

Last year the buttress was divided by a narrow snow crest into two stretches of rock (4 to 5, and 6 to 7). The lower stretch is not difficult. We were on the top of it at 7.30 A.M. (5). The narrow snow ridge already mentioned now led up to the second stretch of rocks, and we paused to take off our crampons. This second stretch goes well, and is quite

* The numbers in the text refer to the illustration at p. 203 of the May number of this volume.

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interesting. There is a nice chimney of about 35 metres between 6 and 7.

At the top of the buttress (8) the snow looked good, but after a few strides the leader found hard ice below a soft thin coating, so there was another little bet about getting the crampons on again. Up to here Abraham had led, but now that practically only snow and ice-work was before us, Gottfried—the gletschermann, as we call him—went ahead.

I may as well confess at once, though it opens up matters rather controversial, that we went the whole day two on a rope. It is not to be recommended on a tour of this character, but we had heard so much of the length of the expedition that we wished to lessen the chances of passing a night on the mountain. I hope the plea of extenuating circumstances will be accepted.

Now came the famous ice ridge (9). It has been climbed astride both in history and in fiction. We did not find it necessary to do so. Very remarkable it is, not only for its narrowness, but because there is a sheer drop on the right, while on the left the slopes fall away very steeply indeed. Compared with what is above and below, part of it is practically horizontal. This year, it was almost a snow arête, but in places we found ice. The snow was soft, and additional care was necessary, for the axe would at times go right down to hard ice. We were now high enough to feel the north wind. Here, too, at intervals, a small cornice overhung to the right.

The ordinary methods of progression sufficed, but I remember thinking at the time that if one of us went overboard the only chance would be for the other to perform a similar manœuvre on the other side and chance the strain on the rope. The ultimate result is a matter for speculation. Fortunately, it was not an event which was contemplated as within the region of practical politics—or even twentieth-century politics.

This attenuated arête finally clung to very steep snow and ice slopes leading to rocks, and as the inclination became greater so did the wind. These slopes were generally hard snow, but in places there was ice. At about number 10 we traversed sharp to the right to avoid crevasses, and passed under and then across the face of a rather steep wall of ice leading to a snow slope. This brought us to rocks overhanging the glacier between us and Mont Maudit.

We skirted them (11) on the left side of the rocks for a short distance; then mounted them to a cold and cramped bivouac at 10 A.M. (12). This was not far from the point 3921

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on the Imfeld map. A well-jolted aneroid registered about 13,200 feet, but let me say at once that I disclaim any sort of accuracy for that particular aneroid, having regard to the life it had been leading.

If bad weather were to catch anyone on the middle portion of the ascent, and an immediate return to the rock buttress were not feasible, the next best chance, I think, would be to make for these rocks. True, there would be little shelter from wind, but last year, at any rate, they stood high enough above the slopes to escape being swept by any ordinary avalanche.

The nest of rocks on which we were perched was a grand and most impressive position. Above were the ice cliffs leading to the upper plateau. On the east side there was a practically sheer drop for a great distance deep down to the glacier separating us from Mont Maudit. To the S. and W. the slopes sank far away below, and White Silence was everywhere. As the eye travelled beyond the immediate surroundings, across the soft Italian distance, peak after peak was revealed from the distant Engadine and through the haze of the southern horizon, until the Pétéret ridge intervened. It produced a sense of complete detachment from the artificiality of advanced civilisation.

Here was one of the undefinable and unspoken replies to the question 'Why do you climb?'

Time passed all too quickly, and after forty minutes' halt it was necessary to advance. The rocks were mounted a further short distance towards 13. The ice wall above was this year the crucial point of the whole route; indeed, under certain conditions it might prove an impasse. It was hard thin ice and very steep. There seemed to be two alternatives—either to traverse to the left and cut across and up the face of the wall, or to pass slightly to the right, into a small depression or gap in the rocks, and then cut up the wall, bearing a trifle to the right. The first alternative would have necessitated a lengthy traverse and continuous step-cutting across an ice face. The second alternative also involved cutting in hard ice, but we chose it as more direct, and it seemed that once up the way would be clear. The height of the wall was about 100 feet or more, of which the first 20 to 25 ft. were perpendicular (I have dared to use that expression after considerable reflection).

