this also a first ascent, as we had seen no cairn on the summit from Cadorna. We gained the S. ridge of the mountain about 9.30, by which we made our way to the top. During the ascent we got fine views of Mt. Joffre (11,316 ft.), a very majestic-looking mountain and the highest peak of the French Military Group. It was first ascended by Dr. Hickson and Edward Feuz in August 1919. There was some very good climbing on our peak's summit rocks; but as they rose steeply before us, rather to our dismay we suddenly came on an empty sardine tin, and what little hope we had left was finally dashed to the ground when, after a somewhat stiff climb, we found a tumbled-down cairn with a stick near it to which some remains of a flag were nailed. We resurrected the cairn and put the flagpole in position, speculating as to who had been there before us, and then laughingly decided that it was in any case a most pleasant climb and one very much worth while. Arriving at the top at 11.45, we left again at 1 o'clock, descending by the N.E. face beside the glacier and got back to camp by 4 P.M., in that way making a traverse of the mountain. The frozen mud, shale and ice made the going rather ugly during this steep descent.

On leaving White River Valley we gradually retraced our steps, coming in for a fearful thunderstorm crossing Palliser Pass and being detained at our camp site by a heavy snow-storm the following day.

Leaving the Assiniboine district on our left, we followed the trail down Spray River Valley, and two days later, on September 5, rode into Banff in serene weather with many a backward look at the unspeakable beauty of the high mountains with their fresh covering of snow.

[We beg to express our best thanks and congratulations to the daughter of our late distinguished and much regretted Vice-President.—*Editor*, 'A.J.']

KANGCHENJUNGA, 1929.

The Bavarian Attempt.[1]

IN January 1929 I decided to undertake an expedition to the Himalaya. The proposal was received with enthusiasm by the

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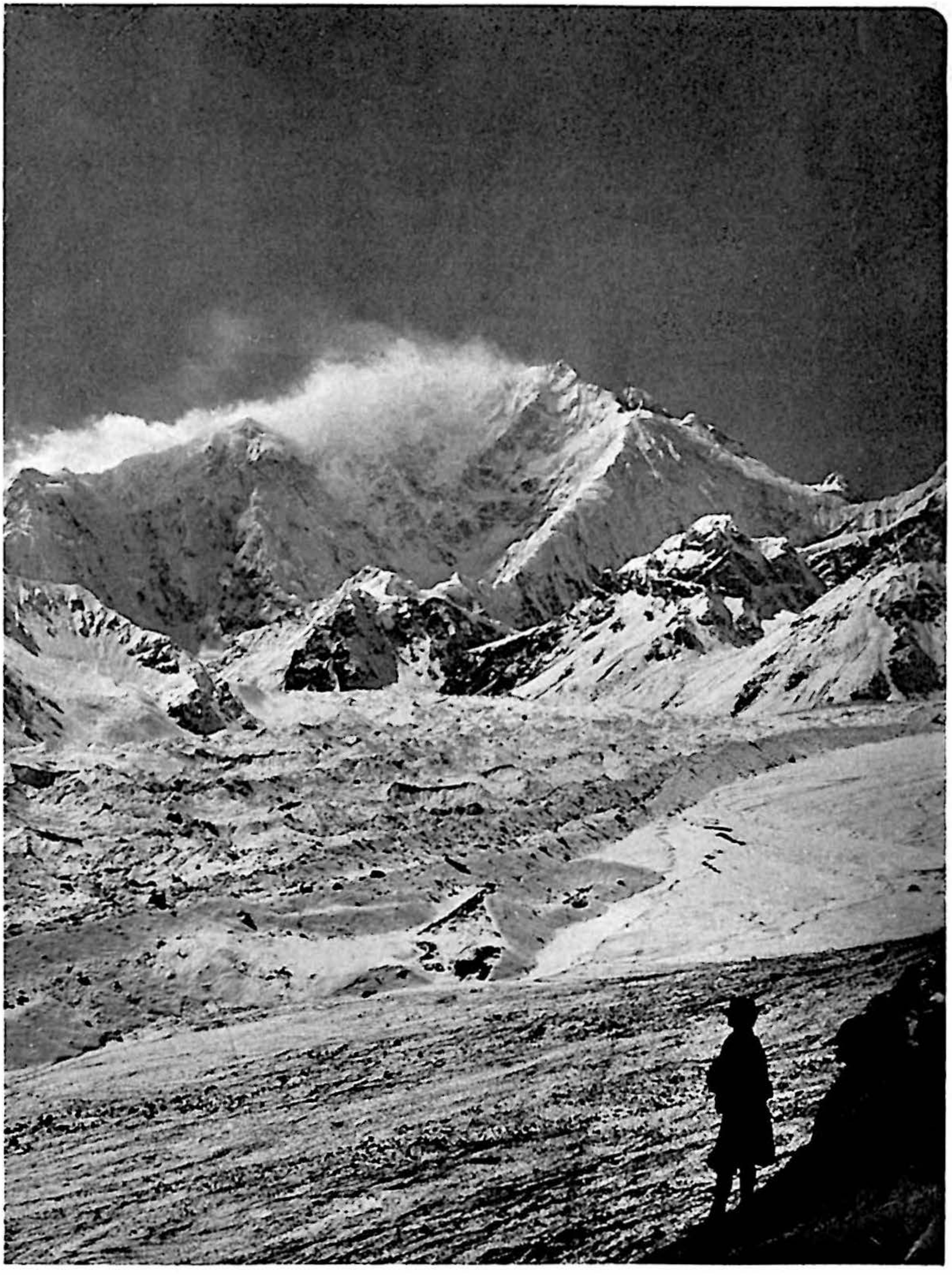
[1] The translation we owe mostly to Mr. E. O. Shebbeare, who joined the expedition for part of the time.—*Editor*.



