Communications should be addressed to the Editor, Kildwick Hall, Keighley.

VOL. IV. 1912. No. 12.

THE YORKSHIRE RAMBLERS' CLUB JOURNAL.

EDITED BY WM. ANDERTON BRIGG.

CONTENTS.

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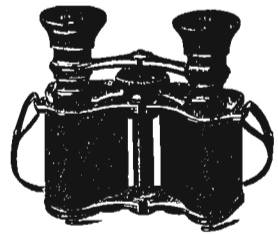

Fig. 1.

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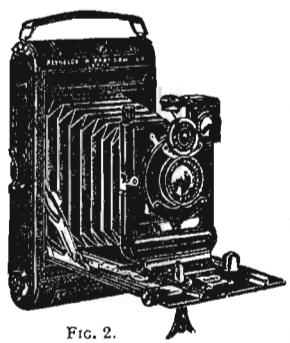

Fig. 2.

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THE

Yorkshire Ramblers' Club Journal

VOL. IV. 1912. NO. 12.

ON THE GRIGNA.

BY REGINALD FARRER.

I have already sung the song of the Mont Cenis. Sung it, indeed, with such ardour that this year, judging from the letters I have received, the Hotel de la Poste will do well to build itself a mighty annexe. Therefore I will not here repeat my former picture of its pansy-carpets, its gentian-pavements, the clear nip of the air, and the luminous beauty of its hills; I will only say that sad will be the year that prevents me from returning thither; when I die, if I have been as good as the good Americans who go for their reward to Paris, without doubt I shall be allowed to re-visit the Mont Cenis. In June, 1911, I spent there a week as rapturous as that of the year before; all the rocks on the Little Col were rosy with Primulas, and I even toiled up for hours over the solid snows that still clothed the Col de Clapier, in the instinct that the small cliffs above the Lac Savine might have been kept open by the winds. And so it proved; and even, on one broken bluff, the King of the Alps had begun to blink his azure eye to the day-light. But the slopes of the Clear Lake were still all icebound, and the season had not yet settled into the serenity of summer.

It is always with a pang that I desert known lands for new. Possibilities, from afar, are strangely alluring; when it comes to realizing them, they grow rather vast and alarming; the certainties of the present are far more comfortable. So with reluctance did I go down from the Mont Cenis to Susa, on my way to the Italian Lakes, for

my first sight of Como. The journey was hot and stuffy. Monte Viso hid his face and denied me good omens. After a night of luxury in Turin (which to me is always the Capua of the Western, as Bozen of the Eastern ranges; I invariably find myself repeatedly gravitating towards one or other in the course of my wanderings), half a day of quick travelling carried us from Milan over the ocean of the Plain, into its first ripples, the advancing surf of the Alps, through breakers of increasing height, to drop us suddenly at an unexpected turn, above the waters of Como, gleaming steely in their narrow trough, between steep mountains, filmed and thunderous with advancing storm.

We had hardly got on board the boat before the tempest broke, and for three hours raged with a roaring fury of hail that lashed the Lake to a grey mist, and only now and then, in the violet glare of the lightning, showed phantom peaks far overhead—ghostly as peaks in a Chinese painting, with slants and shafts of diaphanous darkness dividing them from the deep purple of their jutting promontories along the horizons of the veiled water. And the wind blew wild as if it meant to carry off the dome of the Cathedral. But ere long the storm was exhausted, and when it became time for the steamer to start, had given way to an afternoon of tearful sunlight.

I suppose that the only possible value of a traveller's impressions lies in their being honest. Therefore I will say that probably I expected too much from Como, since I got less. The Lake is so narrow and groove-like, its enclosing hills so uniform, green and undistinguished; I cannot compare it with the northern end of Garda, which to me at least, is more nearly perfect in its beauty than any other water I know. At the same time, it must be remembered that the Italian Lakes are so lavishly praised that perhaps a little reaction of disappointment is inevitable; much of their lauded charm consists in luxury; their hills are a *décor*, and one feels that the passion of their praise belongs to lovely creatures from Paris, lace-clad and high-heeled, to whom a garden of oleander and magnolia close

by lapping blue water in sunshine, with hills of a decent height, discreet in the distance, make up the most perfect *tableau* that Nature can compose. The soft exquisiteness of Como is a trifle *théâtral* to those who have known the fierce and austere glory of more drastic mountains.

And yet, and yet—though many be the dull sky-lines above Como, what picture is there more beautiful than that of the widening Lake towards Bellagio? Ahead, far above the green ridges, towers suddenly the grim granitic cone of Legnone, and the vast limestone mass of the Grigna rises over Varenna. Bellagio, slumberous along its promontory, mirrors the dark flame of its cypresses in the clear water, and lies its length among roses; in face of it, away up at the topmost end of the Lake, the little lower hills are put to shame by the first outliers of the real Alps—scarred, ragged ranges indeed, of no conspicuous form or eminence, but genuine masses of bare rock, and ice and snow. And, after all, even if the glory of Como lie precisely in its sybaritic, lazy loveliness, just tingling pleasantly with the contrast of a sterile peak or two at the back of the picture—is not this little enough to the appreciation of the weary wanderer, jaded with boulevards or moraines? The charm of the picture has its subtle hold, indeed, on all, and yet I do not feel that it could hold for very long the heart of one whose feet have trod moraines with loyalty and discernment. In other words, only for a day or two of mere brute rest could Como fill the need of any man who has once gripped the sacred passion of high places. Its appeal is to the townsman, to the *flaneur* whom not even his ignorance of Latin can inspire with any cry of Excelsior, who longs only to lie quiet among bowers and flowers, gazing idly out on hills and rills.

What did Caroline-Amelia-Elizabeth, by the Grace of God (and the extreme ill-will of her husband), Queen of Great Britain—what did "the Sainted Caroline, in a long pelisse, with feathers in her head," contrive, I wonder, to make of Como? The Hotel Villa d'Este and Reine d'Angleterre preserves the memory of her sojourn—a vast

barrack, poked tightly back under a wall of mountainous verdure. Probably the sham wildness of the scene, combined with its essential mildness, was dear to the mild "romantick" taste of the period. There is a little of Caroline-Amelia yet lingering in the careless good-nature, the opulent display of Como, no less than in its sudden squalls and abandonments, and that passion for publicity which placards its precipices with loudly painted appeals in favour of special vermouths and that mysterious universal liquid, Ferro-China Bisleri. (If you pronounce this in strict English it sounds a very fine botanical name.)

Bellagio is a charming and lovely little place in itself. But alas! So many other people have agreed on this for many years that now it is full of palatial great hotels and German waiters. It is a place to flee from and admire from a distance. We fled accordingly; in earliest blue dawn we fled across the water to Varenna, while the velvet sky was still aflame with great stars. Neither in dawn—chilly and cross, nor in dusk—weary and footsore, shall I forget the charm of the little neat Hotel Oliveda that sits by the landing-stage at Varenna. But perhaps my own taste is no fair guide for others in the matter of hotels; for, though no one more loves the delights of elaborate eating and drinking, I detest beyond measure that atmosphere best described as "luxe" or "luxus." This, which I gather is dear to the hearts of all travellers of every nation, has nothing to do with good cooking or curious cellars; it means German waiters and velvet-clad reading-rooms containing travel-circulars, English chaplains and American old maids; it means cane rocking-chairs, liveries, tennis-courts, and a billiard room made up as a chapel; it means, in fact, a sort of Esperanto concoction of all the snobberies of every European nation, which can thus carry with them, not the comforts of "home," but of home as they would like to have it, constructed in accordance with the rules of high-class fiction.

From all such hotels I flee; for, not only do they not mean good living, but they mean the very reverse of good

living. Their food is dull, pretentious and machine-made; they sacrifice the arts of the table to that of serving it with a cheap sham splendour. Better, far better, a veal cutlet of Italy in a small arboured inn, than stalled *rosbif* in a wide house, served up by vice-faced waiters in golden braid.

Our object that day from Varenna was the Grigna, the 9,000 ft. mass of limestone that rises gaunt above the wooded hills along the Lake. My tin was on my back, my trowel in hand; Teodoro Maranesi, the botanist of the neighbourhood, was going to lead us up to the haunts of *Primula glaucescens*, *Campanula Raineri* and *Saxifraga Vandelli*. These treasures live far up, are very rare and hard to come by. As I am now chiefly addressing those who, I trust, will content themselves with admiring from below my prowess in ascending the Grigna, I shall make no pretences, or few, at concealing the localities of the plants I seek; nor would any lesser motive move me (or any other sane mortal) to ascend the Grigna, so that its presiding deities should be safe in their seclusion. It is, indeed, a hateful mountain to ascend; the way is steep and hard and far: worse, though, than anything else, are the cobblestones that compose the track almost up to the Capanna. I cannot decently describe the agonizing weariness they induce; my brother described it, indeed, but not decently; it couldn't be done. The ascent begins sharply behind Varenna; steep rises the track, all of rounded cobbles, up and up and up, for nearly a thousand feet; then the path winds for an hour or two on the level, in and out along the creeks and flanks of the mountains, above the winding course of the stream-valley that descends from the Grigna, and falls into the Lake at Varenna. Hot sunlight filled the glen; above and below were copsy slopes of grass and chestnut, aflame with golden brooms, and the long rosy spires of the sweet-scented orchis, whose fragrance floated quietly in the warm air. The dew had not yet vanished, but hung in heavy jewel-work in the blue shadows. Here and there, in steep places, were little iron crosses on some rock, to record how Pietro or Maria had fallen over into the gulf and met their death.

After long dulcet ambiguities, the track makes its second steep ascent to the little village of Esino, which one had long seen perched on a pinnacle unattainably far above. Not even from Esino do you get more than the direction of the Grigna, many daunting mountains still intervene; but now the backward prospect over the Lake is wide and lovely. We found an *albergo* and refreshed ourselves with coffee; it was not a pleasant *albergo*—neither clean, nor sweet, nor cordial. Meanwhile, Teodoro had gone to find the keeper of the Capanna Monza. You will have gathered that the ascent of the Grigna is a large and long affair; by no possibility could it be comfortably achieved in a day—still less with the necessity of a many hours' plant-hunt. But both the Italians and the Austrians are inveterate lovers of their mountains, with the result that every eastern and western range is dotted, high up, with many a delightful *rifugio* or *schutz-haus*, where the wanderer, for minimal prices, can find every comfort of food and drink and fire and bed. They are like Japanese houses, these clean wooden palaces—to me an inexhaustible joy. In Switzerland and France they are comparatively rare, and, I believe, comparatively bad. In Austria they are as frequent as they are delightful; this was to be my first experience of an Italian mountain-hut. On the Grigna there are two of them, indeed, the Capanna Cecilia, on the summit ridge, and the Capanna Monza, about 1,000 feet below. But on the 21st of June the Capanna Cecilia was still buried deep in snow; our aim was, therefore, to spend the night in the lower hut. This also, of course, was still shut, for these *schutz-häuser* are not usually open before about the 15th of July (some earlier, some later), when the tourist season draws near, from which time they are kept, like any inn, by a resident caretaker, who cooks and supplies all needs; members of the Alpine Clubs, however, can always borrow the key, and make what use they choose of the hut and stores, keeping due record of all they consume, and paying the bill when they descend again and return the key. This practice postulates a pleasant honesty in those

concerned; it seems to answer so well that I am fortified in my value for the moral effect of mountains. Clearly they do breed a probity in their lovers which it would probably prove hopeless to expect in a country so comparatively flat as ours.

At last Teodoro returned with the key (without his membership of the Club Alpino Italiano the expedition would have been hopeless) and we resumed our climb. The cobble-track winds up behind Esino into a gorge full of hayfields and great chestnut trees. Here the hay was making, and one old lady seized the chance of our passing by to take a "breather." She accompanied our *cortège* for some distance, making much talk. Then was a long woodland toil, then grass and copse with cows, and then, and very high, and very far away, our first sight of a grey peak that was the corner of the Grigna. After this the track turned and mounted stiffly along the outer flank of a hill, under a woodland fringe filled with dying leaves of Hepatica. There were hayfields down the other slope, in which St. Bruno's white lily stood rare and pure. And the distance had widened beyond belief; the lake seemed lost in the depths below; green range over green range unfolded; Legnone loomed magnificent; Generoso hovered beyond the Lake, and higher in the north, Garzirola, where the rare *Androsace* lives. So one's eye ravaged the ranges, and the panorama was tremendous. And then, when our gaze had devoured all the earth, there were rolling clouds in the distance to admire. And then suddenly, high above these again, a thing unexpected, miraculous—hard billows of pure snow, crests and towers of solid white, glowing creamy in the sunlight. I have been called to many a wonderful sight in my time among the mountains; the great peaks have shown me their best, and I have known Fuji-San the Holy in all his moods. Never yet have I seen anything that can compare with the mass of Monte Rosa from the Grigna standing out above the Lombard Plain, far over the lesser ranges, with a serener majesty of bulk and height than any other mountain in the world. I had spoken

stupid words of Monte Rosa, knowing her only from the Zermatt side; henceforth, nobly to avenge herself, she dominated every moment I spent on the Grigna.

Meanwhile the sly Grigna was reserving for us a joke of almost impish malignity. For now the path (or what was left of it) was wandering along a small upland valley, close with green bushes. And straight in front of us by this time rose the whole daunting mass of the Grigna, a ragged and rather shapeless bulk of limestone. It seemed quite near at hand; we were obviously drawing to its foot, across the inevitable little upland plain, enamelled with pinks and pansies, that always closes each Alpine valley in a *cul de sac*. Beyond the lip of our glen must lie the final smooth plateau, a pleasant penultimate rest for our feet, and there beyond it, just over the rim of the foreground, at the upper edge of the pine forest on the mountain, our hungry eyes were gladdened by the box-like shape, the corrugated iron roof of the still too-distant Capanna Monza. However, once over the level flowery plateau before us, there would only remain the steep, short final pull up to the hut.

What, then, was our rage and horror, when the path, instead of ambling quietly across the expected plain, turned back to the right and began fiercely climbing up a wholly unnecessary hill. It climbed and climbed and climbed; its perverse stupidity seemed beyond belief; I doubted our guide; I detested the Grigna; and still the track ascended breathlessly, till at last it emerged on the edge of a cliff, and we understood the reason of its odiousness and the delusiveness of our hopes. For there was no little flowery plain at all; between us and the mountain lay a vast abyss, perhaps a mile across, falling so far down towards the lower levels that its trees and rocks were barely discernible. To the upper lip of this basin had we now attained, and our way to the Capanna, instead of running straight, now ran right round along the semi-circular wall of cliffs to our right, adding miles to our journey towards our lunch, so tantalizingly clear in front of us, and yet so remote—from all those who have not the wings of a crow.

The place and its prospect were beautiful indeed. The gaunt precipices at our feet, sinking plumb into deep distances of woodland; the great amphitheatre to our right, the huge bulk of the Grigna in face of us across the gulf. But I was too cross to appreciate its charms, even though the golden suns of Telekia were bursting in bud from the crevices, and little Rock-Brooms hanging in a spray of gold over the grey walls, and *Saxifraga Hostii* waving in tall plumes of white above its masses of silvery rosettes.

From this point of emergence the track now led us along the amphitheatre. It was a maddening path, for feet already weary, and depleted stomachs. For it would slope downwards for a hundred yards or so, only in order to make us climb up again; it lost us endless time, and wasted our last energies; it was very rotten, and eroded by the winter, fading often to nothing on the edge of gulches and precipices. High overhead rose the cliffs, from which grey bastions stood out from time to time across the way. This ran through stifling copse and over stony slopes; leaves and flowers of Cyclamen began to peer, and Archduke Rainer's Harebell threaded the stark walls of rock. In and out of precipitous ravines we slithered and toiled, skirting the bluffs; shining broad cushions of Primula in the dank and silty ridges of the brushwood could not now detain me; at last we reached the foot of the last climb and desperately breasted it.

The joy of that Capanna. No eyes had we for the wide prospect over all the earth that lay before us (though the Capanna is so placed that a little pine-clad hummock about half a mile away exactly hides the whole miracle of Monte Rosa), Teodoro unlocked it, and we made fire, and fetched water, and cooked. Bread he had brought from Esino, for the rest we ravaged the resources of the hut. And the fun of housekeeping in a Refuge-hut is a thing to make one ten years younger; one is a child again, marooned on a pirate isle. And the place inside is like a clean, delicious doll's house to play with; there are rows of bottles on the

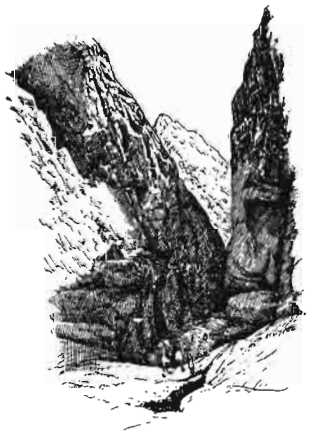
shelf, and pots, and pans, and tins and condiments. All these we had at our pleasure ; never before or since have I so loved a *Schutz-haus*. For here it was our own —no caretaker, no fellow-guests, just ourselves alone on the mountain, with the appetites of Gargantua, and the opportunities of Lucullus. I made soup with pounded squares of Parmentier, lumps of sugar, *salsa di Pomidoro* (which, in less romantic phrase, is tomato sauce), *vin de Malaga*, and shredded sardines. I mixed, and ground, and stirred, in an ecstasy ; never was soup so *allèchant*, so catholic, so heartening before. Meanwhile, Teodoro kneaded *polenta* (delicious to look at in its golden consistency, but insipid to my obviously artificial taste), and my brother unearthed from the shelves tinned peaches, and potted meats, and tunny-fish in oil, and more sardines. Even now I can remember that it was three o'clock, and that we had not fed since eight (and then on coffee and rolls). Fatigue and hunger are divine ecstasies, when once the means of their cure are to hand ; not a yard would I now sacrifice of the cobblestones on the Grigna.

We raided the cellar-shelves ; experimented on vintages ; ate, drank, rested, and were as gods. By four I was out on the mountain again, with different eyes. The Grigna, though, is an ungenial mass. All around, above the Capanna, lies a vast and tumbled waste of snow and stones, rising in successive shapeless lumps of cliff to the final ridges and peaks. My brother struck away up towards the Capanna Cecilia and the summit, though half his way was over snowdrifts, and the other over bluffs of trackless rock. Under the inspiration of Teodoro I made my way towards other cliffs, and over stony slopes and hollows. Soon I was alone in the silence ; it was very wonderful and good. Over screes and scars I sought and scrambled ; far above my head, in awful faces of the precipice, hung out the unattainable white flowers of *Saxifraga Vandelli ;* the lovely rose-pink alpine garlic of Piedmont was poking up myriads of green shoots in sheltered hollows of soil in the ghylls, and on the shingle, where the snow had melted, lay already the fragrant lilac tuffets of *Iberidella*.

Slowly I returned at last, through the sunset and down again to the Capanna Monza. And on a little hillock I paused and sat. Sundown was filling all the lower world with blue films. In veil over folded veil of sapphire lay the mountain ranges ; the west was a soft and opalescent haze ; the valleys were dim and obscure in the dusk. Behind the highest mountain peaks, up towards the zenith, lay long level stretches of soft grey cloud, one upon the other, like restful surfaces of some quiet sea. And above that sea, diaphanous, delicate and pale, floated Monte Rosa, like an Island of the Blest, and the ranges of earth melted into a gentle chaos below. I sat, in the vast silence of the Alpine twilight, while that ghostly and tremendous presence still shone like a soft sapphire, sailing upon an unrippled sea ; quickly the world darkened from sight at my feet, and sank into the profundities of night. Night comes swiftly on the mountains, and soon the still air vibrates to a strange note of menace and awe. The sunset blushed and quickened and died in the west ; to the end, when all else had gone except the horizon, the lucent vision of Monte Rosa kept its place, immovably poised above the growing darkness.

In the Capanna once more we cooked and revelled. And then my brother and I climbed up to my hillock and sat again. By now the night had fully descended. The sea of cloud had risen and engulphed that fairy island, and the level barrier now lay black from end to end of the sky. But underneath the sunset lingered in an afterglow of glaring orange, and against its steady, piercing light, all the peaks of the horizon started in shapes of carved ebony. Only where Monte Rosa should have been, and the Viso far beyond, there was confusion of cloud ; otherwise the afterglow gave us all the mountains in the north and east. I cannot catalogue the items in the wide view which makes the Grigna so famous ; but all my old friends were there, even to the uttermost distance of the Oberland ; a stern triangle of blackness on the rim of the world can only have been the Finsteraarhorn. The earth below us lay in deep sapphire night. A huge stillness held the hills, and a

denser silence seemed to fill the valleys and the bed of the lakes; here and there remote pin points of light appeared, intensifying the midnight of the depths from whence they shone; now and then, with a soft and heavy sound, the note of a bell would rise out of the violet obscurity at our feet with the light and calm precision of a snowflake falling through still air. So then the glow died swiftly beyond the peaks, and the velvet sound of the bell grew deeper, as the last voice of daylight faded utterly among the mountains, and left them coldly sleeping, or dead, until the dawn.