Gottfried set to work cutting very good hand-holds and foot-holds large enough for the front spikes of the crampons.

Meanwhile Harry Runge stood in the narrow gap in the

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rocks paying out the rope, while Abraham and I found shelter on the sunny side of the rocks, and were thus able to appreciate all the more the work of the others. After the first twenty feet or so, Gottfried bore a little to the right, where it was less steep, and then turned to the left, taking advantage of the slope. The first 50 ft. of the wall required about twenty minutes' fierce cutting. The rest of us slung our axes, and went up the whole way hand over hand as if on rocks. We emerged on to easy slopes (14) leading to the highest seracs (15), which this year presented no difficulties.

One huge cliff of blue ice would have stopped us completely had it been impossible to turn it. Last year the famous ice ridge (9) was certainly not the principal difficulty, and I fancy others besides ourselves found the ice wall more entertaining.

Mr. R. W. Lloyd's party, who made the first ascent last year, surmounted it, I understand, by means of a narrow ice couloir a little to the right of our route. I hope he will tell us about this later on. Some parties in former years, I believe, kept straight up the very steep slopes above 10, and I can well imagine they must have found the going exceedingly strenuous.

Leaving the actual Brenva Col far away on our right, we bore S.W. towards the Petits Mulets, through wind-driven snow, which whirled up and was not very pleasant. The summit was gained at 1.35 P.M. It was far too cold to linger more than a few minutes, so we ran down to the Vallot hut and spent an hour there. Then came an exhilarating scurry down to the Grands Mulets, where the various little bets were settled in mountaineering fashion. Chamonix was reached comfortably at 8.30, and Argentière at 10 P.M.

I will run quickly over the other traverses. First, the so-called traverse of the Simelistock.

This charming little dolomite lies at the N.E. end of a fine rock amphitheatre forming part of the Engelhörner group. Most of the Engelhörner allow of a go-as-you-please start from the Hotel. Moreover, heavy boots soon give way to Kletterschuhe, so it is a district eminently suitable for the first week out. The first part of the ascent is quite easy, up somewhat 'platteny' rocks, but with Kletterschuhe one could walk practically all the way to the Sattel without using the hands.

Now comes a short but very interesting climb. It has been fully described, so I will only say that we took the route up the S.W. corner, and came down the chimneys on the west side.

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The rocks at the bulge (shown in the photograph) were not all quite firm, but the rest were splendid. Another day we climbed King's Peak, but did not traverse.

Now to the Mönch from the north. While we were crossing the glacier on the way up to the Guggi hut, the mountain took a deliberate shot at Runge with a goodly rock. Fortunately, he both heard and saw—and dodged in time. We got even with the enemy next day. The next incident was the arrival at the hut, about 7.30 o'clock, of two porters and a boy, just as the steam of burnt offerings was ascending to the nostrils of the gods. We feared we were in for a good deal of clatter, but to our great relief they very soon returned to the Scheideck.

In the morning a start was made at dawn, 3.50, and the summit was gained at 9 A.M. A party had crossed two days before, and their steps on the lower and steeper ice only required trimming. Higher up there was a certain amount of hacking to be done. We had a fine view on to the Silberhorn.

So we came to the Concordia, and next day to the Lötschenthal—that charming and mediaeval valley of many dialects, where a village understands not its neighbour. We heard much talk of cows and cheeses. 'The poor cows cry for food,' they said; 'next week they must already leave the Alps.' The melting of the snows was responsible for much damage along the valley, and it may truly be said that the river was all over the place.

Then came the Bietschhorn—up the N. side and down the ordinary W. arête. On gaining the N. ridge we were able to move on dry rocks nearly the whole way to the summit.

Thence we went to Argentière for the Brenva.

After that Harry Runge had to return home. I went up to Zermatt for the Zmutt and found it in excellent condition, and therefore less interesting than the descent on the Italian side.

This was the final tour; but a glorious sunset on the Furggenjoch kindled peaks and snows red with dying flames, and fired the imagination with hopes for future days, when the silent call of the mountains will once again be obeyed.

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