Photo, M. Piacenza.

KANGCHENJUNGA. Showing N.E. Spur.

friends whom I invited to take part, and with generous help from other quarters. The end of June saw us sailing through the Mediterranean; there were nine of us: Dr. Eugen Allwein; Peter Aufschnaiter; Paul Bauer; Dr. Ernst Beigel; Julius Brenner; Wilhelm Fendt; Carl von Kraus; Joachim Leupold; and Alexander Thoenes, all members of the A.A.V., Munich, and of the D. and Œ.A.V. The necessary funds were provided to the extent of three-eighths by the participants themselves and five-eighths by the above clubs.

We arrived in Darjeeling during the last days of July. Sikkim stood open to us; Nepal, on the contrary, remained closed (at first). We therefore decided to make the Zemu Glacier our first objective. On the strength of our own experience and that of the Everest Expedition we had already, before leaving Germany, collected our own and the porters' equipment and the greater part of the provisions, all packed in coolie-loads. The thoroughness of our preparations and the practical help of the Authorities in Darjeeling and of the Himalayan Club enabled us to start the march from Darjeeling on the *third* day after our arrival. We had collected our provisions and recruited 90 porters, including 15 men who had been on the Everest Expedition, 2 sirdars, 2 cooks, 1 interpreter and under-sirdar. In the first days of August we started in two parties, *en route* for Kangchenjunga, northward through Sikkim. Colonel Tobin to our joy accompanied us.

On *August 9* a reconnoitring party left the mule-path into Tibet, and plunged into the dense virgin forest of the Zemu Valley. They made good progress, and in the next few days the main body followed. Beyond Camp I, near Jaktang, 10,922 ft., and Camp II, 12,596 ft., always keeping to the N. side of the glacier, we reached Camp III ($3\frac{1}{2}$ hours E. of Green Lake, 14,126 ft.). We formed our base camp there, and began exploring on the *18th*. We had now to settle whether it was possible to tackle Kangchenjunga from this side and whether we could attempt this immediately. Brenner and I with one porter left straight for our objective, Tobin accompanying us for the first day. Aufschnaiter, Kraus, and Leupold went to Simvu in order to get an idea of the structure of Kangchenjunga thence.

Three days later Brenner and I stood at the foot of the mountain and viewed the N.E. spur, which, from a telephotograph in Freshfield's book, seemed to offer a possible route. Its appearance was most formidable; we retreated in silence. On the *22nd* we returned to the main camp at the same time as the Simvu party. I had an idea that the spur was worth a trial; in fact that it was *possible* and that we ought to go for it at once. The Simvu party had had mostly bad weather, but they had reached the saddle three times, glacier dangers, however, preventing further progress.

During the next few days in the main camp all the information so far collected was discussed; Tobin returned to Darjeeling.

Allwein, Fendt, and Brenner set out to reconnoitre the northern glacier: they climbed the peak presumably overlooking the end of the valley, fog, however, preventing them from obtaining any views.

On *August 26* the advance against Kangchenjunga began. On the *28th* the first party (Kraus, Leupold, and I, with 6 porters) pitched Camp IV at the foot of Kangchenjunga at an elevation of 17,056 ft. The next few days were occupied in attempts to reach the crest of the arête. On *September 2* Kraus and I pushed forward to within 350 ft. of the crest. On the next day, however, the main party, Allwein, Aufschnaiter, Thoenes, and I, with 3 porters, provisions, and camp equipment, was held up a few feet above the spot at which we had turned back the day before. Aufschnaiter and I turned back at once with the porters, as the place was too dangerous. Allwein and Thoenes then tried to reach the crest without loads. They were, however, forced to turn back scarcely two rope-lengths below it. We made yet another attempt the next day: Allwein and Thoenes reached the crest by a very dangerous couloir. It appeared, however, that the continuation of this route was impossible.