THE AURORA BOREALIS.

By Claude E. Benson.

"Science tells us," I wrote in a previous number,* "that "the cyclones, typhoons, hurricanes, tornadoes and such-like "atmospheric commotions are but the faint reproductions "of gales of a scale and velocity unimaginably greater in "the upper air." The above sentence is merely a corollary to the suggestion that Science is continually telling us things which appear to be in direct contradiction to the evidence of our senses. For instance, in the Northern Hemisphere we live in a region of prevailing southerly, south-westerly and westerly airs, but the mass of the atmosphere, Science tells us, is moving steadily in the contrary direction, viz., southwards, in the teeth, so to speak, of the prevailing breezes. When it reaches the Equator it walks upstairs several miles and returns to the Pole in a hurry. A cyclone, in fact, is merely the base of an enormous vortex in an aërial river northward bound at express speed.

As a matter of fact, so far as I can make out, the great motor forces of the Earth all seem to be worked on the same principle: an endless processional cycle, from the Poles to the Equator, from the Equator to the Poles. This is the law of the atmosphere, of the ocean, and especially of that most subtle, most manageable—and unmanageable—of all forms of energy, electricity, which steals along the Earth's surface to the Equator, and there, rising into the upper air, returns steadily, but with lurid intervals, to the Poles: to descend, sometimes unseen, sometimes in the flickering splendours of the Aurora.

To most Ramblers, surely, the Aurora is known not merely by hearsay. They must have seen it in the Highlands, in the Northern Playground, possibly on "Iceland's greasy mountains," probably, in the case of one adventurous Rambler, on the wastes of distant Siberia.

* "The Helm Wind," Y.R.C. Journal, vol. III, p. 239.

Probably, also, the first sight of its wondrous loveliness elicited from them words of admiration ; but in my case it was the reverse—very much so. I was night-fishing in Scotland ; the conditions were ideal, and I was confidently promising myself for breakfast a dish to make the mouth of Lucullus water—fresh-run herling, when out came that beastly Aurora and down went every fish with its neb against the stones at the bottom, and refused to stir a fin, lured I never so cunningly.

A few nights later I was caught by a thunderstorm which put down the fish quite as effectually, but at that time I should never have dreamed of connecting a flash of lightning with an auroral display, and yet it would seem certain that the two phenomena are intimately associated.

From my youth up, of course, I had known that Auroræ had been regarded as supernatural appearances. The Esquimaux believe them to be the spirits of their ancestors playing with the skull of a walrus. The northern peasant would know

> By the streamers that shot so bright
> That spirits were riding the Northern Light.

Like eclipses, they have been regarded as portentous of calamity. Thus Aytoun sings how before the battle of Flodden :

> All night long the Northern Streamers
> Shot across the trembling sky ;
> Fearful lights that never beckon,
> Save when kings or heroes die.

That desperate conflict does indeed seem to have been preceded by some unaccountable precurse of fierce events, but I cannot help thinking the last two lines of the quatrain were suggested by a greater than Aytoun—

The heavens themselves blaze forth the death of princes.

Be that as it may, if the theory is correct, northern royalties and others who mock at fear and are not affrighted must have rather an uncomfortable time, in spite of their blood and heroism, during periods of exceptional auroral activity.

I determined, however, to have grounds more relative than barbarous superstition or poetic fancy, and turned to Modern Science. Sir Robert Ball put me on the right track.

"We have still to note," he writes, "an extraordinary "feature which points to an intimate connection between "the phenomena of sun spots and the purely terrestrial "phenomena of magnetism. It has often been noticed "that a maximum abundance of sun spots occurs simul- "taneously with an unusual amount of disturbance of the "magnetic needle, and . . . that an abnormal develop- "ment of the earth's magnetism is accompanied on the "very day of the storm by a marked disturbance of the "sun's surface. It also appears that the sun spots are "specially abundant about three or four days before the "outbreak, though on the day immediately preceding, the "sun may seem perfectly quiescent. The Earth's magnetism "is well known to be connected with the phenomena of "the Aurora Borealis, inasmuch as an unusual Aurora "seems to be invariably accompanied by a great magnetic "disturbance. It has also been shown that there is an "almost perfect parallelism between the intensity of "auroral phenomena and the abundance of sun spots."

The Earth, it appears, is a gigantic revolving magnet. Along the surface from the Poles to the Equator creeps an unceasing current of electricity which is constantly being thrown off or expelled into the air as positive electricity, the discharge ever increasing in volume as it approaches the Equator, where it reaches its maximum. Once up in the air the fluid, to use a convenient term, finds itself rather in a tight corner. It cannot rise above a certain height because the thin upper atmosphere will not conduct it, and it cannot return to the earth owing to certain atmospheric conditions and the opposition of the upward discharge of electricity ; consequently, it streams back- wards towards the Poles, seeking the line of least resistance to return to Mother Earth ; this it finds along the line of the dip of the Magnetic Needle. There is,

therefore, near the Magnetic Pole, where the Needle stands on its head, a constantly descending stream of electricity, sometimes invisible, sometimes luminous. When the whole or portion of this electric fall becomes visible, an Aurora is formed ; an Aurora is, in fact, diffused lightning returning quietly to earth.

This process, however, does not go on quite evenly. The upper and lower currents constantly vary in volume and intensity ; very often, especially in the Tropics, the Earth throws off more electricity than the upper air can contain. There is no escape for the congested fluid upward, and the route to the Poles is already filled to bursting—and burst it does. The pent-up electricity forces its way through all opposition back to earth again in flame and tumult. In other words, we have a thunderstorm.

There appears to be no doubt that the regular descending flow of electricity, the sphere of auroral activity, forms a circle round the earth near the Poles. Not very long ago a scientist, by a very ingenious experiment, created round the head of a revolving magnet a small circle of magnetic light—made, in fact, a miniature Aurora in his own laboratory. The elevation of the great auroral ring above the Earth's surface seems largely a matter of conjecture. Scientists give about 150 miles as somewhere near the mark, but there can be no doubt that portions sometimes descend quite close to the earth.

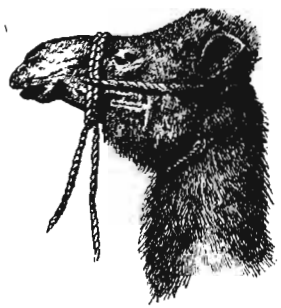
The general form of the Aurora is a low arch of streaks of light enclosing a dark space, the former of such extreme tenuity that the stars can be seen shining through. The streaks are of amazing variety of colour and incalculable swiftness. It is quite impossible for the eye to follow the movement of the lances of light ; it is only conscious of a gleam when it is gone and its place taken by another of different colour and brilliancy, and one is finally content to gaze in delighted bewilderment. These dazzling displays, it would seem, take place in the denser atmosphere near the earth's surface ; in the higher, thinner air, the Aurora is more sober in hue and less eccentric in behaviour.

The beautiful phenomenon of the Corona, a luminous ring, with long, distinct rays, very slender but extremely bright, diverging from it in all directions, is not, as is generally supposed, any peculiar combination of the auroral structure. To see a Corona you must be in a certain position, your eye in a line with the Magnetic Zenith with which the Auroral Zenith invariably coincides. This is a hard saying, but I will try and explain. No one can look up into a cupola—the dome of St. Paul's, for example—unless he is somewhere under the dome, *i.e.*, in the right position to do so. In the same way, no one can see a Corona unless he is in the right position to do so—under the dome, as it were, with the auroral rays converging on his line of vision. Now a Corona never lasts long—a few seconds at most, and then it seems to burst like a firework, scattering sparks in all directions, but this is only an illusion. It has, in fact, moved, and the stationary eye is no longer in the right place. As a matter of fact, the auroral band is never still ; it oscillates ; it swings from north to south during the day, and northwards again at night—and its arc is sometimes colossal, twelve degrees, or thereabouts.

Whether the Aurora hisses and crackles or is noiseless is still a vext question. Scientists who have explored the Polar regions and lived side by side with the Aurora for months and months all agree that the display is perfectly silent ; trappers, Indians and Esquimaux are unanimous in maintaining that it does fizz. At one time they had the support of Science. A careful observer in Paris—and the Aurora has been seen as far south as Baghdad, and once in the middle of last century the entire globe, except the Tropics, was said to be wrapped in Auroræ—a careful observer in Paris noted an Aurora, and, *at the same time*, was sensible of a light crackling sound, like the flickering of flames, which he was confident proceeded from the phenomenon. This would be strong evidence, did we not remember that the speed of sound is 1,100 feet per second, and of light something like 187,000 miles per second, so that it appears there must be some flaw in the Parisian

scientist's calculation. Nevertheless, it does appear to me—and this suggestion is wholly unauthoritative—that, as thunder is caused by the clashing together of the containing atmospheric walls of the vacuum created by the lightning flash, so that the Aurora, *quâ* diffused lightning, might conceivably bring about an attenuated, and, under certain conditions, audible thunder.

The accepted explanation I understand to be that the murmuring sounds which accompany the Aurora proceed from the Polar ice. Anyone who stands near a considerable sheet of frozen water on a still night will be conscious of gentle, whispering, creaking sounds ; and, if he examine the edge in the morning, will find that the ice has been cracked and split in many directions. The fissures are often exceedingly minute, it is true, but the cleaving of them is sufficient to account for the gentle creakings heard during the night. Now on the vast icefields of the Polar regions this process is going on unceasingly on a gigantic scale. We have indisputable evidence that these great ice-sheets are never quite quiet. Sometimes the rending of the ice, when violent, is accompanied by stupendous ruin and clamour ; sometimes, when gentle and gradual, by low hissings and cracklings. But there is silence never.



AN ATTEMPT ON KAMET.

By A. Morris Slingsby,

(56th Rifles, Frontier Force).

Kamet is a peak in Garhwal, some 25,442 ft. in height, on the borderland between Kumaun and Tibet. Though difficult to distinguish at a distance from its lesser satellites, it stands out boldly when seen direct from the glacier on its S.S.W. side, and is almost conical in shape. Seen from other directions it confuses the would-be explorer by the many shapes it assumes. From its northern slopes, which feed the Sutlej River, you look across to the great Kailas Range in the distance ; its southern slopes augment the Alaknanda River, one of the great tributaries of the Ganges. From the summit the lesser ranges of the Himalayas are no doubt visible before they finally merge into the plains ; indeed with a 9 in. heliograph one might perhaps communicate to the south with the distant military hill station of Ranikhet and with the Sutlej River to the north.

It had never been climbed, or even seriously attempted, when Captain de Crespigny, of my regiment, and I set off early in May of 1911 from Ranikhet with the intention of making the ascent. We took with us some eighty coolies, as we had to carry stores for two and a half months as well as warm clothing for the coolies when at the higher altitudes. We also took two sepoys from my regiment and two servants to do the cooking, &c. As we had to change our coolies daily at each stage we also took two *chaprasis* belonging to the district in which we were marching, one of whom kept a march ahead of us to arrange for the next day's supply. He also arranged for a supply of eggs and milk and chickens at each stage, as it was what is commonly known as the "foul" feeding season and meat was not easily obtainable.

Some very hot marches brought us down to Kurn Prag on the Alaknanda River, only some 2,300 ft. above sea level, where we found the flies and heat very trying. Thence we gradually mounted up the valley to Joshimath, where the Rawul Sahib of Badrinath lives, a fat, squat little man with a cataract in one eye, and of most unprepossessing appearance. He is a Madrassi, as it is the custom for the ruler to be a native of that distant province, for the man who first founded the temple at Badrinath came from there. With the help of his steward, an able and well-educated *pundit* called Bidiyadatt from Gwaldam, further south, though against his advice, as there had been a late and heavy snowfall, we got away towards Badrinath after two days' delay, and, after spending the night at Pandukeswar, reached Badrinath the following evening The devastating effects of the late snowfall were everywhere visible, the path was non-existent in many places, the telegraph poles bent double and the bridges carried away. At Badrinath we were delayed for fourteen days as no coolies were available, and we spent the time in attempting the Nalikanta and Satopant Glaciers, but were stopped everywhere by excessive snow. One day I spent in going up to Ghastoli, which is about 13,000 ft. above sea level. After fourteen days we began to get our baggage up to that place and to collect wood there, and at length, in early June, set off up the Ghastoli Glacier with ten picked coolies. Loads were reduced to 25 lbs. and every man was provided with clothes, sleeping-bags and boots. We managed to get the coolies along over the moraine, which they much prefer to snow, even when hard ; and after some six hours reached an altitude of about 15,500 ft., where we camped. All night a cold breeze blew down the glacier, but we had Whymper and Mummery tents and were quite comfortable. We got away next day about 6 a.m. and found the going over the hard-frozen snow quite easy until the sun came peeping over the ridge below Kamet, when we soon found ourselves continually sinking in up to the knees. The melting rivulets on the glacier became noisy torrents and the coolies were

Photo. by A. M Slingsby.

MANA GORGE, GARHWAL.

much affected by the soft going. So far we had been going almost due east, but now, at a northerly bend, we rounded the corner and Kamet came into full view, looking so near and peaceful, with its southernmost slopes still dark in shadow, that we thought our day's *trek* nearly over. The glacier, however, seemed only to lengthen as we went further, the snow got worse, the coolies began to complain of the long march, and soon we had to look about for a place in which to camp ; but we did not find one until we came in sight of two snow-fields at the head of the glacier, one obviously coming from the western slopes of Kamet, the other part of a lower range further to the west. Taking the easterly route we crossed over the centre of the glacier and pitching our camp on some rocky ground which turned out to be the first bit of moraine below the snow-field, sent back all our following except six coolies, the two sepoys and one servant, to our camp of the previous night.

We decided to stop here next day and prospect, but for some unknown reason we were most of us overcome with mountain sickness. Our camp was only at a height of 18,000 ft. and it was not very cold, but next day we found it difficult even to put one foot in front of the other and soon gave up any idea of reaching the col below Kamet. The following day saw us back at Ghastoli with all our stores.

A day in our comfortable camp, however, renewed my spirits and brought back that inexplicable longing for the mountains which all climbers feel, and two days later I sent six coolies ahead and set off myself early the following day intending to reach our second or 18,000 ft. camp in one day's march. I took with me one coolie and Gulab Khan, my Satti orderly, who accompanied Dr. Longstaffe and myself in the Karakorams in 1909. We climbed up to the first or 15,500 ft. camp in two hours, and passing the coolies, reached the second or 18,000 ft. camp in another six hours.

We stopped here for the night and started off next morning for the col at 6 a.m. I felt very fit and the coolies also seemed quite cheery. After two hours' walking on the hard snow of the Upper Glacier, keeping on the east side of

the great snow-field which stretches along the foot of the mountain so as to avoid the huge crevasses whose gaping sides overhung the Lower Glacier, we reached the foot of the col at 8 a.m. The snow-field had gradually narrowed until we now stood in a sort of amphitheatre of ice and snow and ice-covered rock, with steep sloping gullies stretching up to the col which lay to the north some 1,500 ft. above us. After an hour's halt for the coolies to eat their food we set off up one of the smaller gullies, avoiding the main-gully as it was pitted with holes caused by stones which fell at intervals from a cliff overhanging the gullies diagonally to our line of ascent. I went first with three coolies on my rope and Gulab Khan followed with three more on his. A thin, crisp covering of snow over the ice sufficed for foot-hold and saved us the exertion of step-cutting for some 300 ft., and then the surface hardened and the axe came into play. All went well for some two hours, though the coolies seemed to be getting very despondent. They were Bhutias, and hardy men, but, like so many natives, did not care about going where they had not been before. A thick mist now began to enshroud us, and I think this further terrified them, and, after three hours' climbing, all but one were weeping bitterly and declaring that they would go no further. Go back, however, they dare not, as I had taken off the rope and refused to let them go. By way of cheering them up I let them sit down and rest, and went on ahead by myself and cut steps. We had now got above the snow and were climbing on a very nasty ice slope ; the rocks also were coated with ice and I had to chip this off to make footholds before I dare let the coolies move. At every 100 ft. or so I hitched the rope to my ice-axe or round a rock and threw it down to the coolies and they came up one by one, hauling themselves along it. This method was necessarily slow, and the fog, which had become much thicker, made it increasingly difficult to keep to the route which I had mapped out in my mind from the bottom. We went on slowly like this until after ascending about 1,000 ft. we came to more rocks and ice, where we had to

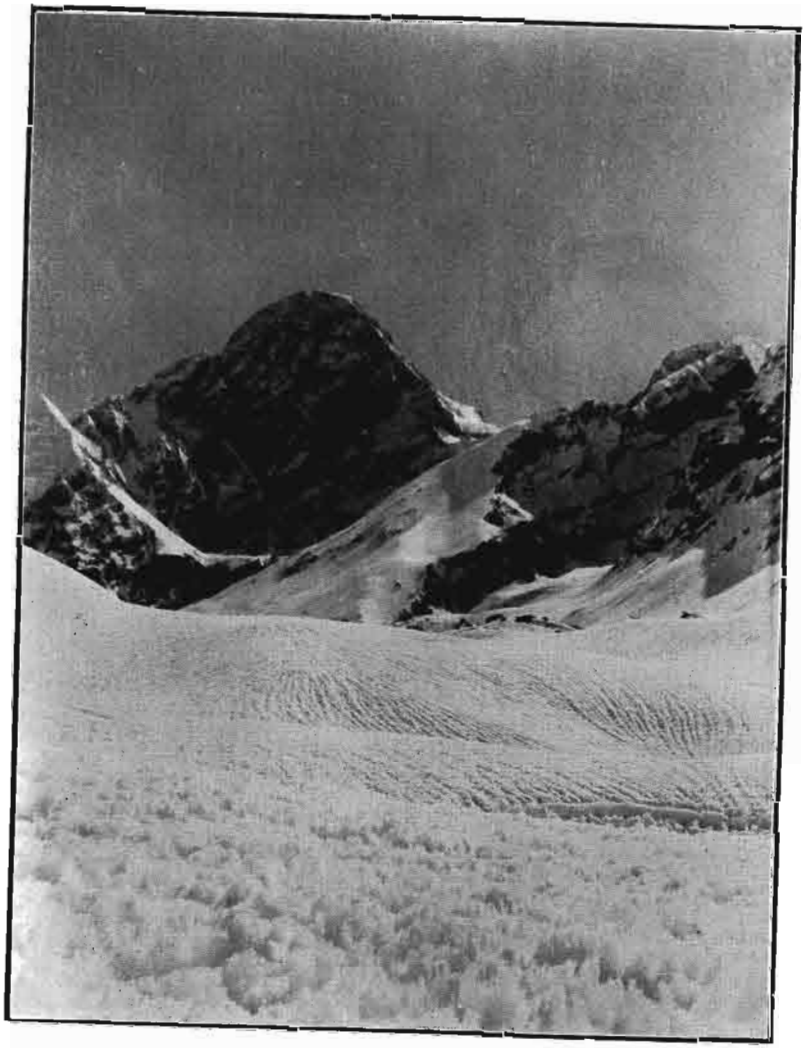


Photo. by Capt. H. Ch. de Crespigny.

KAMET FROM THE GHASTOLI GLACIER.

cross over to the main-gully, and, after getting across it, climbed up by its easterly side. I had hoped the abundance of rocks would have made it easier, but they only added to the labour, for they were all covered with ice so hard that even at noon it was only with difficulty that I could chip off enough to get a foothold. Each coolie had to be carefully watched, for there would have been little hope of saving anyone who slipped, as there was nothing over which to hitch the rope. They were now very tired, dread of the unknown adding to their physical weariness, and it was only with the greatest difficulty that, with the help of Gulab Khan, after nine hours spent in climbing some 1,500 ft., we reached the top of the col (21,000 ft.) at 6.30 p.m. as the day was drawing to a close. The place was so steep that it was only with difficulty that I found a site for our Mummery tents. One coolie, overcome with weariness, sat down and, slipping his arm from the rope by which he held his load, stood up. Immediately and without warning the load slid away, and before we could stop it, went bumping down to the bottom of the gully, where we found it next day.

