

new work to be done. The Splügen dolomite peaks especially look most inviting. In the northern parts there is plenty of ground left for the explorer. Throughout the district the forest scenery of the valleys has an indescribable charm. But there is also a wild beauty in the lonely summits, which are seldom visited, but never visited in vain.

[NOTE.—I have occasionally called attention in the foregoing paper to slight errors in the 'Climbers' Guide,' but I should like to add that the errors are extraordinarily few. The book is really excellent, and indispensable for the climber.]

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### THE PIR PUNJAL RANGE AND TATICOOTI, KASHMIR.

BY DR. ERNEST F. NEVE.

THE Pir Punjal range is the serrated edge of rocky arête-joined peaks and snow-clad slopes which form the highest line of the great mountain barrier dividing Kashmir from the plains of Northern India. Approaching it from the Valley of Kashmir, which lies to the E., we gradually rise, passing first through broken plateaux fissured and eroded by water. Up these intersecting valleys the path passes until at a height of about 6,000 ft. we begin to see occasional pines. A gradual ascent for a few more hundred feet brings us to the lower margin of the great fir-tree forest which clothes the foot of the Pir Punjal slopes with a band about sixty miles long and with an average breadth of perhaps six miles. In spite of the extent to which this forest is overrun by herdsmen, it still remains the haunt of black bear. Large streams flowing down from the snows pierce it in many places, and the easiest route to those snows usually lies along the side of one of these torrent valleys.

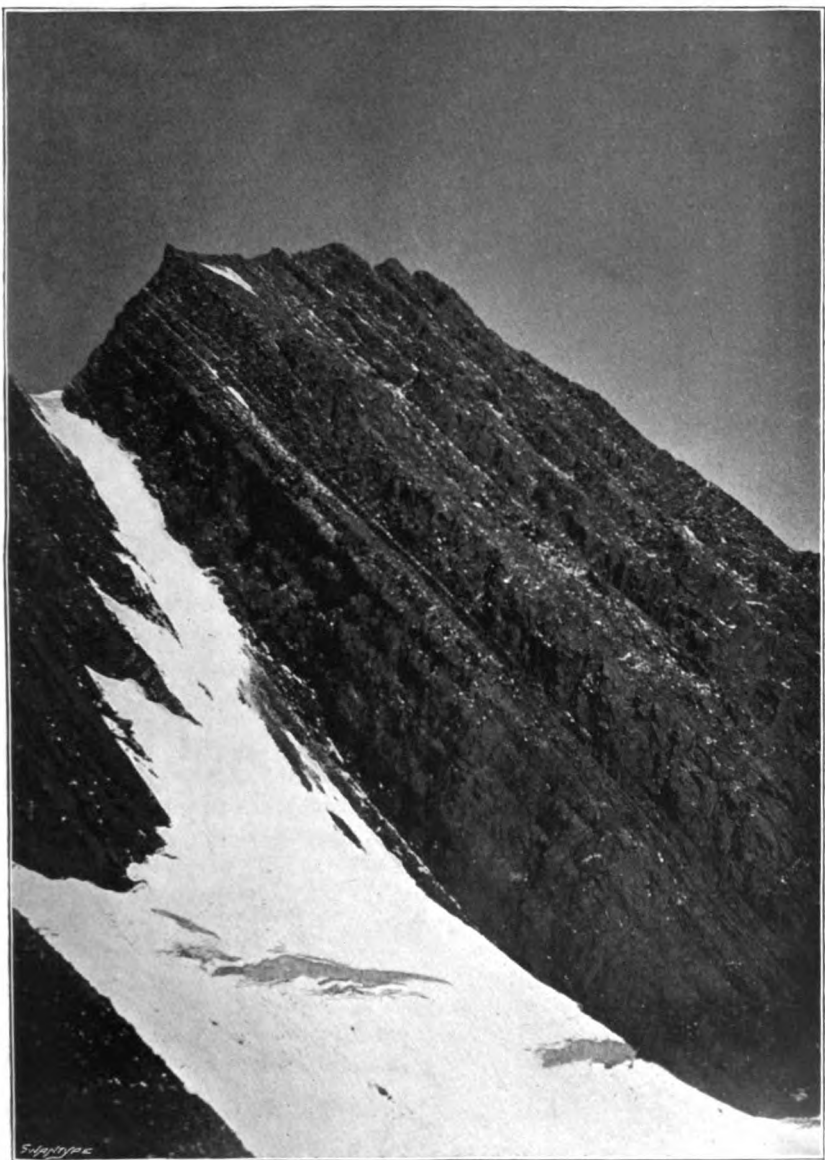
Some of the summits are of great beauty, such as the three Brahma peaks at the E. end of the range, whose graceful conical forms, the lower shoulders of which are mantled with perpetual snow, tower up to a height of 15,500 ft. Four thousand feet lower down, nestling at their base, lies the turquoise blue Kansa Nag, a glacier-fed lake three miles in length.