From the Zemu Gap (Kraus and Leupold) we received bad news: deep snow and great danger from avalanches. I again considered the spur and would not give it up without a very thorough investigation. A camp was scooped out into the wall. On *September 6* we started on a last decisive attempt. The next day we had to retreat right back to Camp VI, owing to a blizzard. *September 8* was the only day on the whole expedition when ALL members were together. On *September 9*, the weather improving, Camp VII was again occupied. Then the heavy snow-falls began; avalanches poured over the ice-cliff near Camp VII, which had to be hastily evacuated. An entire day had to be spent stamping the route between Camps VII and VI through new snow 3 to 5 ft. deep. A further day was necessary to re-establish communication with Camp III. Then the real attack began, from the N.E. spur and the Zemu Gap simultaneously. Camp VII was re-pitched up in the ice wall at a spot safe from avalanches, 18,696 ft. On *September 16* Beigel, Kraus, and I, after days of step-cutting, reached the crest of the arête. Thence we worked for 2 days at the gendarmes on the horizontal part of the arête and, on the *19th*, stood opposite the place where the most abrupt step begins. On the *20th* Aufschnaiter, Beigel, Kraus, and I, with 3 porters, made good progress, but we only got some 450 ft. up the steep part. Here Beigel and I pitched a very exposed camp. The next day we hacked our way through and over the pinnacles. We reached the camp site noticed before and made it ready. Allwein, Kraus, and Thoenes, with 2 porters, occupied it, Camp VIII, 20,664 ft., on the same day. The Zemu party, which on account of the danger from avalanches had not yet got beyond the Zemu Gap, was called in. Here, on the arête, the difficulties owsere

great that they could be overcome only by concentrating the united strength of the party.

When Brenner, Fendt, and I, with 5 porters, returned to Camp VIII on *September 26*, the last and most vertical step had been overcome. Allwein, Beigel, Kraus, and Thoenes had taken turns in step-cutting. To drive a vertical tunnel about 26 ft. long up and through an inconspicuous but unavoidable ice-tower had alone occupied 2 days. Above the vertical step we established Camp IX, 21,646 ft. The worst of our troubles were behind us. The arête now presented no unsurmountable difficulties. On *October 2* the first two 'attacking' parties, Allwein, Aufschnaiter, Kraus, and Thoenes, with 2 porters, established Camp X, 23,288 ft. Beigel and I followed the next day with 2 porters. This day Allwein and Kraus, without knowing it at the time, had stood on the highest point we were destined to reach. They turned back at 11 A.M. at about **24,272** ft., as it was impossible to reach the shoulder, about 26,240 ft., that day if they were to get back to camp before 5 P.M. On the evening of *October 3*, 6 sahibs and 4 porters were ready in Camp X, 23,288 ft., with equipment and provisions to start, but things turned out otherwise. There was storm and sleet all night, and on *October 4* it snowed hard. Kraus and Thoenes went down with the porters, Lewa and Sitten (Cheten), to help Brenner and Fendt's party. On *October 5* it snowed harder and more continuously than ever; Kangchenjunga had already become practically impossible. On *October 6* Allwein and I, with the porters Kedar and Passang, tried in improving weather to move the camp higher up. It took us 2 hours to climb the first 250 ft. After leaving our rucksacks behind we pushed on upwards for another hour and a half. The view was marvellous; then we turned back. On the *7th* the snow-fall was terrific: within 24 hours at least $6\frac{1}{2}$ ft. of new snow fell; it buried all our plans. Yesterday we were still thinking of the advance; to-day it required good nerves to consider the possibility of retreat.

With 130 ft. of rope between each man, Allwein in front, the porters in the middle, and I in the rear, we set out on *October 8*, amid drifting snow and wind, to force our way down. The porters with their heavy loads (they carried 80, we 30 or 40 lbs.) kept on sticking hopelessly. We had to pull them out: a gentle rise of 150 ft. cost us 2 hours' work. The first 'avalanche' slope slipped off as Allwein got on to it, the next had already gone. Another place avalanched just as the first three arrived on it: the long rope was our salvation. The ice cave at Camp IX was buried deep in snow, and on the next day we had to turn back and upwards! It was impossible to get over the gendarmes with loads, as on the previous day we had had some falls and the porters were rather nervous. We brought them back to the ice cave and then, without loads, made the largest of the avalanche-shoots passable. On *October 10* we threw half the baggage over the edge on to the glacier, 5000 ft. below; then we could face the descent with lighter loads. For 2 full days we worked

our way down to Camp VIII. Kraus, Thoenes, and the two porters had arrived there in good condition. Aufschnaiter and Beigel were *en route* between Camps IX and VIII during the very bad weather of the 7th. By nightfall they had reached the horizontal part of the arête at 19,680 ft. They could get no further : avalanches and falls had robbed them of their rucksacks and they had to pass the night here without food or shelter from the cold. The next day they continued their way down to Camp VIII, Beigel's toes frost-bitten.