After settling down in camp I went on to the top of the pass and got a glimpse of Kamet and the country to the north. The mists slid away and the panorama before me was magnificent. Just below the corniced slope of the col a very high glacier, starting from the north-west side of Kamet, stretched away at our feet and curved gradually north until it merged in the low grey hills of the distant Sutlej valley. Beyond, the untrodden summits of the Kailas Mountains rose tier after tier up into the skies, girt here and there with long straight lines of hovering clouds, which seemed to add considerably to their height. Turning from this vast upland view of Tibet I looked eastward on Kamet. From the col a long snow slope swept up to a great rock-tower, itself a minor peak some 2,000 ft. above me, from which, if it were climbed, it would be necessary to drop down many hundreds of feet before again commencing to climb up the slopes of Kamet itself. By going

more to the east, however, and avoiding it altogether, it would, I believe, be possible to get on to a long continuous snow-slope and so to the top of Kamet. What manner of hidden crevasses lie between the col and this slope I cannot say, but the snow of course gets the full effect of the sun from early dawn, and here undoubtedly would be the greatest difficulty. To the south and west were countless small peaks and here and there a larger one that raised its head above its fellows, their eternal snows flushing pale yellow in the rays of the setting sun. As I gazed on this sea of peaks, as yet untrod by man, the last parting rays of the sun lit up their upper slopes, the wind dropped, the peaks grew dim beneath the twinkling stars, the avalanches from Kamet ceased and over all a great stillness reigned.

Next morning, after a cold but windless night, I tried to get the coolies to come on, but they had all been somewhat affected by the altitude and their exertions of the previous day and only one would accompany me. Though the reward of our efforts had seemed so close at hand, even within our grasp, I now began to realize that I could not go on and leave the coolies where they were, for they would surely have died. With the obstinacy of despair I went on for about two hours to a height of I suppose some 22,000 ft., and then returned to camp. The snow was very soft and this served to confirm my misgivings of the previous evening as to the effect it would have had on our further progress. Before packing up our tents and commencing the descent I took the hypsometer readings and found the temperature at 10.30 a.m., in the shade to be still 2° below freezing point.

We had some difficulty in getting down owing to the ice on the rocks, but eventually did so without mishap, and after camping at our 12,000 ft. camp again, descended the next day to Ghastoli. Thunderstorms and rain, the forerunners of the monsoon, came on, and further attempts at Kamet were obviously out of the question, and so, after a few days' halt at Badrinath, we set off on our return journey to India.

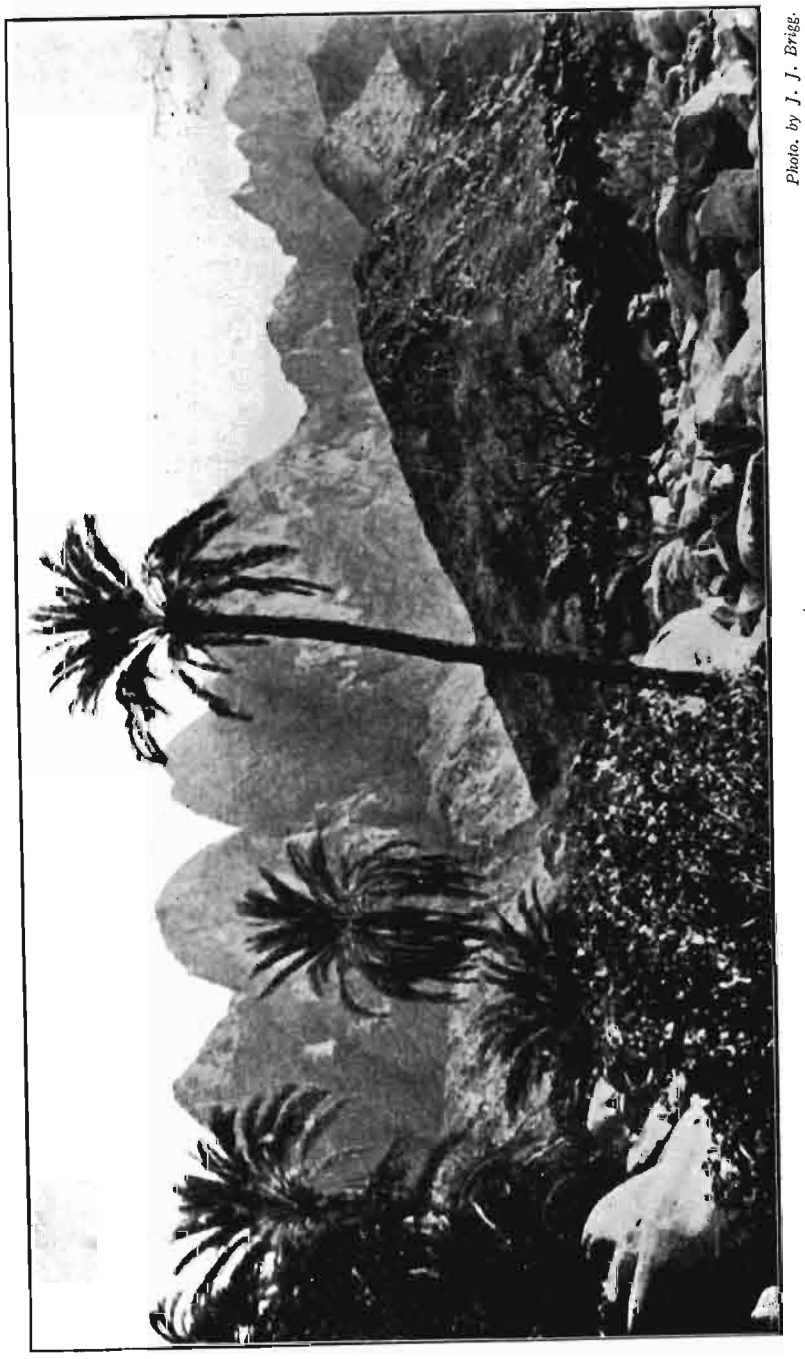


Photo. by J. J. Brigg.

JEBEL SERBÁL.

SINAI: A DESERT RIDE.

By John J. Brigg.

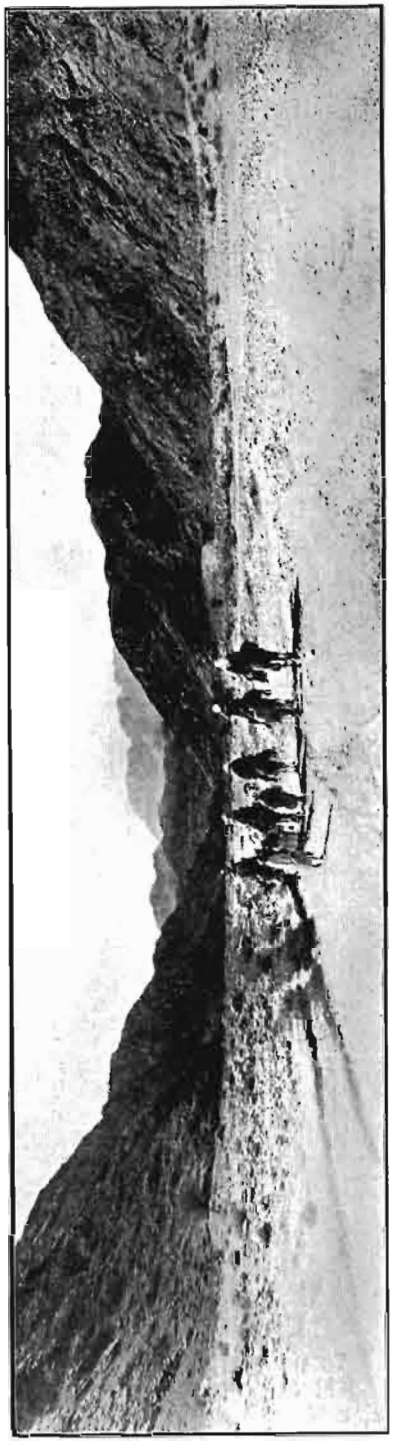
After listening to my recent paper with the above title some of my fellow Ramblers were pleased to say that I had made a very good tale out of a desert. I fancy they had the common idea that every desert is a vast unbroken level stretch of golden sand, without a hillock or a tree, and, certainly, the best-known history of the Desert of Sinai speaks only of one mountain. Elijah Walton's wonderful pen and ink panorama of the Sinai Peaks in the Cambridge University Library, however, is sufficient proof to the contrary. Sinai indeed, as Dean Stanley has said, combines the landscape beauties of the desert, the mountains and the sea; no part of it is very far from the sea and none of its plains are "out of sight of land"—there is always some higher ground in view.

Of our trip from Suez to Mount Sinai and back, made in the spring of 1912, let me give an impressionist picture. As we tried to travel in comfort we had tents and camp beds and men to cook, wait and pack up tents and look after our transport. Every evening, therefore, saw five tents pitched and a table spread, and every noon some score of baggage camels striding along ahead whilst we spent a long siesta, sheltered from the blazing sun, in a comfortable tent. As the Peninsula of Sinai is under the Government of the Soudan I need not say there was no fear of man; and the cheerful rabble of Arab camel-drivers who accompanied us were as happy and helpful an escort as any traveller could wish, carrying indeed, for 'pomp and circumstance,' a few scimitars and guns, but much more at home with the long stone-headed pipes which they passed from hand to hand as they walked alongside, yarning all the time in resounding Arabic. It was no hardship to get up at 4.30 a.m., knowing that we should thus secure a few hours of the cool and exhilarating desert air before the torrid breath of mid-

day, and there was always something to interest the rider who looked beyond his camel's head-stall. Even in the first three days' march, that 'three days' journey in the wilderness,' where, as of old, one 'finds no water,' there were a few birds, or perhaps a huge green lizard running betwcen the camel's feet, and in the distance the lagoons and land-locked lakes of the Mirage and glimpses of the sapphire sea, with a 'tramp' or a 'liner' to take one's thoughts back to the busy harbours of England.

We halted at the time-honoured watering-places which alone make the desert highway possible, the hills increasing in height as we fared southwards, and one camp especially on the Red Sea beach, strewn with wrecks of coral and tropic shells, between two headlands, will always be a pleasant memory. Striking inland through the various 'Wadys' or narrow valleys that wind between the barren hills, we left the limestone region of the North and came to the hills of Red Sandstone where the ancient Kings of Egypt quarried for turquoise five thousand years ago and left their names and titles graven on the rocks. Later travellers—fifteen centuries ago—have scribbled their names in inscriptions which, for long, were attributed to the Israelites. The hard gravelly surface of these valley floors afforded very good going and some of us found the first two hours, in the bright morning air, a pleasant preparation for the day's voyage on a swaying camel. Passing the sandstone hills we came to the true mountains of Sinai—peaks of granite, grey or red, their rocky ribs bare of any kind of soil or vegetation, with great veins of intrusive rock, porphyry diorite and greenstone, seaming their flanks for miles. Rain does fall sometimes and the water which comes to the surface, here and there, forms fertile "oases," of which the Oasis of Feirán—"The Pearl of the Desert"—the scene of Moses' great battle with Amalek, is the most famous. After days of hard, dry desert, it came as a shock to splash into a running stream and find the tents pitched by a grove of palms with reeds, fruit-trees and patches of corn. Here, also, we found our first mountain—Jebel Serbál (6,500

PLAIN OF ER-RAHA.



WADY FEIRÂN.

Photos. by J. J. Brigg.

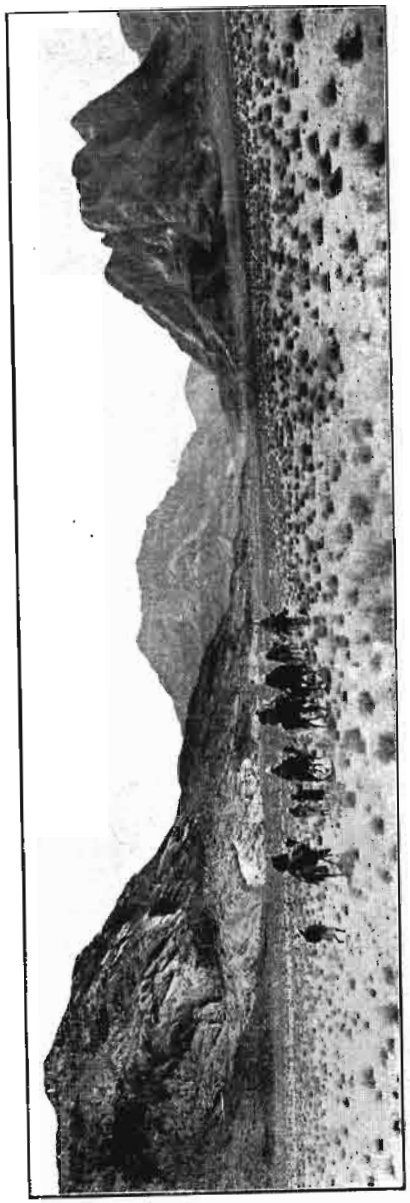
ft.), not of great height, but a shapely peak, reminding one of the Mickledore side of Scafell, with five domed peaks and deep gullies between. Our climb—for I need hardly say we climbed it—was a pleasant day's outing. Camels took us to where the path ended and the ascent was up a long and laborious gully of rocks. Our guide, who might have sat for 'Phra the Phœnician,' went up like a cat, with all our belongings slung over his shoulders in a white sheet, and a rope which Baedeker's quite unnecessary caution had induced us to bring with us. Sweet smelling herbs fill the crevices nearly to the summit, which Dean Stanley aptly likens to a gigantic turtle. We saw all the land before us like a relief map, with the Red Sea and the mountains of Egypt beyond. Altogether, Jebel Serbál, "The Peak of the Coat of Mail,"—an apt Arab simile from its smooth granite summit—remains in one's mind a pleasant memory.

As we left the Oasis of Feirán our camels had the unusual experience of wading knee deep in a clear running stream, but we were soon again in the 'great and terrible wilderness,' and nearing the central knot of mountains. Our luck in the weather still held, clear skies and a brisk north wind to temper the sun's heat. The trees in Sinai are few but hardy and generally dry and spiky. The aromatic shrubs are many and varied, and judging from his breath, the camel likes a *pot pourri* of them all for his wayside snacks.

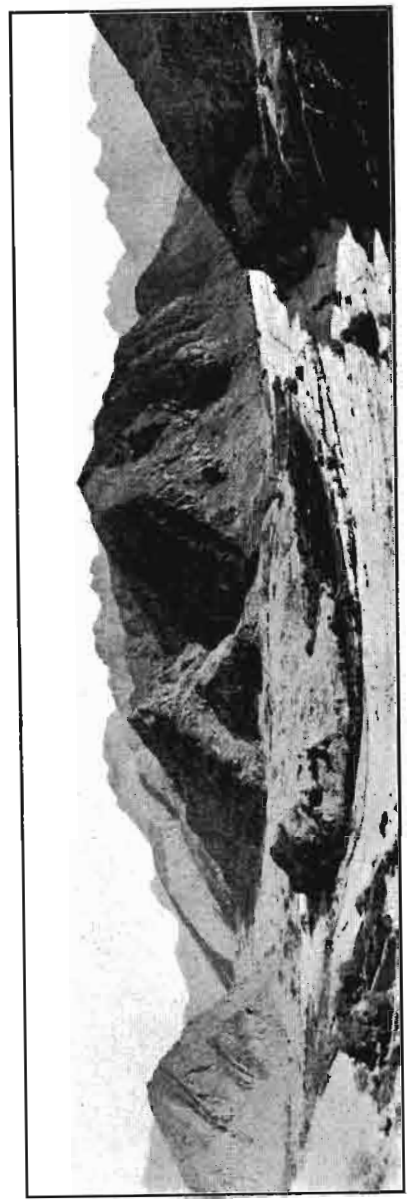
After this we climbed a rather long and rugged track—the Pass of the Winds—up into the hills, and came out on to the plain dominated by *the* Mount Sinai—Jebel Musa and his brethren, Ras es Sufsafeh and the rest. Close under the granite crags of Jebel Musa is the fortified monastery of St. Catharine, an outpost of Christianity in the Arabian desert. Here we spent several days as restfully as a 'Rambler' can, that is to say, we, or some of us, climbed three peaks on the three days we were there and rested nearly a whole afternoon. Our tents were pitched in the pleasant gardens of the monastery, under a row of gigantic

cypresses, and behind us and in front towered the granite crags which glowed warm in the evening sunlight ere the stars came out to peep at us through the cypress leaves. The Monastery Church is a marvel of barbaric beauty, with its mosaics, pictures, gold and silver ornaments, and forest of hanging lamps, while the shields of arms rudely scratched, perhaps by Crusaders, on the carved wooden doors of the porch, lend a touch of human nature. More than once did we attend the monks' service and try to apprehend their scheme of music, and some of us visited the ancient bone-house, where a skeleton porter has sat as doorkeeper for a thousand years. The famous library where Tischendorff found his Greek MSS. of the New Testament and rescued leaves of other precious volumes from the furnace is now cleaned up and as spick and span as a Carnegie library. Any reference to the *Codex Sinaiticus,* which their predecessors esteemed so lightly, is now considered by the Prior and his monks in rather bad taste. Jebel Musa, the Holy Mountain of Sinai, is climbed by a well engineered pilgrim-way and so can hardly rank as an ascent, but we did have a little scrambling among the summits of Ras es Sufsafeh—in fact we were stopped by a steep little chimney below its summit, which, Stanley says, judiciously, "ought to be climbed for the view." The neighbouring peak, Jebel Kathrein (8,550 ft.), the highest in the Peninsula, has a well-made road nearly as far as to the chapel and little refuge on the summit. Our guide was an intelligent monk who had kept school in some far-off island in the Ægean, and we had the unusual experience of discussing the pronunciation of Greek in a Greek chapel, 8,550 ft. above the sea. The downward road passes a spring called "The Well of the Partridges," because it sprang up to refresh the partridges which had accompanied the body of the martyred Catharine as it was borne by angels from Alexandria to Jebel Kathrein.

We left the Monastery of Sinai with regret and made our way back to the coast. Perhaps the most impressive part of the trip came at the end where, through a long and



MOUNT SINAI.



Photos. by J. J. Bragg.

THE OASIS OF FEIRÁN (OR REPHIDIM.)

narrow defile twenty feet wide and a thousand feet above our heads, we suddenly emerged into the desert sloping down to the sea. This, the desert of Kaa or Gaa, is more like the absolutely stony waste of our ideas than anything else we saw. We had a brisk morning's ride across it and came at last to a little port called Tor, chiefly remarkable as being the place of quarantine for the pilgrims returning from Mecca to Egypt. There are 'compounds' which will accommodate 50,000 at once, but we found them 'out of season' and empty, and in charge of a plucky Englishman —though I think his wife better deserves the epithet—stuck out there alone.

The last we saw of our faithful Arabs—by this time there were about fifty of them—was a gesticulating crowd on the the little pier as we put off to the Khedivial Line S.S. Neghileh that brought us back to Suez and civilization.

THE SIEGE OF MERE GILL.

By E. E. Roberts.

Wanderers on the northern slopes of Ingleborough seldom fail to pass by the long and curious rift into which Mere Gill Beck falls. At flood times the roar is tremendous and it is a wonderful sight, standing on the great rock-bridge, to watch the huge waterfall pouring into the pool 40 ft. below and the smaller fall close by, leaping out and dashing against the rock-pinnacle which rises from the depths. The remainder of the rift is only a few feet broad, and has for floor the same pool, which is usually some 50 ft. deep, but in very dry weather shews a little beach under the fall and a steep slope of mud running down under the bridge into the shrunken pool. From this slope you can look right through the narrow rift to the northern end, where an underground stream tumbles in. Fluorescein has shown that this stream is the same as the odd little beck labelled P. 101, which can be seen breaking out from the flank of Ingleborough some distance to the S.W.* Shepherds have been lowered down to the beach to recover the corpses of unlucky sheep, but I know of no printed reference to this cave, and history does not record who was the first to take the sensational stride on to the Pinnacle, climb down the crack and discover the Cave by crawling into the low tunnel at the foot of the fall and up the 10 ft. bank of gravel inside. Rare visitors followed and, by a level dry passage of 30 yds., came to where a stream falls in and round four or five bends to a great shaft or pitch. Finally Mr. Haworth's party descended this—the First Pitch—and found another great obstacle beyond. There is an outlet somewhere in the floor of the Mere—for so we have christened the pool, though there is good reason to believe the beck itself takes its name from some local word—but the water-level generally stands well above the entrance to the Cave,

* See "Underground Waters of Ingleborough," Yorkshire Geological Society's Proceedings, Vol. xv.

and the main flow is over the gravel bank inside and forward, by waterfall, pool and soak, chamber and crack, until, after uniting with the smaller stream inside and with all the other waters of Chapel-le-Dale, it comes to light at God's Bridge, in the valley, 500 ft. below.

Here then was a pot-hole which offered sport indeed—all the fascination of the unknown and all the difficulty of an unclimbed peak. Nor has its conquest been easy—indeed a regular siege has been necessary. Each Whitsuntide since 1907, a little band of mountaineering men have attacked, or threatened it; fresh cragsmen from this Club have filled the gaps from time to time, and its captors were, in the end, almost to a man, at once engineers and mountaineers. Three seasons did we get into the Cave, five times was the attack delivered, but success only attended a combination of spade work and good luck, with a thorough knowledge of the water-system.