To the W. of the Brahma peaks the Sedau and Pir Punjal passes cross the range in two well-marked gaps, separated by a group of five grey rocky summits, which enclose snowfields of considerable extent. Looking along the sky line, again six miles to the W. is the highest point of the whole range—Sunset Peak, so named on account of the manner in which it is

the last of the tops to catch the rays of the setting sun. This peak has a saddle-back, and has been several times ascended by Dr. Arthur Neve, myself, and various friends. The ascent, which is extremely easy, lies for the last three hours up a snow slope, which gradually increases in steepness and culminates in a rocky arête, the S. face of which, and of the peak itself, drop as a sheer precipice for some hundreds of feet. On the summit pieces of smooth rock with vitreous fracture can be found, showing bubbles and other traces of igneous action.

The most conspicuous and imposing of all the peaks of the Pir Punjal range is undoubtedly Tatticooti, the pyramidal shape of which, with a central notch and very steep and jagged western and northern sides, looks as if it might be exceedingly difficult to ascend. In 1900 I made an attempt, and succeeded in attaining a point about three-quarters of the way up the final peak, and well above the apex of the notch. The obstacles were, however, too many. My camp was too far away, and the fatigue great. The peak became shrouded by cloud, and the porters refused to proceed. However I found, as I believed, a good and practicable route. On August 6, 1901, the Rev. C. E. Barton and I pitched our tents above the pines of the Sangsofed River. On August 7 we did five miles of steady ascent, at first through birches and juniper bushes, and then over grassy and flowery meadows bright with crown gentians and golden potentillas and dotted with great boulders. Climbing a grass-covered terminal moraine, 250 ft. in height, we placed our base camp on a stretch of meadow under a rounded knoll, the rocky faces of which were ground and polished by the ice of ages. Our altitude was 10,850 ft.

The following day two miles' ascent, chiefly climbing and scrambling over moraine, brought us on to the snowfield, part of the continuous névé, from which the Pir Punjal peaks in a long line lift their rocky heads. Here our direction changed from south to west, and emerging from the head of the valley we finally took a north-westerly course along the upper face of the snowfield, steadily rising until we reached the upper level, near the southern arête of Tatticooti, the height attained being 12,850 ft. Here we pitched two shelter tents on the rocks, one for ourselves, the other for the porters. The weather was very unsettled and at intervals there was hail and a driving wind, the peaks being almost entirely in a cloud, but occasionally clearing for a few minutes. About 10 P.M. a violent storm set in with drifting snow, and for some



*Photo by C. E. Barton.*

*[Swan Electric Engraving Co.]*

**VIEW OF TATTICOOTI, FROM THE SOUTHERN ARÊTE, WITH THE N.E. ARÊTE  
ON THE RIGHT SKYLINE.**

The height of the portion shown is about 2,500 feet.

time during the night and early morning our tents were in danger from the violence of the blast, and we passed a very disturbed night. On the morning of the 9th it cleared by 8 o'clock and the sun came out, and shone brilliantly on three inches of fresh snow. Our tent ropes were coated with ice and the canvas covered by a layer of frozen snow. The peak was quite clear, and in spite of the late hour the outlook was decidedly promising. Crossing the S.E. arête we were compelled to descend 300 ft. to a snowfield covering the E. glacier. The steep slope with loose rocks, and fresh snow, resting in places on ice, caused some delay here, but by 10.30 we had crossed the snowfield and reached the foot of a broad couloir stretching 600 ft. up to the N.E. arête. We started off on snow, but above we had to scramble up a very steep shale slope. At the top was a cornice of snow with the 5-ft. edge toward us. On the opposite (northern) side a very sharp snow incline stretched straight away down for two or three thousand feet to a glacier. From the point where we stood a broken and steep jagged rocky arête stretched up for more than 2,000 ft. towards the summit, which could not be seen. Following up the arête for a short distance we worked across its N. face amongst loose rocks and fresh snow, traversing some couloirs full of snow, continuous with the steep slope below. We rejoined the main arête about 200 ft. higher, and a steady steep climb up the edge brought us at last to a point at which it became knife-like. By working down a ledge on its southern side we reached a couloir, which steadily followed up eventually again brought us to the main arête, only a few hundred feet below the top. The gradient then became less severe, although the drop on both sides was very great. The porters caused some trouble and delay, owing to their being unused to the rope.

We reached the summit (15,524 ft.) at 2 p.m. It was very sharp being formed by two blocks of trap rock standing on end, immediately below which was a vein of pure white quartz. We believe this to be the first time that the summit of Tatticooti has been reached.

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#### MOUNT EVEREST, OR JOMOKANGKAR.

THE note from Dr. Ruge, a well-known historical geographer, translated below, appeared in the last December number of 'Petermann's Mitteilungen.' Mr. Douglas Freshfield has addressed to the editor of that periodical the subjoined correction of the series of errors into which the German writer has been betrayed by his imperfect acquaintance with English literature.