Payne first came across Mere Gill Hole in 1905, and forthwith began with enthusiasm to collect a working force. Next year he brought myself and others on a glorious camping trip to Ingleborough and Gragreth and showed us Mere Gill, promising us a pot-hole inside with a single drop of fabulous depth.

At Whitsuntide, 1907, Payne organized our first camp at Mere Gill. Mrs. and Miss Payne came, and Clarke, Williamson, Hoessly and myself. Mr. Kilburn, of the Hill Inn, brought his cart for the first time up the steep track on the scarp above Souther Scales, and found it very difficult. That camp is still remembered as the infamous "Cold Camp." How it froze and blew, and what devices we tried to keep warm! How some people burnt themselves with hot stones, and how comfortably we went to sleep, to wake up shivering at 2.30 a.m., and how at length Payne, the resourceful, gave the less hardy the right tip, and I slept warmly the last night under a blanket made up of 300 ft. of rope!

This was a mere reconnoitring expedition; the mouth of the Cave was far under water and our operations were

more amusing than serious. We visited Douk Cave, found Far Douk, and let Hoessly down over the big pitch, to be nearly battered to bits by the waterfall before we hauled him back. Has anyone explored the latter cave in the last ten years? We made, too, our first useful discovery about the Mere Gill waters—how to turn the beck so that it falls over the Pinnacle into the Mere.

In 1908 the weather was favourable and our partially successful attack is recorded in this Journal (vol. II., p. 312). With four men on the drag-ropes the heavily laden cart went at a trot up the scarp above Souther Scales, and Hoessly brought two new men, Boyd and Oechlin, to make good our losses. The latter, an absolute stranger to the district, arrived at 1 a.m., having made a bee-line for our beacon in the dark from somewhere south of Ribblehead Station, over scores of walls and miles of scars.

Inside the Cave there was only a reasonable amount of water flowing over the First Pitch, which is some 60 ft. in all, with a large platform three-fourths of the way down. There are also two good ledges, and, if you are clever and quick, you may not get very wet. Hoessly did a wonderful thing here in estimating and sawing off exactly the right length for the beam which we jammed across the shaft to take the pulley for the body-line. Out of the chamber at the foot of the pitch, over a little pool which once successfully engulfed and robbed us of two pulley-blocks, round a sharp corner, through a deep pool and by a narrow but very high winding passage, we followed the water to the big pool with the smooth rock slide just before the Second Pitch. Roped, I slid down in safety and turned to warn Hoessly. He came at it fast, away went his feet, and he slid on his back into the pool. For one brief moment I saw above the water, at one end a boot, at the other a hand grasping a lighted candle, then both disappeared. That pool is known as "Hoessly's Bath" to this day.

To the Second Pitch we dragged the end of the very long rope which had been tied on as a hand-line for the descent of the First Pitch, and then stupidly threw all the slack

over the edge. I was the first man to be lowered, and by a marvellous fluke managed to keep a candle alight through the splash and spray of the 90 ft. descent. There is a broad and very damp ledge, 30 ft. down—we called it Candle Ledge—and a little below one passes through a slanting corner among sharp ribs of rock which have at one time or another damaged every passer-by. A tangle of rope had to be cleared off the Candle Ledge and several coils released on the way down. Hoessly came next and the magnesium light showed us the gigantic hall—the Canyon Hall—into which we had penetrated. Smaller than the Great Chamber of Gaping Ghyll, it impresses me as longer and higher than that of Sell Gill Hole. A few yards further, the stream falls over a 20 ft. pitch, and from a chockstone above we could see a clean cut fissure—now called the Canyon—running straight away from us, and cutting deeply into what appeared at first sight to be the floor of the Canyon Hall.

This was our limit for that day, but, as the Mere continued to fall, in spite of a wet and miserable night, Hoessly and I were lowered again next day. When the first man climbed under the chockstone into the Canyon, and went on lowering himself into the water till he was up to the neck, it looked, for a time, as if it would be necessary to swim, but the pool was deepest at that point, and after another bit of climbing and more pools, to be crossed with care, we went on, roped together, down what seemed a huge length of perfectly straight passage, in a state of wild excitement—for this was entirely unknown ground—till we came to another great pool and, shortly, to where the Canyon ends at a third great descent. In the glare of the magnesium it was possible to make out a platform, 20 ft. down, and a huge shaft to the right. The roof was still an enormous distance overhead. The wonderful thing about the Canyon Hall is that it runs right into the mountain for a good 100 yds. in a direct line with the rift on the surface. We tried to persuade the three men above to send us down another man, but they very wisely declined. Strong men

though they were, the hauling at the entrance to the passage was round so many bends that there was not much reserve strength. So Hoessly and I turned to expiate our own carelessness of the day before by undoing the most awful tangle of rope I have ever seen. It was thick rope and wet, and we suffered many plunge-baths in the inevitable pool and a continuous shower from the fall before we got it all clear. Nearly ten hours had been spent underground before, greatly to the relief of the ladies, we returned to daylight with all our tackle, very tired—and very clean.

A month later Williamson gathered a large party for a night attack at a time when the Mere was very low. Five men, including Erik Addyman, Hazard and Boyd, traversed the Canyon and reached the head of the Third Pitch, but the further attack failed, and it was clear that the last of the great Ingleborough pot-holes would never give in to any but a properly organized party with plenty of time and with each man thoroughly acquainted with his job. One good result, however, of this attempt was that Addyman and Hazard fell under the spell, and were keen to carry the exploration to its end. It was they who, by discovering some of the sinks in the bed of the Beck by which water reaches the inside stream and encouraging the Beck to flow into them, found that the supply to the Mere could be cut off early in dry times. The water was, in consequence, lower that summer (1908) than it had ever been before, and in 1910 the Mere was so depleted by this method that, but for the stream at the north end, it might have dried up altogether.

There was never any chance of entering the cave at Whitsuntide, 1909, so we joined the Gaping Ghyll Camp, and, with two of our party down below during the flood (Y. R. C. J., vol. III., p. 67), and the rest, including our ladies, among the workers outside, we had quite enough excitement to last the year.

In 1910 we camped as usual, intending to do minor pots. Never were we so strong. We had lost the two Swiss, Hoessly and Oechlin, who had left the North, but we had found a sixth man of the right sort in Stobart; and my brother came, as he said, to see us work. The accident to Boyd in Sunset Hole (Y. R. C. J., vol. III., p. 177) was a painful shock, and his absence in later expeditions a severe loss.

Mere Gill Hole had now become an enthralling problem. Whenever any of the five men keen to see the thing through got together it was a topic which lasted for hours. It was clear that the whole of the small party must be got down the big Second Pitch, and to do this rope ladders must be used. On the other hand, none of us thought this safe because of the distance to be climbed in the fall. Addyman came in here with the brilliant suggestion, which was the key to our ultimate success, that it might be possible to divert the Beck where it leaves a little gill, crosses some gravel, and takes a more open course. Direct assaults having failed, the engineers now took up the siege and began by opening trenches. Some weeks before Whitsuntide, 1911, Addyman and Stobart surveyed a trench as far as the ridge between two big sink holes on the surface and on the side of the wall further away from Mere Gill Hole, and the farmer dug it out for us—at the critical point through stiff clay. With Barstow's generous assistance, they also made seven rope ladders, and, after destroying every foot of untarred rope except our climbing ropes, we had 1,200 ft. of tarred rope. Numerous people were asked to join us, but Mere Gill Hole has a just reputation for being very wet, and the one accord with which they all began to make excuse became quite laughable. At Whitsuntide, 1911, the weather was lovely, though, owing to heavy thunderstorms, the Mere was nearly up to the Cave. The only drawback was that two men had to leave on Monday night but, on the other hand, there was Coronation Week to look forward to for a second attempt if the first failed. From midday on Saturday we laboured at deepening Addyman's trench and building up a solid dam across the gravel bed. The water was found to run by one of the sinks down to the First Pitch, so we promptly turned it

into the other sink. Three hours' work sufficed to rig a new beam on the First Pitch, hang the ladders and get much of the tackle down. At the foot of the pitch the whole of the trench-water appeared, so that it was clear the trench must be carried further. After supper we all set to with what energy we could muster. Stobart and Addyman worked like giants till nearly 11 p.m., and carried a shallow trench some distance away from the sinks to various holes which we hoped would convey the water to the Sunset Hole system. There was still a lot of tackle to send down when we got to work towards noon next day, including that awkward thing, a beam. With the recollection of Sunset Hole still fresh in our minds, the most extreme care was taken, but the ladders were finally settled on the Second Pitch, and lashed to a big chockstone behind Hoessly's Bath. The waterfall, however, was very successful in putting out the lights, and it was 5 p.m. before things began to come down the Second Pitch, but in the end the beam, three ladders and much rope were carried along the Canyon. One ladder was recovered with much difficulty from the recesses of a pool. For some reason we preferred to secure the ladders to the beam though it was difficult to fix. Hazard found the ladders too short at the first attempt, and at the second it was deemed advisable for two men to watch the beam, so of course the safety line chose to become tangled and before it could be cleared Addyman, who had got down nearly to the bottom, preferred to return. The work and the wettings had taken so much out of us that we now turned back, leaving the tackle in various safe places, and reached the surface at 11 p.m. on an exquisite evening.

Next morning all were very weary and Payne was fated to spend the next night in the train, but the other four pulled themselves together for another try. In two hours we reached the old place at the far end of the Canyon. Three ladders were sent over the Third Pitch, and Stobart and I went down the mighty shaft in which the Canyon ends—a wonderful descent of nearly 100 ft. in all, 70 ft. of

it straight down the smooth wall below the platform. For the first time after leaving the top passage a roof can be seen when stooping to follow the stream. After going 60 yds. along the stream we stopped at a smooth pitch above a huge pool, where the aneroid showed us to be 410 ft. below the surface. It was nearly 4 p.m., time was up, and we turned back to the herculean task of dragging the tackle to daylight. Stobart left at 7 p.m. for Leeds but by 9 p.m. everything except the ladders was out on the moor. The ladders required yet another three trying hours' work next day from three tired men.

Our defeat on this occasion was simply due to the inability of so small a force to crowd both trenching and exploring into the fifty hours available, but our Coronation Week experiences were even more galling and in the year 1911 almost incredible. The weather was doubtful all the week and on Thursday too wet for us to venture on any work below, but Friday was fine. We were without Stobart, but found that in pot-holing, as in mountaineering, practice and condition count for much. Every rope had its appointed place and the ladders were handled like toys and passed down as if by machinery. We chanced to have an electric lamp in going order for the second time, and this was of the greatest service to the first man on the ladders. It is a pity these lamps are so troublesome for pot-hole use. In five and a quarter hours the four of us (Addyman, Payne, Hazard and myself) had reached the Third Pitch, left three ladders ready tied and the necessary rope, and in seventy minutes more had returned to the surface. Mere Gill Hole was at our mercy! Perfectly fit and not a bit tired, we turned in with two full days in hand.

But the stars in their courses fought against us. At 2 a.m. the camp awoke to the furious patter of rain drops. All morning the storm raged worse and worse. For twelve hours the trench held back the flooded Beck and turned the moor beyond the wall into a great lake. At 3 p.m. the water topped the dam and the Mere filled up rapidly. For thirty-six hours the rain

fell and we had to leave our ropes and ladders to the mercy of the torrents inside. Next week-end we came again only to find the Cave still drowned and it was several weeks before Addyman, by persistent expeditions and with various people, succeeded in recovering all but two or three ladders. One interesting discovery was made on the moor not far from camp—an opening into the tunnel by which the stream P. 101 reaches the Mere. On hands and knees, for nowhere can one stand up, it was followed through a cold stream for two or three hundred yards to a patch of stones where the lonely explorer can rest and restore warmth to his chilled knees. In April, 1912, Stobart and I were crawling hard in this passage for an hour and a half, there and back, and must have nearly reached the Mere before we gave up at a point where the passage is split into two.

The 1912 expedition almost organized itself. We made no further effort to get others besides our five selves, but a born "cave man" offered himself in the person of R. E. Wilson. The ladders were cut up and for the most part reconstructed and two light ladders bought which proved very useful. Everyone was under orders to turn up in camp at the earliest possible time, and at 11 a.m. on Friday I stood, armed with a spade, by Mere Gill Hole. Things could scarcely have been worse. The fine spring weather had broken, the Beck ran at three times its normal good-weather flow and the Mere was at high-water mark. However, the chances were all against our rallying so strong a party again, so the attempt had to be made. Soon after 1 p.m. I had got most of the Beck running into the trench, partly stopped up the Pinnacle watercourse and persuaded the water which stuck to the open bed to go through the various sinks into the Cave: at all events there would be no waterfall into the Mere. At 2 p.m. there was a shout and Stobart appeared, brandishing an enormous pickaxe. All afternoon he worked furiously—and so did I, at times—building up the dam and digging a broad channel through the gravel bed straight for the trench. One leak

under the dam and the streams from the moor still allowed a fair supply of water to enter the Cave. Hunger at last drove us to the Hill Inn and on the way we met Mrs. and Miss Payne coming up ahead of the camp equipment. After the usual strenuous push and pull up the scarp we got settled down in camp the same night. The Mere was falling rapidly but nothing could be done all next day, so we straggled up Ingleborough to show off our costumes, and spent the afternoon, together with Wilson, digging out the trench in the peat and trying to stop the leak in the dam. The other three men (Addyman, Hazard and Payne), and the second cart-load turned up in the afternoon. Hazard had brought several gelignite cartridges, with which he proposed to blow in a second entrance from one of the big sinks next the trench, and the strong men of the party put in their time there thumping the drill. I was severely censured for having turned in the trench-water and left the place extremely dirty. At bedtime there was a little excitement when we found that Hazard expected us to have the gelignite to sleep with us, but he pointed out the awful possibilities of frost and succeeded in overcoming our objections.

The water that evening was just level with the top of the mouth of the Cave and some of us climbed on to the stones which peeped up and enjoyed a lovely view of the water-filled pot. Next morning the entrance was open. Last year's beam was found still in position and quite sound. All the ladders and most of the tackle were passed down the First Pitch, the lower part of which we passed, dry and unroped, by hanging a ladder from a belay on the left, and the three ladders for the Second Pitch were rigged. All this time the whole of the water which had escaped the trench was pouring into the Cave, and with the Mere only just below the level of the mouth we did not dare to turn it off. Moreover there was not a single electric lamp availabel and only one acetylene lamp in working order, and this the great spout of waters which shot over the edge threatened to put out. No one volunteered to go into so heavy a fall

and get the ladders down this awkward pitch in the dark, so we had reluctantly to give up the idea of rigging the Third Pitch that day.

It was delightful to be out on the surface on such a lovely afternoon, in time for tea, and, as we were short of ladders, three men went over to the Gaping Ghyll camp and had two light ones very kindly lent to them by Wingfield. Stobart had also his first run down Gaping Ghyll.

Mere and beck had fallen very rapidly in the night and on Monday we turned all the water we could by way of the Pinnacle and so reduced the Cave stream very much. Stobart was first down into the Canyon Hall and in clearing the ladders at the awkward place below the ledge cut his hand seriously. At this and the next pitch we had now men enough to allow of one being stationed on the ledge and were thus saved much time and strength in forwarding the bundles, but he got well drenched by our trick of clearing out a certain pool so as to stop the stream for the moment before each climb up or down the ladders. As soon as possible four men pushed on down the Canyon, and one of them, Wilson, was considerably surprised at the depth to which he went in the first and deepest pool. All the channels we had once dug in the silt-banks had filled up but the pools were soon lowered again to a comfortable level. The rotting, mouldy mass of last year's ladders was flung over the edge and we had everything quite ready before Payne and Addyman arrived. They had been delayed by having to re-lash the pulley for the body-line. Moreover, Payne had thrown down the 200 ft. coil of Alpine rope from Candle Ledge, and it took him a long time to discover that it had disappeared right into a singular and perfectly round little pot-hole close to the foot of the waterfall and to fish it up again from an astonishing depth. Four men, a rope and a ladder were sent down the Third Pitch, but as the only belay was 60 ft. back from the obstacle at which we halted in 1911, the 200 ft. rope was needed. Addyman was lowered over two drops in the stream and sent ahead while

the other three were at work. He arrived back just as we were moving on. "A passage of over a quarter of a mile. Try not to be more than an hour!" and he returned to join the other two at the head of the Third Pitch.

So "Forwards!" The smooth pitch needs the rope as a hand-line—it can scarcely be climbed: the huge pool below is passed by an upward traverse on the left: another pitch is descended by ladder—though it could have been climbed: the next huge pool disappears under an extraordinary rock bridge and we take it on the right, bodies half in a bedding-plane and half in the water with feet scrabbling for hold on the vertical walls—two of us, at least, slipped right in: under the bridge we wade to a sandy beach in a lofty chamber, about 450 ft. below the surface—the Pool Chamber: our belongings have dwindled to a rope and a rucksack and we are hungry—but the end is too near for delay: a dry and fairly level side-passage is noticed, but on we go with the stream, along a narrow lofty course of the Douk Cave type, as fast as we can walk: corner after corner is turned: no pitch now to come—or only a small one: someone counts a hundred steps—they are soon over: the prize is ours and the passage echoes to terrific yells and the roar of the chorus:—"Pot-holers, cragsmen, scramblers!"

High up on the left we see a dry passage, perhaps the one we had refused: beyond a great torrent pours from an opening, 12 ft. above us: I climb to a foothold in the fall, come off, and get a ducking: on again! the torrent making deafening accompaniment to our shouts: a pitch that only requires a bit of chimney-work into a knee-deep pool: a bank of stones held up by a beam, no doubt the one we used in 1908: the roof descends: the passage widens: the water deepens and becomes still: all at once we feel gravel under our feet: saturation level cannot be far off and the problem of Mere Gill Hole is solved at last!

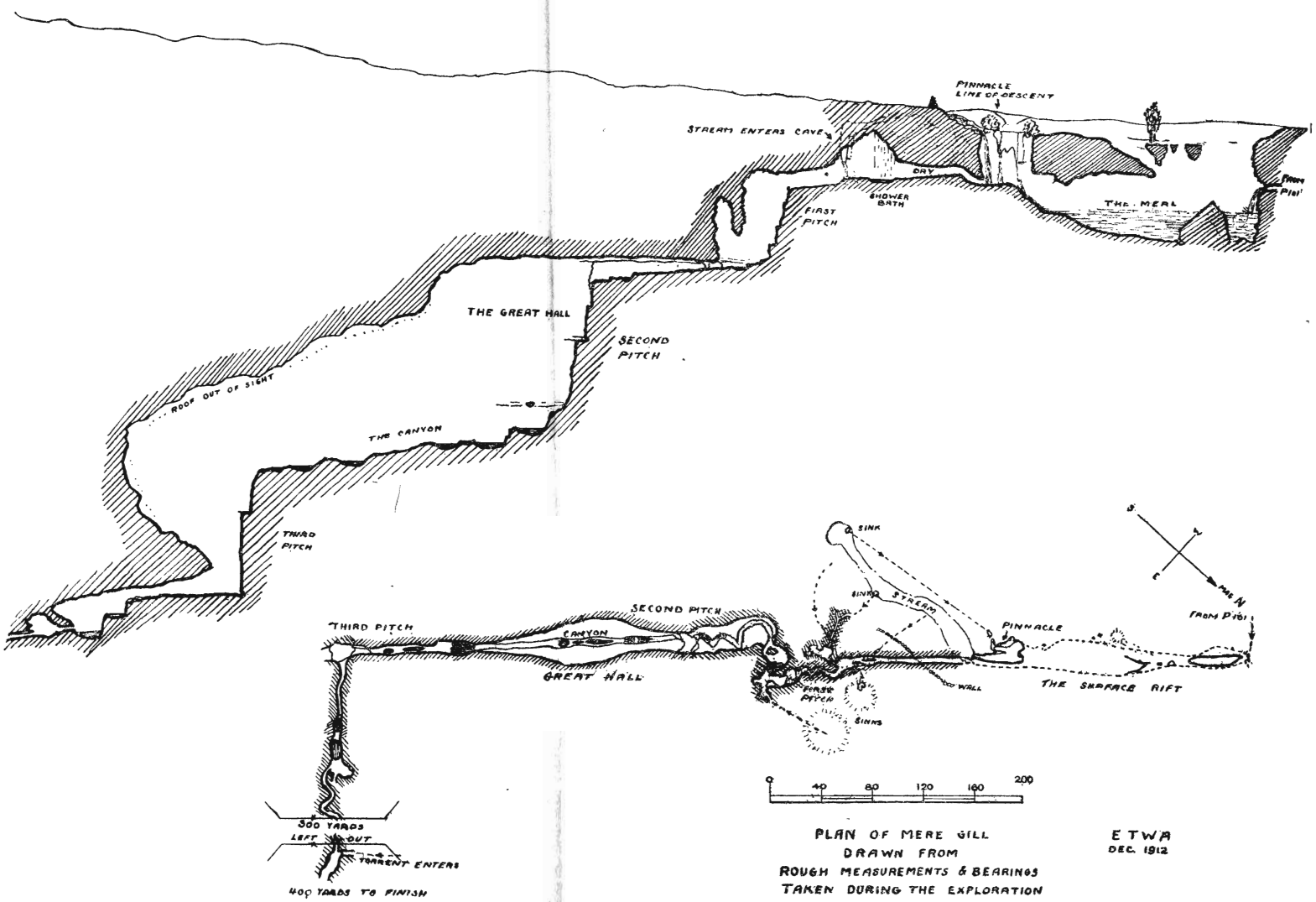
The sack is left where we have to crawl over some stones, and we move forward, stooping, through deep water: presently we are working along, bodies on a shelf and legs

in the water: then we are crawling through a very wide bedding-plane, in the usual uncomfortable way, on elbows and toes, Hazard drawing ahead and Stobart with his damaged hand falling behind: Hazard shouts that he is jammed between floor and roof: the siege is over—and the awful whirlpool promised us by a local farmer is a myth!

We lose no time in the retreat and count 750 long steps to the Pool Chamber, where we wolf our food, a jubilant crew, and drag the tackle back to and up the Third Pitch. Once in the Canyon we scout the half-formed idea of abandoning some of our tackle: six men seem infinitely stronger than four: no double or treble journeys this time, and not so much wrapping up of ladders and with a man on the ledge the top bit of each pitch is climbed without the ladder turning round. Of course there is still much hard work and some happenings: Addyman, for instance, after wearing oilskins all day, contrives to tumble into Hoessly's Bath, but is consoled by the yells of the unfortunate man climbing the ladders through the displaced water.

Wilson, who has laboured all day in the wet like a hardened veteran of many caves, is the first to crawl out into the daylight about 9.30 p.m., ten and a half hours from the start: seven ladders follow, and Addyman's half-drowned victim brings up the end of the long line of ropes which have to be pulled through the top passage out on to the moor, and is revenged by one coil catching Addyman round the leg and doing him much damage. By 10.40 p.m. everything but the First Pitch tackle is on the moor, wet clothes are doffed for dry, and we sit down to supper. Grand explosions of gelignite and a magnificent illumination with candles celebrate the victory. The ladies as usual assist vigorously in pulling out the endless lengths of rope, and on Tuesday Mrs. Payne went down the First Pitch.

The exploration of the lower reaches of Mere Gill Hole was too hasty to permit of survey-work. One's impression is that from the end of the Canyon, where the Cave ceases to run into the mountain and the survey ends, the passages take the direction of Sunset Hole or Douk Cave. If so, the



PLAN OF MERE GILL
DRAWN FROM
ROUGH MEASUREMENTS & BEARINGS
TAKEN DURING THE EXPLORATION

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DEC. 1912

long bottom stretch must lead underneath the upper course of Sunset Hole. The total depth which the water descends through the limestone is from 1,260 ft. at the surface of Mere Gill Hole to 750 ft. where it emerges at God's Bridge. The opening S. 111, close at hand, is stated to be the outlet of the Mere, but it is curious that none of our party have ever seen water flowing from it in the wettest weather.

Two interesting points remain : the dry passage, and the source of the torrent, 460 ft. down. Most of the trench water can be traced quite close up to Braithwaite Wife Hole, and must therefore join the Sunset Hole water. The possible sources of the torrent, therefore, seem to be :— the Mere, an independent stream gathered underground, or the Sunset Hole stream. The second is very unlikely, and the volume seems too large for the Mere outlet, but it must be remembered that the stream P. 101 is pouring in water unchecked. One would like to believe that the torrent is the Sunset Hole stream increased by the trench water. We assume that from the point we reached the united streams soak through low bedding planes and tiny cracks to God's Bridge, as the Gaping Ghyll water does to Clapham Cave and the Helln Pot water to Turn Dub. It is not likely that anyone will find a way through, but whoever comes after us, will find good sport in Mere Gill Hole. Once the Mere has been well lowered, a party of eight, working underground in two successive gangs, each for a limited time, could complete the exploration and survey in safety and comparative comfort. We wish them luck with so stout an opponent.

I have to thank Addyman for the accompanying Plan, which was gradually built up and checked by angles and distances measured during his many visits in 1911. It is accurate as far as the head of the Third Pitch.

THE STREAM-BED OF FELL BECK ABOVE GAPING GHYLL.

By Harold Brodrick.

Fell Beck flows down Ingleborough through a large basin of glacial drift, and at a distance of about 400 ft. above Gaping Ghyll receives from the right its last lateral branch, (Thack Pot Sike), which has cut a deep gorge in the drift. Immediately below this point the stream-bed becomes much wider, (say 50 ft.), and the stream spreads into several channels, of which only that on the left carries water under normal conditions. Here the stream, which has hitherto run about W., turns due S. after a fall of some 3 ft., and for the first time flows over the bed-limestone.

At this point, and under the right bank, is the first sink (P. 1a, not shewn on the Plan), the water sinking into an E. and W. fissure in the stream-bed, about 2 ft. long and 1 in. wide, with a greater width under the bank. Other very small fissures running N. also take water. This sink seems capable of taking nearly half the normal flow.* From P. 1a the stream-bed runs S. for 76 ft., falling on the way over one ledge, 2 ft. high, into a pool, but without any sinks, so far as present observation has gone. The stream-bed is entirely composed of bed-rock limestone as far as the line opposite P. 1, where it drops nearly 3 ft. and is covered across its width with glacial stones. There is probably a fissure across the stream-bed at this point. Close to the left bank is the Camp Sink (P. 1), which, when opened, *i.e.*, cleared of stones and sand, is capable of taking the greater part of the normal flow of water, which water reappears at the Spout Tunnel.

At P. 1 the stream-bed turns W. and is much crevassed. Normally the stream flows on the right-hand side, but can be diverted into the sinks P. 2 and P. 3 and thus into the

* By "normal flow" is meant the water which flows over one lip of Gaping Ghyll but not over both.

Spout Tunnel. The stream when coloured at P. 3 reappears at the sink P. 4 only to sink again at once and not show again on the surface.

After leaving P. 3 there is a step of 3 ft. in the stream-bed, with several big boulders on the low side. Close under this step, on the left, are three sinks, (P. 4, P. 5 and P. 6), into which some of the water flowing over the step normally sinks. If a considerable stream is turned into these sinks some of it comes out at the point S. 2, and flows over the lip of Gaping Ghyll, but the low-water flow down the sink P. 4 runs in some other direction, probably into the Spout Tunnel. Close to the opposite or right bank is a big sink in the stream-bed, the Rat Hole Sink, (P. 14), which can take a normal flow of water. This water can be heard at another fissure in the side of the bank a few feet below P. 14, and then flows down the lateral branch of the Rat Hole.

At a point 42 ft. lower down and still on the right hand bank of the stream-bed is the entrance to the Rat Hole which was first noticed in 1909. As this opening was found to be capable of taking the very large stream of water which in times of flood falls into the Great Chamber of Gaping Ghyll at some distance from the Main Waterfall and Spout Waterfall, a dam was constructed across the stream-bed at this point. Holes, about 3 in. deep, were laboriously drilled into the flat limestone bed of the stream, steel uprights leaded into them, and four planks fitted with iron D's so as to allow of being slipped on to the steel uprights; thus forming a dam capable of turning a 2 ft. head of water into the Rat Hole. At the ends of the planks, next the banks of the stream, any openings in the rock were cemented up, and now, with the help of a few sods, practically no water can get further down the stream-bed except in times of excessive flood.

At the E. end of the Dam, *i.e.*, at the end furthest away from the Rat Hole, is a sink, (P. 15), in the stream-bed capable of taking about half the normal flow, the greater part of which after running close under the surface appears

at the point S. 3 immediately above the Windlass Platform and flows over the lip of Gaping Ghyll.

A few feet below the Dam is a long sink,(P.7),nearly filled with pebbles, which communicates with the point S. 1 a few feet below it and at the end of the bed in which it lies.

Below P. 7 the stream, in several places, runs for a few feet under thin beds of rock, but nothing of any importance is met with until we arrive below the drop above the Windlass Platform. This drop is over a shelf of limestone, some 6 ft. in height, with a sink, (P. 11), immediately above it on the left. The water of this sink reappears below at the point S. 3, only to fall over into the Main Shaft. At the other or right-hand side of the stream-bed, and above the shelf, is another sink, (P. 12), the water of which reappears below the shelf, part of it in a small cave (T), which was, until Whitsun, 1912, blocked up, the remainder flowing underground to find its way into the upper end of the Jib Tunnel. At Whitsun, 1912, the block of rock which obstructed the entrance to T was hauled out and Wingfield was able to crawl in about 6 ft. The cave continues forward but is too small to admit of passage until several stalagmite bosses have been cut away, no easy matter in such a confined space.

Below the Windlass Platform there is a further drop of 5 ft. on to the broad slab, the further edge of which forms the actual lip of Gaping Ghyll.

I now propose to describe the various high-level passages so far as they are known at present.

The Rat Hole. When first observed in 1909 (Y. R. C. J., vol. III, p. 186), this passage could not be entered until a block of limestone which obstructed the mouth had been removed, and even now the actual opening is still divided into two by a partition of rock, the easier passage being on the right-hand.* A crawl round an S bend leads into a straight circular pipe, 2 ft. high and of about

* From a photograph taken at Whitsun, 1906, it is evident that at that time the present entrance to the Rat Hole was entirely obscured by glacial drift.

the same width, which continues for a distance of 18 ft. as far as A, where, although the roof is still no higher, the right-hand wall opens out into a low bedding-cave, some 10 ft. wide and 7ft. long, where it is possible to turn round. After this the passage resumes its former drain-pipe character for about 26 ft. as far as B, and then becomes slightly higher, the slope of the floor dropping rather more rapidly than that of the roof. At B a stream comes in on the right from another still smaller pipe which up to the present has not been explored.

As far as B there is no running water in the passage under ordinary conditions, but numerous shallow pools in the floor. At the time of the first exploration there were also numerous banks of sand and stones which added considerably to the difficulties. Some of the larger stones have now been wedged into a low bed which occurs in places near the roof, and the flush of water from the stream has washed the sand and smaller stones down the pipe.

Immediately beyond B is a drop of about 18 in. into a pool of water about 1 ft. deep and the passage for a few yards becomes comparatively large, being about 4 ft. high, but it soon becomes lower again, and after crawling over a very uneven floor the second bedding-cave is reached at C. Here the stream turns at right-angles to the left for 6 ft. and then, at D, forms a slender waterfall of about 8 ft. To negotiate this fall it is necessary to crawl to the right until one's legs are out of the main-passage and then crawl backwards to the top of the drop. The climb down is fairly easy, and, as one is already thoroughly wet, the additional discomfort is not noticed. At the bottom of this fall—85 ft. from daylight—it is possible for the first time to stand upright, as the roof is some 10 ft. high. From D the passage continues very low and winding for about 15 ft. and then becomes high enough to allow of walking sideways, but with a steepening gradient, as far as the Junction at E.

At the Junction the stream from the Rat Hole Sink (P. 14), joins the main-passage, and on one occasion, when about half the normal surface-flow of Fell Beck had been

turned down P. 14 it entirely prevented any further investigations beyond this point.

From the Junction, (E), the passage, at this point about 6 ft. high, becomes rapidly higher, with the stream running over a series of steep water-slides, until, at 15 ft. from the Junction, the lip of the Fourteen Foot Pot is reached at F. The stream itself falls over the lip, but it is possible to climb round and upwards to the left over a tufa-covered slope and on to a saddle on the far side of the pot. The far side of this saddle is covered with loose stones and slopes steeply for about 8 ft., beyond which there seems to be a sheer drop to the bottom of Gaping Ghyll at G. Any further exploration in this direction will be by no means easy owing to the rotten condition of the saddle and the difficulty of getting ladders so far.

With care the pitch into the Fourteen Foot Pot can be climbed. The first descent was made by Wingfield with a life-line; and after he had climbed back the rest of the party went down, Wingfield following. The Fourteen Foot Pot consists of an oblong chamber, some 10 ft. in width. The stream flows over the stones which compose the floor and away to the right down a fissure passage. This passage is about 5 ft. high at first but rapidly rises in height while the stream falls rapidly for about 15 ft. and then takes its final leap into the unknown at H. A large gritstone boulder near the commencement of the fissure forms a bridge which affords an excellent belay. The left hand floor of the fissure is missing, but along the right hand wall is a ledge about 1 ft. wide which offers a passage to the end of the fissure, some 20 ft. beyond the boulder. At Whitsuntide, 1912, Wingfield got to the end of this ledge and lowered an acetylene lamp down the shaft and it kept alight for a depth of 50 ft., showing up details of the grooved walls of the shaft. This shaft is at least 30 ft. wide, but we found it quite impossible to estimate its depth. We lowered a plumb line but could not get it to descend beyond a ledge 200 ft. below us. This ledge is approximately at the level of the ledge in the Main Shaft of Gaping Ghyll and of

another ledge visible from the boatswain's chair near the roof of the Great Chamber. It does not seem unlikely that there is a hard stratum of limestone here, and that, if a descent from the end of the Rat Hole could be made, an entirely fresh system of caves might be found at this level.

I have already mentioned that at the Junction, (E), shortly before reaching the Fourteen Foot Pot, there is a stream flowing in from a passage on the left. This passage at first is about 5 ft. high and 2 ft. 6 in. wide, but after passing up-stream for about 25 ft. the roof lowers to about 3 ft. at K, and about 20 ft. further on widens out into a bedding-cave at L, but, after about 10 ft., again contracts and resumes the ordinary narrow stream-passage type, with the roof about 3 ft. above the floor. At a distance of 40 ft. from the bedding-cave the roof is about 2 ft. 6 in. above the floor and the passage extremely narrow, the direct passage being entirely blocked with boulders which have fallen from the roof, but it is possible to work round these to the left, and then through them into a circular chamber, (the Waterfall Chamber), some 9 ft. high and 10 ft. across, at M. The stream falls into this Waterfall Chamber through a fissure and forms a waterfall 6 ft. high, but, unfortunately, the fissure is too narrow to get through. The main passage to the left of, and under, this waterfall spreads out into a wide bedding-cave, too low to admit of exploration. Fresh grass and numerous live flies were met with here.

The whole of the Rat Hole has been surveyed as carefully as the nature of the place would permit, and it is clear that the lateral branch just described passes under the main-passage of the Rat Hole near its commencement at a depth of about 15 ft. below it, and that the Waterfall Chamber is very close indeed to, but about 15 ft. below, the Rat Hole Sink, (P. 14), from which it is fed.

The Jib Tunnel, which is too well known to require any detailed description, consists of a straight horizontal passage, some 5 ft. high and 15 ft. long, leading from behind a big block of limestone to the top of what is, in wet weather, the highest waterfall in the British Isles.

The Spout Tunnel. At the end of the Whitsuntide Camp, 1910, Booth and Wingfield succeeded with the aid of the boatswain's chair and of a rope-ladder, which was hung from the jib-end at the far end of the Jib Tunnel, in getting into the mouth of the Spout Tunnel. A few weeks later a full exploration and survey was undertaken, (Y. R. C. J., Vol. III, page 190).

The floor of the passage drops very rapidly in the first 10 ft., and getting into it from a ladder fastened inside is by no means easy. About 20 ft. from the entrance a small stream flows in on the left, from a passage about 6 ft. in height, which after 10 ft. is blocked up by a mass of boulders that completely stops any further advance. Beyond this point the main-passage continues, with a height varying from 4 ft. to 8 ft., for 130 ft. as far as the Junction Chamber, at N. At one part is a fissure at least 20 ft. high, too narrow to admit of climbing. The strata to the N. of this fissure seem to dip S. at an angle of 48°, and it is a curious fact that the same dip is seen on the S. side of the Fourteen Foot Pot in the Rat Hole and also in the photograph of Gaping Ghyll, facing p. 233 in Y.R.C.J., Vol. III. It is very probable that this dislocation of the strata is closely connected with the formation of the Main Shaft and the Great Chamber of Gaping Ghyll, and that this great natural wonder owes its origin to a fault, the existence of which has only recently been realized.

After the first 10 ft., and as far as the Junction, the Passage is for the most part about 3 ft. wide, of the usual stream-passage character and practically level. At one place is a waterfall about 3 ft. high. The Junction, (N.), is a triangular chamber, at the apex of which the main-stream enters down a waterfall, 30 ft. high, but beyond the chamber the main-passage continues for 75 ft. to the point P., in a straight line, and with a height of 3 ft. diminishing gradually to 2 ft. In this length is a very high fissure in the roof similar to that in the earlier part of the passage. At the end of this passage the roof rises to a height of at least 20 ft. and slight waterfalls come in on the left, the

first about 12 ft. and the second, about 8 ft. further on, 10 ft in height Both of these can be climbed and both are fed by the same trickle of water from a passage some 20 ft. above, (at Q). It will be quite impossible to climb into and explore this passage until a ladder is taken in. This point Q is found by survey to be almost directly under the sign-post which stands above the shake-hole of Gaping Ghyll, and it is nearly certain that the water met with at Q is supplied from the swampy ground on the surface, as it was found to be exceedingly cold, whilst that which fell into the Junction Chamber, (N), from the high-level passage (*see below*) was very warm. The stream temperature of Fell Beck at the time was 60°, so it is clear that the high-level stream must be fed from a direct stream and the low-level stream by percolating water.

To return now to the Junction Chamber, (N). When the Spout Tunnel was first explored it was found impossible to climb up the waterfall, owing to the quantity of water, but on the second visit Wingfield managed to climb up the pitch in the full course of the waterfall. Booth and Davidson followed and the three then completed the exploration, of which the following is Wingfield's description :—

"The lower of the two pitches consists of a nearly right-angled chimney, divided at the bottom by a leaf or knife-edge of waterworn limestone. The climb commences from the top of the knife-edge and continues for a height of about 30 ft. through the full force of the waterfall, which under favourable circumstances would pass through a 4 in. pipe. Two horizontal cracks about 12 ft. above the pool at the bottom give an opportunity for a rest and change of position, and from here to the top of the fall the handholds, many of which are very rotten, have to be found by touch alone, as the lights below are of very little assistance.

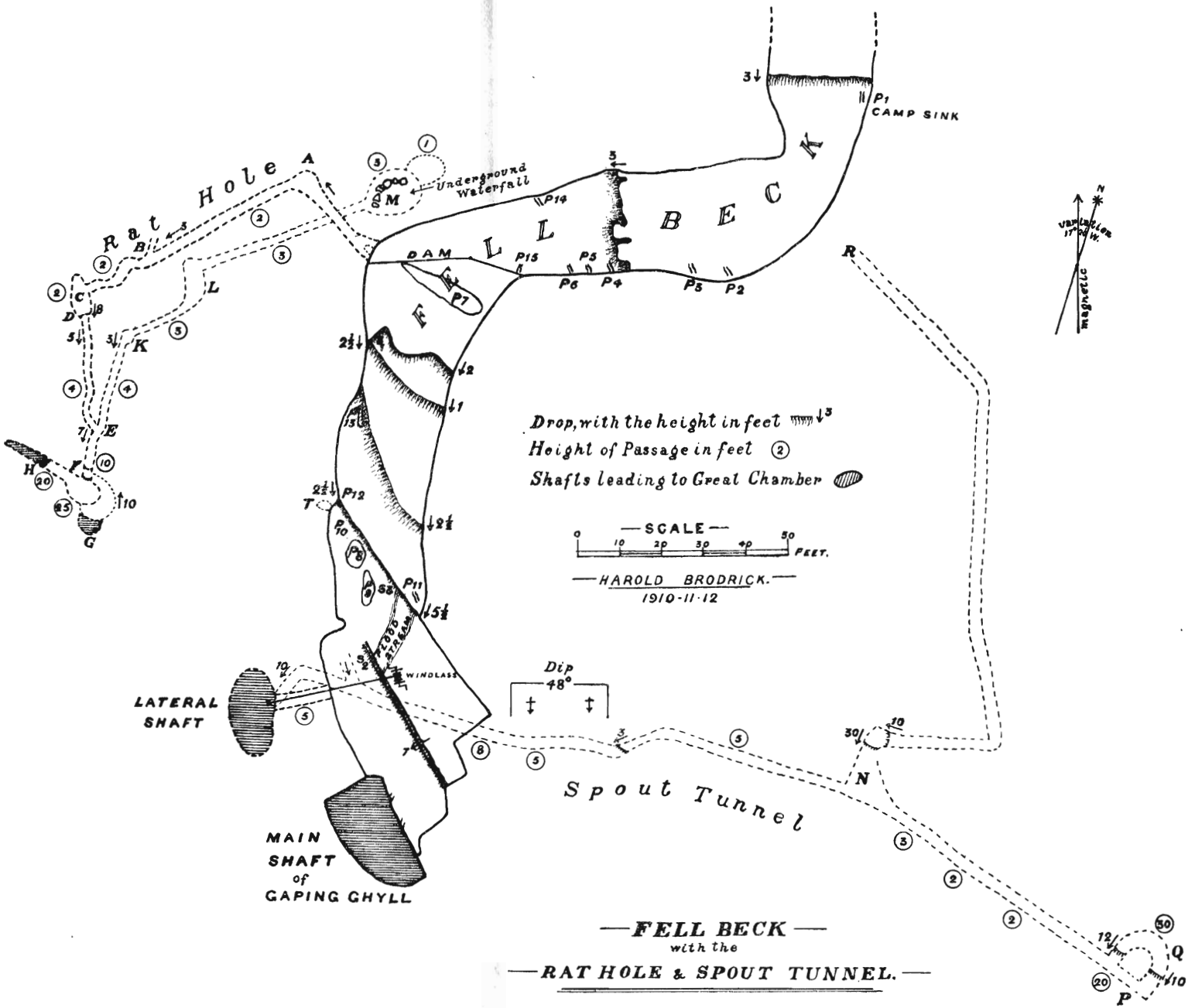
"At the top of the lower pitch is a small chamber about 10 ft. high and 8 ft. wide, from the far side of which the stream falls out of a stream-tunnel some 10 ft. above the top of the lower pitch. The climbing of this upper pitch is comparatively simple and leads into a stream-passage

similar to, but, if possible, of slightly less dimensions than the Rat Hole. From here the passage continues for a distance of 160 ft. with one or two inflows of water, the main-stream becoming less and less. At this point, (R), the passage becomes too small to admit of further progress, but water could be heard falling a short distance beyond.

"The return from the end of the passage to the top of the Junction Chamber had to be made backwards as there was no room in the passage to turn round. The climb down the two pitches into the Junction Chamber is by no means an easy one, especially for the last man, as, although there are two belays at the top of the lower pitch, one is loose and the other too rounded and slippery to afford much security."

At R the water was very warm indeed and many land insects were met with. On plotting out this passage the point R was found to lie between the Camp Sink, (P. 1), and P. 2 at a depth of a few feet only below the level of the stream-bed at this point.

In Vol. II., p. 49, of the Y. R. C. J., Cuttriss states it as his opinion that the sinks in the bed of Fell Beck are widening rapidly and that the time may come when the Main Shaft of Gaping Ghyll will be dry. I can fully endorse this view and am of opinion that the action is taking place at an extremely rapid rate. In 1872, Mr. Birkbeck, on the occasion of the first recorded attempt to descend Gaping Ghyll, had a long trench made to carry off the waters of Fell Beck, so as to leave the lip of the Main Shaft dry ; and as late as 1895, M. Martel had this trench repaired and even then was troubled with falling water. At the present time it is only after rain that we have water falling down the Main Shaft, and during the summer months it is dry in normal weather. It is clear that Mr. Birkbeck, a native of the district, would never have gone to the expense of having a trench of such magnitude built if there had been a chance of the lip being dry at any time during the summer. During the last ten years, according to my own observation, the sinks have been taking more and more water each year, and as the



—FELL BECK—
with the
—RAT HOLE & SPOUT TUNNEL.—

upper sinks, (P. 1a, P. 1, P. 2 and P. 3), all feed the Spout Waterfall, there is a danger that the Spout Waterfall may render the present method of descent by windlass from the end of the Jib Tunnel impossible, except in very dry summers, or unless the water is carefully dammed out of these sinks and directed into the Rat Hole Sink and the Rat Hole itself.

The following have assisted in the exploration of the Rat Hole :—Erik Addyman, Barstow, Brodrick, J. P. A. Dear, Hall, L. Slingsby and Wingfield ; and in that of the Spout Tunnel :—Booth, Brodrick, Davidson, Rule and Wingfield.

As regards the Plan I may add that the survey of the stream-bed has been made with great care, and the bearings and positions of the sinks, etc., have been checked many times. The survey of the Rat Hole has been made as carefully as the nature of the passage would permit, but owing to the difficulties of such work it is possible that the position of the Fourteen Foot Pot is not quite correct. The upper passage above the Junction Chamber in the Spout Tunnel was only surveyed roughly, but is probably fairly accurate.

POSTSCRIPT.—It appears from a paper by Prof. T. McKenny Hughes (Journal of the Victoria Institute, Vol. XXI., 1887, p. 84), that the existence of the Jib Tunnel was not known until after the great flood of July, 1872, and that he discovered it immediately after that storm, being in fact the first person to explore it. Professor Hughes in a letter to me says :—"The opening into this hole was, I believe, not accessible or visible before the great flood of 1872, but I do not think that the large blocks were shifted from the mouth by that flood, but only that the smaller material was washed out from the interstices so that I was able to crawl in."

WHEN PAN BLEW ON HIS PIPES.

By Alex. Campbell.

When Pan blew on his pipes, they say
The Ancients ran to the woods for a space,
Where, with fauns and dryads and nymphs at play,
They danced in the groves at a merry pace—
When Pan blew on his pipes.

For the magic notes of his woodland songs,
Did quicken their blood, with a fire that drove
Them out from the cities in joyous throngs,
To seek the fair visions by hill and grove—
When Pan blew on his pipes.

But now Pan's pipes blow far less clear ;
They are muffled and sometimes sound unsure,
Yet not so low that the listening ear
Does not yield to the charm of their old allure—
When Pan blows on his pipes

For the heart, half pagan, still will hear
The call to the hill, to the wild, to the sea ;
Where the sun and the wind make welcome cheer
For the Rambler and lover of Nature free—
When Pan blows on his pipes.

For to feel the play of the sportive winds,
To live in the sunbeams as they fall,
From these come the joy that the Rambler finds,
As he wanders afield obeying the call—
When Pan blows on his pipes.

Envoi.

So when the sunset hour shall fall,
And the shadows creep round the Rambler old,
He shall go to his rest under night's dark pall,
With joy ; how the hours were touched with gold,
When Pan blew on his pipes.

CHIPPINGS.

(The Editor invites contributions to this column on subjects of interest to Ramblers.)

Editorial : The Editor regrets the late appearance of this issue and can only plead in mitigation the restriction on his leisure which the Mayoralty of an important—he had nearly said importunate—borough imposes.

As the size of Nos. 9, 10 and 11 was such as to make the scrapping of the present stock of binding cases probable if No. 12 were included in Vol. 3, it has been decided to make No. 12 the first of a new volume. An index to Vol. 3 is in preparation and will be issued, if possible, with No. 12.

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Gaping Ghyll in 1912 :—An expedition to Gaping Ghyll was made at Whitsuntide this year, for the fourth time in succession, and the practice may now be considered to have become a recognized institution.

From the general appearance presented by the moor in the neighbourhood of the camping-ground proper, it is evident that we are rapidly approaching the time when what may be called "fractional camping" will share the fate of plural voting and the ideal state of "one man one tent" be reached.

We have evolved considerably since the days when we cooked our meals on a primitive stone fire-place fed with wood from Rayside Plantation, for this year Robinson was able to provide us with a dinner of several courses cooked in the most recent type of Primus-stove oven, an event which filled the hearts of the old and hardened campers with dismay as they recalled the days when they had performed wondrous feats without greater sustenance than that derived from the consumption of two sardines and a tinned pear. However, the times have changed and it is the fashion to cavil at the younger generation.

Of our actual doings there is perhaps little of novelty to record. The tackle for the descent worked admirably, and, in addition to our own members, a large number of visitors were able to view the wonders of Gaping Ghyll.

Very satisfactory progress was made with the survey, which was resumed at the end-point of the previous year's work in the passages beyond the Stream Chamber.

On the first day the survey was carried as far as the great boulder in the Stream Chamber, including a portion of the Upper Stream Passage. From previous accounts of this region we had got the impression that this passage was comparatively short, but we found that there were two branches, and the survey of the right-hand branch, which is about 500 ft. long and extremely narrow in parts, occupied the whole of the second day.

The survey-party included Barstow, Brown, Buckley, Dalton, Hall, Stenhouse Williams and Rule.

On the surface, Brodrick and Wingfield were busily engaged with the further examination of the Rat-Hole. They endeavoured to establish communication with the Great Chamber by lowering plumb-lines from the end of the passage, but no sign of the lines was seen in the Chamber and it is now practically certain that a ledge exists somewhere in the shaft at the end of the Rat-Hole, which arrests the descent of objects lowered down.

Digging operations were resumed in the fissure lying north of the Flood Entrance, and a depth of 20 ft. was reached.

In the matter of weather we were particularly fortunate, for the Whitsuntide week-end proved to be one of the very few dry week-ends experienced during the early part of the summer of 1912.

Given favourable weather conditions it is probable that one more expedition will suffice for the completion of the survey in the New Passage, as far as the T Junction. From this point to the Great Chamber the passage has already been accurately mapped.

A feature of the 1912 camp was the success of the camp-fire sing-songs, which revealed much hitherto undisclosed talent. The tendency to lapse into formal speech-making as the evening advances must, however, be suppressed with a firm hand.

It has often occurred to the writer that the scene round the camp-fire offers great opportunities to the writer of drama. Those who are well acquainted with the amenities of camp life on the banks of Fell Beck will appreciate the possibilities of development in various directions afforded by the following fragment :—

Scene 1.—*The Camp Fire, Gaping Ghyll.*

Time :—Rather late in the evening after a strenuous day.

T. B——h : Now what would you say was the length of that passage, W——d ?

C. R. W——d (*casually*) : Oh ! I don't know. Say, about thirty-five feet.

H. B——k (*anxiously*) : *I* should rather be inclined to say thirty-five feet six inches, or possibly seven inches.

E. G. I——d (*waking from a reverie*) : Gentlemen, for the last time, any advance on thirty-five seven ? (*Laughter.*)

H. B——k (*indignantly*) : Look here, you fellows, this isn't a joke, it's a serious matter. . . . . .

(*Curtain*).

A. RULE.

——:——

RECENT POT-HOLE EXPLORATIONS :—

On Fountains Fell :—New Year Pot : 150 ft. Two single ladder pitches. (April 2nd, 1911. Barstow, Dalton, R. F. Stobart, E. E. Roberts.)

On Penyghent :—Little Hull Hole : 240 ft. First pitch, 80 ft. (Oct. 29th, 1911. Barstow, Roberts, Stobart). Second pitch, over 100 ft. (May 5th, 1912, the same, with Addyman and Chappell).

Long Churn: 130 ft. Shaft of 90 ft. and passage. (July 12th and Oct. 6th, 1912. Addyman, Hastings, Hudson, R. F. Stobart, J. G. Stobart and Roberts).

Cowskull Pot: 70 ft. Between Long Churn and Jackdaw Hole, and

Cross Pot: 85 ft. A quarter of a mile away (July 13th, Stobart and Roberts).

Sell Gill Hole: Three single ladder pitches, probably the third descent. (July 14th, Stobart and Roberts).

On Ingleborough:—Mere Gill Hole: 500 ft. (May 27th, 1912, see Y.R.C.J., vol. iv, p. 31).

On Whernside:—Greensett Cave: (Oct. 1912.) Charlesworth and Roberts followed up the stream 200 yds. and made an exit into a sink half way to the swallow hole.

Nidderdale:—Goyden Pot: (June 1912.) An entrance to a complicated system of passages was found by Barstow and Stobart, and a survey was made by them and others.

E. E. R.

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THE CLUB MEET AT HORTON-IN-RIBBLESDALE, on the 5th and 6th October, 1912, has inspired the following verselets by a well-known hand :—

Ho! Comrades, fill your glasses,
And get your pipes alight,
The Ramblers meet with slippered feet
Around the fire to-night.
To-night their lips and features
Are wreathed with smoke-clouds all,
From Brigg beside the fender
To Chappell by the wall.

And plainly and more plainly
Now through the smoke appears
Each member of that gallant band
With brimming tumbler in his hand
Filled with the liquid of that brand
That sobers (m'yes!) and cheers.

And now from the piano
May the bard Campbell see
The features of each sporting Tyke
Who's come by motor, train, or bike,
To that brave company.

There's Constantine the Winsome,
Louis "Le Débonnaire,"
And Erik of the oilskin coat,
Who brings your heart into your throat
By acting of the giddy goat
However you may swear.

The Chesterfield of Scotland
Is at the meet to-night,
And Harry of the beetle brows
And arms of muckle might,
And Benson of the shining pate
Replete with chestnuts up-to-date
And Pomfret's skald, who from the grate
Doth fervently recite.

And the grave Sieur de Senlac,
Chief of the Bradford throng!
And with him, spectacles on nose,
The man whose name will not wash clothes,
And Barstow of the skimpy hose,
And Clarkson of the song.

And Booth the veteran of G. G.,
And Leach, his tried *compére*,
And with them Perky Robinson,
The *artiste culinaire:*
Le chef de la G. G. cuisine,
And Waud, and Sam of sober mien
On potting and yot-holing keen,
And lissome Stobart *frère*.

And now from the piano
A clash of sound clangs forth,
As Charlesworth lustily trolls out
A ballad of the North :
And louder still and louder
The roof and rafters ring,
As Ramblers join with song or shout
Not knowing what it's all about,
But that's a thing which matters "nowt"
Provided that they sing.

Then to the hideous discord
Of comb, and whoop and yell,
Roberts relates in melody
How "gallant Fairshon" fell.
And so with chant and tale and jest,
The evening keeps agoing,
And Clarkson sings a stave or two,
And good old Buckley, staunch and true,
And Connie—which is something new,
So what's the next thing he will do,
My goodness! My goodness!
My goodness! There's no knowing!

——:——

MOTOR-CYCLING IN THE LAKE DISTRICT:—The following account, taken from the *Yorkshire Post* of the 26th October, 1912, of the Auto-Cycle Union's Autumn Trial, shows that the possibilities of the Playground of England are not exhausted: "The start was given at Kendal at 8 a.m., and there were many spectators. The morning was cold and dull, the roads not in quite perfect condition, shady places carrying a lot of grease. The first climb was out of Kendal westward, a steep hill rising within a few yards of the starting point. No one failed on this, but several machines had difficulty. A few miles out was another hill, and then for several miles there was nothing noteworthy. *Brigsteer Brow*, with its masked

start, caused two or three machines to fail, and a few miles further *Sizergh Fellside*, approached by a narrow lane, saw a crop of failures. Belts and chains stretched and gave way, and more than one engine failed at the stiff task. From this point to the well-known, or rather much-talked-about, *Towtop*, was plain sailing. *Towtop* is a steep, twisty bank, with an execrable surface, and it was no wonder that more failures were recorded. After Staveley the route was carried up *Gummers How*, which, however, did not seem to give so much trouble. The surface was fairly decent. *Kirkstone Pass* from Ambleside was the next mount, and its 1 in 4, 1 in 6, and 1 in 8 portions thinned down the competitors somewhat, and the County Council had added to the difficulty, for a thick paste of clay covered the very worst place in the ascent As one competitor put it, it was all right grinding up through the clay, but when it was so soft as to roll up before the front wheel it was rather too bad. *Patterdale*, *Watermillock*, *Troutbeck-in-Cumberland* were the next points before *Keswick*, and every survivor went through those favourably. On the return route *Red Bank* was a trying ascent; its surface was greasy, and its pitches seemed steeper than ever. The bad place of the whole route, however, came when the motor cyclists were asked to climb from Great Langdale up to *Blea Tarn*. At first, the route was a bad one, but after a few competitors had passed, the surface was like a ploughed field, and offered as much purchase for driving wheels. Only three machines are reported to have made perfect ascents. A few of the others got up by running alongside at the worst places, and the passenger machines by shedding their extra weight. Not a few of the entrants were willing to cry enough—for the rain was descending smartly—and to take the return route down *Great Langdale* to *Ambleside* and *Kendal*. There was another test plotted by an energetic secretary, the ascent of *Ellers Brow* from Skelwith Bridge, a *détour* which gave a hill of terrible severity, narrow and greasy. Competitors kept arriving at Kendal from three o'clock to six, all wet

through, and with tales of adventure to record. The Lake country had justified its selection as a most severe testing ground for the motor cycle—the routes taken are a good sample of the sport which can be offered in the way of stiff climbs"—and there is still Sty Head left!

—:—

PROPOSED WRYNOSE AND HARDKNOTT ROAD:—Those who know—and love—the grass-grown road leading from Little Langdale over Wrynose to Cockley Beck at the head-waters of the Duddon and thence over Hardknott into Eskdale will not welcome the proposal to make it fit for coaches and motor-cars. Our Lake-land sanctuaries are not so many that we can afford to lose even one of them.

—:—

CLIMBING AT ILKLEY:—As it is not improbable that I am the "London advertiser" of Almes Cliff Crag, it may not be unbecoming in me to suggest an explanation of the relative neglect of the Ilkley Rocks. Some years ago, one fine summer morning, I started for Ilkley on scrambling intent, with a Clerk in Holy Orders, and not without misgivings which my companion derided. We tackled only one climb, which I think from Mr. Greenwood's description must have been No. 21. Anyhow, about half-way up I came to a few inches I could not make go. (Mr. F. Botterill afterwards told me that that small portion had up to then remained unclimbed direct.) By the aid, however, of a long left leg, I managed to get on after a little fuddling, and the finish was relatively easy. When I looked down my worst fears were realized. All holiday Ilkley was gaping at us, and two-thirds of it had cameras. The Holy Clerk then came up, but stuck at the *mauvais pas*. A combination of events—neglect to watch his leader, neglect to notice the left (proper right) wall, annoyance at the check, extra annoyance at failing where a man no whit his superior had succeeded, double extra annoyance at being the cynosure of a silly crowd—led to the temporary disestablishment of the Church.

It is therefore in the interests of the enjoyment of the climber, the dignity of the Church and of public morality that Ilkley be neglected, at any rate during the season.

Nevertheless, Ilkley is not wholly unsung. Attention was called to these Crags in an article of mine in *Fry's Magazine*, portion of which was afterwards reproduced in France.—C. E. B.

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THE LATE CLINTON THOMAS DENT, F.R.C.S., &c.:—On August 26th the hand of death removed one of the earliest and most distinguished of our Honorary Members, and the Yorkshire Ramblers, like many another club and public body, now mourns the loss. Dent was a many-sided man, with a great variety of interests. An obituary notice in *The British Medical Journal* for September 14th shows what was his well deserved reputation as a surgeon. We, however, are principally interested in him as a great mountaineer, especially as some years ago he gave us a delightful lecture in Leeds on the subject. His speeches at the Alpine Club and elsewhere were invariably good and full of dry humour, his delivery was telling and kept his audience spell bound. As a writer I need only refer to "Above the Snow Line," "Badminton on Mountaineering," and numerous papers in the *Alpine Journal*. In the latter, one entitled "The Rocky Mountains in Skye" (Vol. XV. page 422) has a very special interest to British mountaineers. As one who for thirty years enjoyed Dent's friendship, not only in the city and the plain but also on the rugged mountain crests, I know well the worth of the man we have lost. Whatever he undertook he put into it all his zeal, erudite knowledge and enthusiasm. His powers, and they were great, were probably inherited from his North Country ancestors.—W. C. S.

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THE LATE J. ARCHER THOMSON:— All who have climbed in Wales or who have read the late Mr. Thomson's climbing articles, or his Lliwedd and Ogwen guide-books,

will understand what a gap his untimely death has made in the ranks of English climbers. He was one of the pioneers of climbing in Snowdonia, and knew that district as few others.

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THE SKI-ING DISASTER AT FINSE this spring, by which Dr Templeton, of Newcastle and Mr. Warren, of Hull, lost their lives through losing their way in a mountain storm, is a reminder of the risk to be encountered in those waste uplands of featureless snow, and of the importance of a party remaining together in bad weather.

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NEW MEMBERS: The following have been elected since our last issue:—

CHARLESWORTH, ARTHUR, M.Sc., 100 Bankside Street, Leeds.

CLARKSON, WALTER, 11 Mario Street, Leeds.

CLAUGHTON, WM. THOS. ALBAN, F.R.C.O., Giggleswick School, Settle.

HALL, ARCHIBALD ALEXR., M.Sc., Ph.D., Armstrong College, Newcastle-on-Tyne.

MIDDLETON, ALAN LOMAS, Glebe House, Far Headingley, Leeds.

NEUMANN, CHAS. FREDK., Giggleswick School, Settle.

SLINGSBY, ARTHUR MORRIS, 56th Rifles, Frontier Force, Kohat, India.

SMALLPAGE, FREDERIC HARTLEY, 10 Heworth Green, York.

SPRATT, JOSEPH THOMAS, 22 Springwood Avenue, Huddersfield.

STOBART, JOHN GEOFFREY, Harperley Park, Harperley Station, Co. Durham.

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CLUB LECTURES: The following summaries (by the readers of the papers) may be of interest to those members who were not able to be present:—

J. M. DAVIDSON in his "Alpine Reminiscences,"—commencing with an account of his early experiences in the Oberland mountains, where, without any previous breaking-in on English rocks, he found himself in late October, described some amusing situations in which he became involved. Further incidents and expeditions in the Oberland, Valais and Dauphiny districts were narrated, and the lecture concluded with a detailed account of one or two climbs on the Chamounix Aiguilles.

C. E. BENSON gave an account of his "Member's Holiday" under the title of "Rambles round about Ullswater," and exhibited a series of slides of views taken in that district. In the course of the evening he commented on the difficulty of describing a serious climb, contrasting the apparent invidiousness of possibly over-estimating the difficulties and the real criminality of underrating them. He animadverted on the recent publication, authoritatively sanctioned, of descriptions of climbs which at any rate touched the borderland of the unjustifiable. It was possible, he said, that the difficulties and dangers of these courses might be happily found to be exaggerated, but if the slabs of the Slanting Gully were really only to be regarded as good practice for their greater severity, he feared that these descriptions must be relegated to the category of deplorable publications. He concluded his lecture with the exhibition of a few slides of the Ingleton Falls.

REGINALD FARRER, speaking of his lecture, says: "It would be true to say that my lecture described a tour which, beginning with the Italian Lakes, conveyed its hearers, in the course of plant collecting, up into the fastnesses of Monte Baldo, and thence, travelling northward by way of Botzen, over the Schlern and through the heart of the Rosengarten Dolomites, down into the Fassa-thal, and thence after an excursion southward to the Cimon della Pala and the Rolle Pass. North again out of the Fassa-thal, over the Pordoi Pass and the Falzarego Pass, through Cortina and up to Misurina."

DR. INGLIS CLARK commenced his lecture on "A Visit to the Brenta District of the Dolomites," with the marvellous Bocca di Brenta, over which the Crozzon towers like a great obelisk. In this connection the secondary risks of mountaineering were illustrated by incidents in couloir or glacier gorge. A succession of views illustrated a Scottish tour, including Loch Lomond and its mountains, Lochs Tay, Tummel, Tulla and Lubnaig, and passing into Glencoe and to Fort William. The ascent of Ben Nevis in winter by the Moonlight Gully, with its thrilling incidents and narrow escapes, occupied attention for a quarter of an hour, ordinary toned slides being used to illustrate it. The traverse of a forbidden road (for motor cars) in Argyllshire gave an opportunity of showing the wonderful colouring of Scotland in bracken, seaweed, water, heather and forest, and this was further emphasized by the views of Lochs Garry, Quoich, Maree, Coulin and Torridon. A visit to Switzerland was made to show the extraordinary effects of sunrise and sunset on the Alps, and the lecture terminated with a series of Scottish sunrises and sunsets. The lantern slides shown, with the exception of those of Ben Nevis, were in natural colours, and reproduced with marvellous fidelity the glorious scenes with which mountaineers are familiar.

H. BRODRICK in his lecture on "Recent Work at Gaping Ghyll" dealt with the work of exploration and survey carried out by members of the Club during the past three years. The Old S.E. passage has been completely surveyed and mapped, and work is now in progress on the right-hand branch of the S. passages left unsurveyed at the time of discovery. The exploration of the Rat-Hole and Spout Tunnel were described and slides were exhibited illustrating the position and use of the timber-dam which has been constructed below the Rat-Hole and should prove of great assistance in cases of emergency.

The lecturer gave it as his opinion that the amount of water flowing over the lip of the pot-hole from Fell Beck had decreased very considerably during recent years, and

that more and more of the water was sinking higher up the stream-bed. This view appears to be confirmed by an examination of the earliest literature dealing with the pot-hole, and more particularly by the fact that the Birkbeck trench was constructed by an explorer who lived in the district, and who made the first descent to the ledge in the summer, at a time of year when the stream-bed below the camping ground is now usually quite dry.

The view was also expressed that the inflowing water at the end of the Old S.E. passage might possibly be derived from Marble Pot, which does not appear to have been coloured at the time of the hydrographical survey of Ingleborough.

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YORKSHIRE AND LAKELAND: AN APPRECIATION:— Ramblers will, we are sure, thank that veteran mountaineer, Mr. Frederic Harrison, for the following lines, written in the sixties, and now published in his Memoirs (1911):— "My first visit to the Cumberland Lake Country disappointed me, as I had been a devotee of the Scottish mountains for twelve, and of the Alps for ten years. It was very paltry and almost snobbish, and I have lived to be ashamed of my bad taste; nay, I have long since repented in sackcloth and ashes, for I now hold the Lakes to have a rare and peculiar charm. But a crazy 'gletscher-man,' as I then was, knew no better. I wrote:—

"'I was prepared for something on a small scale, but I never expected anything so like a toy. . . . . Not merely are the Lakes so incomparably tiny, but they are so spruce and dapper that I can hardly believe them natural.

"'Every corner is trimmed out in parks or lawns, and you wander between brick walls as if you were at Fulham. . . . . The hills along the Rhine are not lofty, but then they don't pretend to be mountains. The Scottish are hardly real mountains, but then they are savage. The Italian mountains are civilized, but then they are of exquisite shape. I planned three tours, to occupy me three days, and I used up all three tours before dinner. I

shall take one of these lakes for a trout stream, and I would wager I could run right up Helvellyn and back within an hour.

"'Ah, well! The Lakes have another side too. If they are small they are pretty—far prettier than I ever imagined. The foliage far surpasses any that I ever saw. The variety of Windermere is endless, and nothing can be more graceful than the grouping of the hills. The whole country reminds me of the country round Lucerne, and the view from those hill tops is like that from the Righi looking north over the lowland.

"'Ah! Now I see how the beauty of the Lakes gains on one when the first shock of their petty size wears off. The forms of the hills are certainly very beautiful, and nothing equals the richness and variety of the verdure and the foliage. The land lies in so small a compass that a day's walk affords a constant succession of exquisite and different views. Indeed, you may see four lakes in that short space, and all in vivid contrast and with new charms.

"'From the Lakes I went over to Yorkshire, to Bolton Abbey, and thence across to the East Coast on foot. I soon repented me of my silly contempt of our English hills, and drank in the intoxicating charm of that noble country.

"'I walked up and down the best of these Yorkshire valleys and moors—Wharfedale, Wensleydale, Swaledale, Teesdale, Eskdale, from Ingleborough to Leyburn, Helmsley and Pickering to the sea. Yorkshire as a country, though I had seen York City long ago, the moors and rivers and abbeys and castles were new to me, and aroused in my heart a storm of delight.

"'How glorious—how inspiring—how dear is this epitome of England,' I wrote in my diary, 'the very essence of our native country—how homely, familiar, and welcome is its beautiful scenery! How delightful those luxuriant valleys, fed by winding or rushing rivers, with the free fresh moor above, the hamlets perched on the hillside or nestling in the hollow of the glens. The great valleys walled in with

beetling cliffs and fringed with various foliage—then some grim old feudal castle, brimful of historic memories with the annals of our country graven on its grey walls—the old Gothic church crowded with traditions, names, and works of many long successive ages—the princely park with noble trees and rich pasturages and delicately reared cattle, the very type of nature developed and elevated by man—the awe-inspiring wreck of an abbey, quiet, tender and piteous like Rievaulx—so exquisitely graceful, so humble, silent and deathlike—the very image of a bygone age yet remaining in secluded solitude—recalling an almost forgotten time in its beauty and its mournfulness, like the corpse of one loved, and then the mediæval and not yet modern town, Richmond in Swaledale, fairest of English towns, an endless picture and ever fresh joy. But above all in memory most dear remains the vision of that softly smiling gentle valley of Bolton Abbey in Wharfedale—so severe, so simple, so inspiring—of all spots in the world I think the richest in its fulness of calm, and joy, and peace.'"

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SUNSET HOLE:—The statement in No. 11 that the waters of Sunset Hole (p. 99 of the Yorkshire Geological and Polytechnic Society's Proceedings, vol. XV., p. 287) have been coloured and found to re-appear at Hardraw Kin (P. 95A) is surely incorrect The former have, in fact, been followed to a point underneath the bottom of Braithwaite Wife Sink-Hole, and are there at a much lower level than Hardraw Kin. The waters of the latter can be traced a long way upwards, and seem to be merely the drainage of an adjacent bog. E. E. R.

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AS OTHERS SEE US:—We are not sufficiently modest to refrain from printing the following Review of No. 11, from *L'Echo des Alpes* of April, 1913:—

"La Grande-Bretagne voit aussi s'épanouir une floraison de petits clubs de montagne; le "Club des grimpeurs du Yorkshire" publie un périodique que nous voyons pour la

première fois mais, espérons-nous, pas pour la dernière. Le lecteur de ce journal a devant les yeux un choix considérable d'écrits divers.

" Le 'Yorkshire Ramblers' Club' quoique société locale, n'en compte pas moins un grand nombre de membres et de tout intrépides ; il n'y a qu'à jeter un coup d'œil dans la rubrique 'Vacances des membres' pour se rendre compte de leur activité. Ascensions de tous genres et dans tous les pays : Suisse, France, Italie, Autriche, Angleterre, Norvège et puis en Syrie, et puis en Palestine !

" M. Claude E. Benson donne le résultat de ses observations et de ses recherches sur un vent local qui souffle parfois avec violence dans le Cumberland.

" Avec MM. C. A. Hill et Hastings, nous pénétrons sous terre, dans des grottes, des cavernes immenses et bizarrement creusées ; le premier nous fait connaître la caverne du Dragon dans l'Ile de Majorque, avec la grotte des Français laquelle mesure 500 mètres de longueur et contient un lac long de 177 mètres et profond de 4 à 9 mètres ; avec le second nous pénétrons dans une quantité de grottes, trous, boyaux, comme il s'en trouve beaucoup en Grande-Bretagne.

" Près de Leeds, que nous connaissons par ses manufactures, se trouvent de petites montagnes, des rocs tourmentés où les varappeurs trouvent matière à grimper. M. W. H. Greenwood nous fait faire l'ascension, parfois vertigineuse, souvent difficile, de ces rochers qui rappellent ceux du Salève et en certains points quelques-uns des beaux passages des aiguilles de Chamonix.

" Enfin, un grand article, à côté de beaucoup d'autres que je regrette de ne pouvoir résumer, dans lequel l'editeur du périodique, M. W. Anderton Brigg, indique une route, longue mais jolie et variée, pour aller de Zermatt à Chamonix. Sous le titre 'dans de vieilles traces,' il narre sa traversée du Rothorn de Zinal, le passage du col du Grand Cornier qui le mène à Bricolla. De Bricolla, par le col des Bouquetins, ils arrivent à Prarayé, dans le Valpelline. De là ils font une tentative infructueuse, à cause du mauvais temps, pour atteindre le sommet de la Dent d'Hérens.

Ensuite, descente du Valpelline, Aoste, Cogne, d'où ils vont faire l'Herbetet, puis descente sur Villeneuve et de là, par la grand'-route à Courmayeur. Par le Mont-Blanc du Tacul, il n'y eut pas moyen de gagner le sommet du Mont-Blanc, ils durent finir leur course à Chamonix. Cela se passait en 1908 ; le récit, fort bien écrit, est accompagné de superbes photographies.

" Si nous nous sommes un peu étendus sur cet article, c'est que le trajet décrit peut donner envie, à quelques Genevois, de l'employer pour se rendre dans la région de Zermatt, en suivant une route pittoresque, variée, un peu longue mais dans des contrées remarquables. E. d'A."

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BACK NUMBERS:—These, which are limited in number, can be obtained from the Hon. Librarian (J. H. Buckley, 168 Wellington Street, Leeds). Price : Nos. 1, 3, 4 and 5, 5/- each ; No. 2, 10/- ; Nos. 6, 7, 8, 9, 10 and 11, 2/- each. Specially designed green buckram cases for the three volumes, 2/- each. Postage extra.

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THE TAIL-PIECES in this issue are by Mr. Eric Greenwood and are from photographs taken by J. J. Brigg and friends in Sinai. Impressions of the late editor's fine pen-and-ink sketches of Almscliffe had been made but were found too large for tail-pieces, and they are held over for a too long deferred article on that place.

KINDRED JOURNALS.

THE ALPINE JOURNAL.

No. 196: Mr. A. M. Kellas has a long and informing article on Northern Sikkim and Gahrwal, with an account of several first ascents and some interesting notes on mountain sickness. He pays a high tribute to the mountaineering qualities of his native guides. Mr. Yeld discourses pleasantly of his favourite Graians; Dr. Mario Piacenza's (translated) story of the first ascent of the Matterhorn by the Furggen Ridge displays the romantic spirit of worship and daring that our Italian friends bring to the conquest of their glorious mountains; Mr. Hutton writes feelingly of a night out on the Hinter-Sustenhorn; and Dr. Cockburn breaks new ground in a helpful paper on "Indoor Training for Mountaineers."

No. 197: deals with Mt. Blanc in its sternest aspect, and the papers on "Two Ridges of the Grandes Jorasses" (G. Winthrop Young), "Mont Blanc and the Grépon in 1911" (the late H. O. Jones), "The Col de la Brenva" (Dr. Claude Wilson), and "Mont Blanc by the Brenva and other Traverses in 1911" (W. R. Cæsar) breathe the heroic strain and attain surely the high-water mark of climbing achievement. Mr. Larden's paper, "Some House-Inscriptions from the Upper Lötschenthal" opens a new field for observation below the snow-line, and the translation of extracts from M. Merkuloff's Guide to the Caucasus draws attention to that district, now so neglected by English climbers.

No. 198: has a racy article by Mr. Broome on the Nord End from Macugnaga and a delightful account by Prof J. H. Clapham of a three weeks' Alpine ramble in 1911. Mr. Wheeler contributes a long article, with map, on the Mountains of the Yellowhead Pass, and there are several articles on Himalayan climbs, including some rollicking letters by Capt. Todd to his uncle, W. C. Slingsby, and a note by Mr. Meade on the Gahrwal peaks, with fine photographs of the country described by Mr. Morris Slingsby in this issue.

No. 199: is compounded of light and gloom, the former in cheerful articles by Dr. Inglis Clark on some unfrequented valleys in the Brenta and other Districts (with coloured photographs), by Mr. Irving on Mont Herbetet and other expeditions near Cogne, and by W. C. Slingsby on Monte Cairo and other ridges in the Abruzzi and Apennines; the latter in Mr. Young's article on "La Pointe Isolée of Les Dames Anglaises" with an account of the fatal accident to Mr. and Mrs. H. O. Jones and the "In Memoriam" notices on the late Sir Alfred Wills, H. A. Morgan, C. T. Dent, R. Gaskell, J. M. Archer Thomson, H. O. Jones and others. A new feature is the reproduction of some of the photographs shown at the Annual Show in December.

There are also the usual records of New Expeditions, Alpine Bibliography, Accidents, Reviews and Club Proceedings.

THE JOURNAL OF THE FELL AND ROCK CLIMBING CLUB. (No. 6.)

We have to congratulate the Editor on another successful number, full of interest to Lakeland lovers. There are a few articles dealing with other districts—the Peak of Teneriffe (G. E. T. Thorpe), the Jöstedalsbrae (Victor H. Gatty), the Vorarlberg (A. E. Field), and North Wales (J. Laycock), all of interest; but, in other respects, the local colour is maintained with a success which only those who edit similar journals can appreciate. Mr. Colin Phillip writes with artistic insight of Lakeland Tarns, and W. C. Slingsby, with his wonted enthusiasm, of that memorable wind of the 5th November, 1911; the Editor gives us a graphic description of the Martindale Deer Forest, and warns the unvigilant rambler of the dangers of a stray bullet—a tempting theme to enlarge upon, but we refrain; Mr. Cowlishaw gives his experiences—with novices—of that most unsatisfactory Easter of 1911 at Wasdale; and Mr. Hanks writes pleasantly of the Rock Climbers' Birds.

Deer Bield Chimney and Blea Rigg, two new climbs near Grasmere, are described, and there are useful notes on climbs new and old, including a *descent* of Eagle's Nest *arête*, by Messrs. W. B. Brunskill and S. W. Herford. The last-named has also an article on the Traverse of Scafell Crags, which, with another by him and Mr. G. S. Sansom, on The Climbs on Scafell Pinnacle, are the last words surely in English rock climbing. Anyone who knows the north side of Scafell will appreciate the skill shewn in overcoming the difficulties of the climb described and, may we add, the courage of the Editor in allowing of their description. The writers are, of course, brilliant climbers, and the distinction they draw between the terms "difficult" and "dangerous," as applied to rock-climbing, is logically sound, but sad experience has shewn that it is not always possible to fix limits to the former term until too late, and when we are told of climbs where 'boots should be taken off,' and which are 'undeniably best tackled alone,' those limits have surely been overstepped. But it is only fair to say that the difficulties are set out very plainly, and we can only hope they will be realized by all readers. It is interesting to note that in the opinion of the whole party Botterill's Slab "stands, as far as difficulty is concerned, in a class by itself."

There is an interesting account by Mr. Haskett Smith of the accident on Mickledore in 1884, and the usual club news. Nor must we omit the splendid photographs, local and Alpine.

THE RUCKSACK CLUB JOURNAL. (Nos. 6 and 7).

The contents of these two issues illustrate the difficulty experienced by editors of this kind of journal in finding material for their pages if confined to British climbing. The only articles in No. 6 dealing with that subject are a short one by Mr. Pearson on a rare plant called *Scapania Nimbosa*, one entitled "A Defence of Plynlimon," by Mr. Pickstone and a truthful description, as we can vouch from personal experience, of the great wind at

Coniston on the 5th November, 1911. The remaining papers, all interesting, deal with the Canadian Rockies (C. F. Pilkington), China (J. A. Jackson), some Excursions in the Alps in 1911 (P. S. Minor) and a Night-out on the Aletschhorn (S. F. Jeffcoat).

In No. 7 the Editor has been more successful. Dr. Baker summarizes some recent cave-work in Somerset and Ireland, Mr. Corbett describes the climbing on Bodlyn Crag near Dolgelley and Mr. Jeffcoat that on Hen Cloud and the Roches near Leek, both with excellent photographs. Mr. Wyldbore writes amusingly of the fitting up of the Club Hut at Cwm Eigian in North Wales, a most interesting experiment. Mr. Ashley has an article on Glengariff and Mr. Jackson furnishes a characteristic account by the late T. W. Robinson of two early climbs in Scafell Pinnacle by Slingsby's Chimney, and Mr. Hobbins a cheerful story about camping out in Langdale. There are also articles on the Vosges (A. E. Barker), the Lötschenthal (B.B.R.) and Alpine Wanderings in 1912 (J. Wilding).

THE SCOTTISH MOUNTAINEERING CLUB JOURNAL.
(Nos. 68-70.)

It is a standing wonder to editors of similar journals how this one contrives to find sufficient for its pages, three a year, without going outside Scotland. Scotsmen, of course, would say the explanation is simple: the infinite variety of Scotland! The late Editor, Mr. Wm. Douglas and his wife, tell the story of the Islands of Loch Awe, full of romance and poetic feeling. Half-hours in the Club Library (Mr. Gillon and Mr. H Alexander, junr.) deal pleasantly with travellers' tales in Scotland a century ago, and we gladly agree with the reviewer when he says, speaking of the closing of inns in the interest of sport: "It might be a good thing for the Highlands to-day if there were Government Commissioners to build roads and establish rest houses." Mr. Harold Raeburn tells of a climb on the Brack in Glencroe, and there are other good stories about Ardgour,

Bidein Druim nan Ramh in Skye, Torridoun, Aonach Eagach, Braeriach and South Uist. The Club has always made a great feature of its Meets and the description of them leaves a pleasant impression of good fellowship in the worst of weather.

The Cairngorm Club Journal. (Nos. 37-9.)

With the exception of articles in the Black Forest (A. L. Thompson) and the Colorado Rockies (R. Anderson) this journal also finds sufficient matter within its own borders, and we have interesting articles on the Cairngorms (A. Copland), Lochnagar (Seton Gordon), Sligachan (J. R. Levack), Glen Cova and Glen Doll (H. G. Drummond), the Tinto Hills (A. J. M'Connochie) and others, all interesting, and a practical account on Map Reading (P.A.C.). The Excursion and Notes are very interesting, especially those in the Cairngorm country, and the remarks on the closing of the Shiel Inn, at the head of Loch Duich, and the Passing of the Deer Forest are indications of changes which may have far-reaching results for the tourist and mountaineer.

The Alpine Ski Club Annual. (No. 5.)

This number contains an excellent article by Mr. W. Rickmer Rickmers on the Avalanche, full of cautionary advice which is summed up in the phrase: "It is never quite safe to pat a tiger on the back, although he may be in a good humour" Mr. Arnold Lunn tells of adventures on the Forno Glacier in bad weather and on the Eiger in worse, with a good day on the Gspaltenhorn by way of reward, all with the guide Crettez. The articles on the Lauterbrunnen Breithorn (Edw. Tennant), the Grand St. Bernard and Combe de La (the Hon. E. C. Pery) and Ski-ing in Derbyshire (A. H. Daukes) are all interesting and Mr. Walter Larden gives some useful hints to middle-aged ski-runners. The Reviews are good and the notes on the runs at Mürren, Gstaad and some Norwegian and Swedish centres most useful.

The Year Book of the Ski Club of Great Britain and the National Ski Union. (No. 8.)

With its splendid photographs, useful tips and dodges, season's report on the various centres and accounts of expeditions in many countries, this annual is calculated to rouse the envy of those Ramblers, the majority unfortunately, who are chained to the oar at home, and they must try to console themselves with the impression which the descent of Gaping Ghyll appears to have made on Messrs. Swan and H. Archer Thomson, who describe it as "an adventure full of romance and not without its thrilling episodes." There is a good map of Scotland showing the best ski-ing ground, and a description of how to obtain the best sport there.

Perhaps the most interesting part of its contents, from an historical point of view, is an account of the origin of the newly founded National Ski Association and its rival, the British Ski Association. Even a summary would occupy too much space, and we can only state here that the N. S. A. is a self-governing non-proprietary members' club, open to both sexes, without ski-ing qualification and in close touch with its parent, the S. C. of G. B., which requires some such qualification. Our ex-president (Lewis Moore) is the Club's representative on the Council.

Ski-ing. (No. 1.)

This, the organ of the newly founded British Ski Association, sets out the aims and origin of that body, and explains, none too gently, its quarrel with the S. C. of G. B. and the latter's offspring, the National Ski Union. Mr. Caulfield has an illuminating article concerning Tests, in which he explains that a ski-runner is—

Third-rate when (and *only* when) he can ski *safely*.

Second-rate when (and *only* when) he can ski safely and *easily*.

First-rate when (and *only* when) he can ski safely, easily and *fast*.

Mr. Arnold Lunn breaks new ground in an article on Midsummer ski-ing on the Aletsch Glacier; Mr. Delalp has a good deal to say about jumping and Mr. Chute Collum recommends Japan for ski-ing.

THE WINTER SPORTS REVIEW. (Vol. I. Nos. 3 and 4. Vol. II. Nos. 1-3.)

"Always merry and bright" from its charming outside cover, to its Answers to Correspondents, might well be the motto of this little quarterly, and no one who wishes to be quite up to date in the world of ski-ing, skating or winter sport generally should fail to get it. Its frontispiece sketches of celebrities are excellent and its "tips" and words of advice invaluable.

THE SCOTTISH SKI CLUB MAGAZINE. (No. 5.)

A short but amusing article, "The Paths of a Backslider" (H. MacRobert), and good stories on ski-running at Ballater (J. A. Parker), in Norway, and in the Ochils (J. W. Gregory) are the chief items. The Club Notes show the club to be alert for every chance of ski-running afforded by our unstable climate.

THE ANNUAL OF THE MOUNTAIN CLUB OF SOUTH AFRICA. (No. 15.)

We have not space even to enumerate the varied contents of this interesting journal, but we welcome its fifteenth annual appearance as evidence that the true mountaineering spirit of fun and good fellowship has been so successfully transplanted to "The home of the floods and thunders." Of glaciers and snowfields there are none, but the rock-climber has full scope, and usually in good weather, a contrast to that which the writer of the only foreign article found in Skye. "We took comfort," he says, "in reflecting on what the average European climber would accomplish in a week if set down at say Sand Hills Siding, or even near Table Mountain, with the conditions we encountered in Skye."

THE CLIMBERS' CLUB JOURNAL. (1913.)

Mr. Pigou writes amusingly of some climbs among the Horungtinder and Mr. Steeple carefully of some new and difficult work in the Cuillins; Mr. Winder sends notes on underground exploration in the Manifold Valley and Mr. O'Brien hints somewhat vaguely at good climbing in Ireland. The more strictly literary note is sustained by articles on "The Early Victorian Attitude" (H. V. Reade), "A Climbing Alphabet" (N. T. Huxley), "Concerning the Admission of Hill Walkers" (C. E. Benson), "In Defence of Popular Writing" (Arnold Lunn) and a reply thereto by Mr. C. Myles Mathews.

There is also a pathetic account of the search for the late H. R. Pope, who was killed on the Pic du Midi d'Ossau in the Pyrenees, almost certainly by a fall of rock, when climbing alone, and extremely good obituary notices of that climber and of the late J. M. Archer Thomson and H. O. Jones.

MEMBERS' HOLIDAYS IN 1912.

E. E. ROBERTS:— At the New Year was in Snowdonia and did, with G. Barlow: Arenig, Moel, Lyfnant, Dyphwys, Llethr, the Rhirogs and Tryfaen (North and Central Buttresses). At Easter.—Mardale to Wasdale, Arrow-head Ridge, &c. May 5th.—Little Hull Hole. Whitsun-tide.—Mere Gill Hole. July 12-14.—On Penyghent with R. F. Stobart: Long Churn, Sell Gill Hole, Browgill Cave, &c.

In August.—From the Riffelberg, with Stobart and W. M. Roberts, did the Stockhorn, Klein Matterhorn and S. slopes of Breithorn to Schwarzthor (descent most trying owing to the immense extent of soft snow to be traversed), Monte Rosa, Riffelhorn by Matterhorn Couloir, Theodulhorn. With Bishop and Stobart did the Cima di Jazzi and Schwarzberg Weissthor (in dense mist), Trifthorn over the whole ridge from Triftjoch, Lo Besso, Pointe de Zinal from the Col de Zinal and walked over the Sanetsch Pass (7,000 feet), two hours in deep snow.

"The Matterhorn Couloir on the Riffelhorn is a fine climb over difficult, smooth rock. It does not lead to the summit at all, but finishes on a broad alp half-way up from the glacier. The long line of crags can then be climbed in many ways to the W. ridge, which has one very stiff bit just below the summit. On a second climb, with Bishop, the head of the couloir was entered by descending a gully from the W. ridge low down. A traverse was made to the alp, and the upper crags were then traversed to the E. until a popular and interesting route was crossed, which led direct to the top of the Riffelhorn."

CLAUDE E. BENSON spent September in West Craven and Bowland. "The dales," he says, "are full of beauty and interest, but the fells present morose and cowardly features. Any amount of grouse and a lamentable absence of grit."

W. A. WRIGHT spent August in Dauphiné and (with Miss Wright and guides) crossed the Clot des Cavalles from Alpe to the Châtelleret and Promontoire Huts and to the Brèche de la Meije, but bad weather compelled them to return to St. Cristophe; from latter place by Col de la Lauze to La Grave; thence by the Brèche to La Bèrarde; thence to Ailefroide Hotel by Col de la Temple, ascending Pic Coolidge *en route;* climbed Pointe Puisieux of Mt. Pelvoux from the Provence Hut; to the Caron Refuge for Les Ecrins, but the weather broke in the night; crossed the Col Emile Pic, ascended the Pic de la Neige Cordier, slept in Alpe Inn and returned to La Grave. The very variable weather prevented bigger climbs.

C. R. WINGFIELD:—In January had a few days' good ski-ing near Llangollen; spent February at Chester Barracks in training; at Easter was at the Wasdale Y.R.C. Meet, where on the 9th April, led by Sanson, climbed the New West route on Pillar Rock in a heavy snowstorm.

May 4.—Slanting Gully, Lliwedd, led by Burne.

May 5.—Looked at Devil's Kitchen and climbed Hanging Garden.

Whitsun.—At the Gaping Ghyll Meet.

June.—Training at Conway, explored some small caves and (led by J. M. Davidson) climbed the Great Gully in Craig-yr-Ysfa.

July.—Explored some old shafts near Bull Pit, Derby-shire.

August.—Yachting in Gwynfa (60 tons), could not get round Land's End, so ran East.

September 17.—With H. L. Kentish and E. A. Baker, completed first descent (250ft.) of Noon's Hole, near Enniskillen.

November 29.—Had a good day's ski-ing near Llangollen.

W. A. BRIGG was at the Wasdale Meet at Easter; spent Whitsuntide in a solitary 'push-bike' circular tour by way

of Sedbergh, Eden Vale, Alston, Teesdale, Mashamshire and Richmondshire; had a week end at Ogwen Cottage with Mr. Haskett Smith and did some gullies on Tryfân, Idwal Slabs, Great Gully in Craig-yr-Ysfa (led by Mr. J. M. Laycock); and was at Chamonix in August with J. J. Brigg and Messrs. Greenwood and Garden, where he and his brother hoped "to burn fifty candles" on Mt. Blanc, but the weather was bad, and even worse at Arolla.

J. J. BRIGG was at Villars in February for winter sports; in the Desert of Sinai in April; and in the Alps in August.

REVIEWS.

HOME LIFE IN NORWAY.

BY H. K. DANIELS.

(LONDON: METHUEN & CO. LTD.)

Every lover of Norway should read this lively and intimate "life-history" of our cousins across the North Sea. Rather flippant, perhaps, in style it tells us much that nothing but a long and observant residence in the country could teach about the home-life of its people, their pursuits, their pleasures and their food—especially the last. The author brings out very clearly the yeoman character of the people, without an aristocracy or nobility, and the distinct line of cleavage between the *Bymand* or townsman and the *Bonde* or peasant, the former comprising the merchants, shopkeepers and their dependent workers in the coastal towns and a few inland centres, the latter, whether sea or land *Bönder*, practically all the rest. The book confirms the respect and liking which all who know Norway have for that pleasant land.

SKI-ING.

BY ARNOLD LUNN.

(LONDON: EVELEIGH NASH. 1913. pp 256. 3s. 6d. net.)

Mr. Lunn's object in writing this book is to give the beginner some useful lessons in the art, and he is completely successful. He discusses Mr. Caulfield's book with the freedom of an expert, and his chapters on how to learn the "Stemming Turn," "Telemarks," "Christianias" and—his own invention—the "Stemmiania"—a portmanteau-word from Stern + Christiania—should be read by anyone who wants to become a ski-runner.

Mr Lunn is a mountaineer, both of the Summer and the Winter, and all his exhortations are conceived with this—the real aim of ski-running—in view. His ski-mountaineering lore is to be found both in the formal pages on the

subject and in the fascinating chapters on tours made in the Alps and in Norway. His stories of winter expeditions in Switzerland, including the crossing of the Oberland and ascent of Finsteraarhorn ; his delightful time at Easter on Norwegian snows ; and not least his plucky return to the snow after a bad accident on a Welsh climb, are full of the true spirit of the climber and show a keen appreciation of natural beauty combined with a wealth of practical common-sense. The chapter on "Where to Ski" gives an unbiassed and expert appreciation of all the ski-ing centres now available, but will of course need to be revised as more and more "Winter-sports" places are opened.

The chapter on "Clubs, Competitions and Tests" gives with great fairness one side of the unfortunate dispute between the Ski Club of Great Britain and the British Ski Association. "*Tantaene animis coelestibus irae!*" The time cannot surely be distant when, so far as tests of style, &c., are necessary at all, there shall be one standard and one authority. J. J. B.

The Cornish Coast and Moors.

By A. G. Folliott Stokes.

(London : Greening & Co. Ltd. 1912. pp. 367.)

To the rambler whose brief holidays in Scottish Highlands, Yorkshire Dales, or Cumbrian Hills are so often spoilt by bad weather, this work opens a new and alluring playground. It is a far cry to Penzance—but so it is to Loch Awe ; and the long night journey to Bristol has its reward in the glimpses of "The Golden West" beyond.

Not, indeed, that he could hope to compass in one trip the circuit of the whole Cornish Coast described here, from Marsland in the north to Plymouth in the south. But with the author as his guide he could make himself familiar with some part of it and feel like him the witchery of its iron-bound coast, sunny coves and wind-swept moors.

In the Penwith peninsula, for instance, the "Sanctum sanctorum of the Cornish Celt," he will find cliff scenery of

the finest, with delicate rock climbing of a high order, and wild uplands with a wealth of prehistoric villages, cromlechs and stone circles, all "bound in with the triumphant sea" thundering in from the Atlantic, blue as the blue sky above.

And if, like the author, he makes himself familiar with the dreamy mystic atmosphere that broods over this land of legend and mystery he will catch something of the spirit that still makes Cornwall a thing apart from the rest of England.

The author's wayside notes on botany and natural history, folk lore and antiquities, are not the least interesting part of this book, and the photographs excellent.

Walking Essays.

By A. H. Sidgwick.

(London : Edward Arnold. 1912.)

Mr. A. H. Sidgwick writes very pleasant English ; he has a very pretty whimsical wit ; he has read a great many books and remembers them, or the more quotable parts of them, at exactly the proper moments for the illustration of his thoughts. He appears to be fond of walking, and, if one may judge from what he says and the way he says it, and what he doesn't say, he would be a most charming companion for a walk, whether it were a Sunday tramp in Surrey or a more extended ramble some Easter or Whitsuntide, for he would not only keep silence as you strode along, but at a halt he would rush you into conversation and contradict you flatly, but also, for he has a happy and contentious temper, let you contradict him—and you would want to do so at every sentence—without any loss of friendship. Also, as he knows the Surrey bye-ways very thoroughly, he would take you for a very delightful walk, if you left the leadership to him, and you would take pleasure in seeing a considerable intellect engaged in unravelling the difficulties of the way and illuminating the obscurity of the guide books. Sometimes he would say something which would not in its manner of delivery lose

the appearance, perhaps the reality, of authentic truth. We wish that we could stop there and recommend him and his book unreservedly. But he is, and we use the adjective advisedly, a very irritating young person. He knows that the aim, conscious or subconscious, of those who follow any form of sport is "to realize themselves in a fine activity." But his obtrusive and uncontrolled intellect interferes continually to prevent either realization or amusement, and, like all young intellectuals, he exposes himself at every phrase to the categorical denial. Take a trivial example—"No man's health or bodily comfort would now be affected in the slightest degree by the presence or absence of a tie." To which we answer that there is no one who has ever gone through the gamut of a long Alpine day, but knows how the alternate constriction and liberty that comes as the tie is alternately bound up, loosened, discarded, and finally used to make the bearer presentable for the last stage home, but laughs at an experience gained on Leith Hill in Piccadilly. Then he thinks that "the sixtieth year is like the eighteenth mile—the point at which you settle into your stride for the last stage." Ye shades of Arthur Wills and many another! Lastly, how comes Mr. Sidgwick, in writing a deal of paradoxical abuse of beer, to make an exception for that turgid decoction of brown sugar that comes from Munich? To be more serious, the present writer has for many years, to the mingled amusement and amazement of friends whose education was completed in eastern and northern counties, sought vainly for a living example of what people call "the Oxford Manner," to find it here at last. An essayist, and above all one who writes of activities among the wonderful works of nature, must, to win our hearts, have seen far more ugly things, before he can bar those that are lovely, and be more ready to find in his fellow-men things not common or unclean. Numbers of estimable people are stirred by great music, without being afraid, in the proper mood, of the most vulgar braying of the brassiest band. Lots of us have waltzed without losing our sense of refinement, or our ear

for the waterfall, and, for myself, I have worn a stiff collar for years, though not when I was taking violent exercise, without either chafing my neck, cramping my motions, or vitiating my skin. Yet we will not part with Mr. Sidgwick on an acrimonious note. Take him at his best, writing an epitaph for his guide-book writer, we reproduce the commas textually, "Continuing on past the Happy Years, take the well-marked track to the right, but at the third clump of asphodel, note a greasy track diverging to the left, and follow this until it leads into an open space covered with amaranth and moly." C. S.

The Englishman in The Alps.

Being a Collection of English Prose and Poetry relating to the Alps.

Edited by Arnold Lunn.

(Oxford University Press. 1913. pp. xx. & 294. 5s. net.)

It was Macaulay, we think, who protested against the printing of "elegant extracts" from the poets' works, torn from their context, under some such title as "Beauties of Shakespeare," and those who have drunk at large of the streams of Alpine literature, now so copious, may be tempted likewise to look askance at this dainty anthology, comprising over a hundred and fifty extracts from the writings of half as many writers in prose and verse. But it would only be for the moment. True, some of the prose extracts are so short as only to whet the appetite for more, but the greater part are a complete whole and we especially welcome the reprint of some passages not readily come by, like Philemon Holland's "Hannibal," Leslie Stephen's "A Bye-day in the Alps" and Windham's "Chamounix." Some passages are informing, all are interesting, and many full of literary charm. As the editor very truly says, "Every sport gets the literature it deserves, so that while pheasant shooting still awaits its Homer, mountaineering has attracted some of the finest literary talent in the country."

The prose extracts range from the far-off narratives of Philemon Holland, Evelyn and Coxe, through the breezy pages of Whymper and Stephen and their compeers, to the ultra-modern introspection of the Oxford mountaineering essayists. The verses give us the best that Byron and Shelley and Wordsworth and Tennyson have sung of the mountains—and it is very good, but not better, says the Editor, and we agree, than what Mr. Geoffrey Young has given us, and we hope still has to give.

We will not say more, for the volume is a small one—nearly as small as a tiny Milton that has been our mascot for twenty summers, and we look to see it pulled out of many a ruck-sack at many a mountain halt, and to hear echoes of its verses as an adornment for many a mountain tale.

Alpine Studies.

By Dr. W. A. B Coolidge.

(London: Longmans, Green & Co. 1912. pp. xiii. & 307.)

Dr. Coolidge is to be heartily thanked for giving us, in this handy volume, some gleanings from his unsurpassed—and probably unsurpassable—harvest of Alpine writing. Three of the articles are new, including one about the author's dog Tschingel, whose record of Alpine ascents is not likely to be beaten. The remainder are reprinted from various journals, English and foreign, including one on the Dolomites from our own pages. It is not difficult to gather that the author's heart is, like the reviewer's, in the Western and South-Western Alps, the greater part of his climbing as recorded here deals with the Maritimes, the Chambeyron, Monte Viso and Dauphiné. His experiences go back to the early '80's, and were largely those of a pioneer, but any rambler with energy enough to forsake the common Swiss round will still find these districts uncrowded.

The articles on "The History of the St. Théodule Pass," "The Early History of Monte Rosa" and "The Matterhorn and its Names" are evidence of the author's encyclopædic knowledge, and very interesting.

In Praise of Switzerland: Being the Alps in Prose and Verse.

By Harold Spender.

(London: Constable & Co., Ltd. 1912. pp. xiii. & 287. 5s. net.)

This anthology of Alpine literature in prose and verse, chiefly the former, unlike Mr. Arnold Lunn's, is too bulky to carry in the pocket, but will, none the less, be welcomed by the mountaineer, not only for the "purple patches" from writers like Ruskin, Tyndall and Stephen, already familiar, but more especially for the lengthy extracts from authors not so easily come by, such as Albert Smith, Dr. Saussure, Horace Walpole, Livy, Mrs Piozzi, &c.

The Alps are dealt with in Admiration, in Description, in Adventure, in Tragedy, in Comedy, in History and in Fiction, a somewhat fantastic way of treating them, but the subject is great enough to survive it, and we get a kaleidoscopic succession of rhapsodies in prose and verse, well-knit description, epoch-making climbs, both old and recent, tragic happenings, quaint conceits and elegant extracts, which run to nearly three hundred pages, and leave us, who know the fulness of the Alpine storehouse, greedy for more.

For nothing perhaps, will the mountaineer be more thankful than for the reprint of Mr. Godley's immortal verses beginning "In the steamy stuffy Midlands"

Tramps Through Tyrol.

By Frederick Wolcott Stoddard.

(London: Mills & Boon. 1912. pp. x. & 298. 7s. 6d. net).

This book is not written for climbers, but then Tyrol itself was not built for them either, except for those who specialize on Dolomites; and travel in it is of such a

pleasant armchair fashion, after the greater Alps, that a pleasant chatty account of walks and drives among its lovely valleys and beneath its fantastic peaks ought to be welcome at any rate to the rambler, if not also to the mountaineer. Cortina, Bozen, Meran, to name only three of the places described, are of grateful memory and we are glad to have word of them again, whether in word or picture. The pictures, indeed, are very good, and those in colours are so few as to suggest that, for once, they have been made for the letterpress and not *vice versa*.