During these days all communication between the separate camps broke down ; in Camps VII, VI, and III our men were sitting surrounded by snow walls 5 to 6½ ft. high. We got through from Camp VII to Camp VI in one day, those below having stamped a route for us half-way. We then had to evacuate the latter camp with the few porters fit for duty. The porters acquitted themselves splendidly in spite of the hardships they had been through ; they carried 150- and the sahibs 60-lb. loads. In grand weather we now trekked for 4 days through glittering snow to Camp III, and relieved Leupold of his uncertainty and loneliness. At the snout of the glacier we again encountered bad weather. It snowed and rained for 3½ days without stopping. The snow-covered bamboos and rhododendrons made our passage particularly difficult. We could no longer carry Beigel, who was obliged to walk. Avalanches crashed through the virgin forest and over the rock walls ; pools of knee-deep snow-water covered the surface of the jungle for mile after mile. On *October 20*, at about 11 P.M., the last two members of the expedition came into Lachen, while landslips from far up on Langebo thundered into the gorge in front and behind. A week later we reached Darjeeling, Beigel travelling to Calcutta direct.

PAUL BAUER.

[It has been found necessary to abridge this account ; the full narrative will be found in the *Himalayan Journal*, 1930. Dr. Bauer's complete story, now in our possession, we hope to publish shortly.

We express our warm thanks to Dr. Bauer, to which we would add our congratulations on the safe return of the party, as well as a tribute to the great feats achieved, both in altitude, endurance and skill.—*Editor* ' A.J.']

TWO VARIATIONS ON THE TRIGLAV (N. FACE).

[These two routes describe *opposite* ends of the system of ledges. The second is by the ' buttress ' to the W. of the ' Black Gully ' and was accomplished in the following year. The great N. face or wall of the Triglav is nearly 2 miles wide and about a mile in height.]

The 'Black Gully' Route.

A NUMBER of routes lead up to the Triglav summit. There are the ways through the Kot and Krma Valleys from Mojstrana; the engineered 'Prag' and 'Tominšek' paths leading more directly and over stretches of rock, from the head of the Vrata Valley; and finally there are the paths leading up from Bohinj, which are longer and, as a rule, not patronized by mountaineers except for the descent.

To the Alpine climber the irresistible attraction of the Triglav lies in the immense N. face, that wall of more than 1000 m. in height. So far there were practically three recognized routes for scaling the N. face—the 'Austrian,' the 'Slovene' (Tuma, Kunaver), and the 'Jug' routes, the latter first followed completely in 1928 by the Slovene mountaineers Jože Čop and Stane Tominšek (son of the President of the Slovene Alpine Society), who decided to give it the name of the founder of modern native mountaineering in Slovenia, Dr. Klement Jug, who lost his life on the N. face of the mountain in 1924. A few days later the same fate overtook the young Vladimir Topolovec,[1] who fell from just below the top of the wall, 500 m., to the bottom of the tremendous black scar seaming the middle of the face and known as the Črni Graben, or Black Gully. All attempts to reach the spot where his body lay had proved unsuccessful.

It was just this circumstance that prompted my friend Jože Čop and myself to study the face in the winter of 1927–28, with the special view of finding a way of getting into the Black Gully. We came to the conclusion that there was a way, although a very difficult one. Not long ago we succeeded in interesting Dr. Stane Tominšek in our scheme, with whom we set out one fine day to reconnoitre the terrain and make sure of access to the gully.

On August 27, at 9 A.M., we got on to the face by the usual approach to the 'Austrian' and 'Slovene' routes and followed the 'Austrian' route for some 200 m. up to the point where a grass-grown ledge turns off to the right from terrain overgrown with dwarf willows. By following this ledge we came to a small shale-lined hollow, beyond which we continued towards the right by ledges till we came to a small chimney formed by the open wall and a small tooth jutting out from it. We scaled the tooth by the chimney and then resumed progress by the ledge to a second tooth rather higher than the first. This we climbed by a wide, reasonably steep 'gutter.' Here the ledges cease to lead further to the right, so we

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[1] When, in 1924, Vladimir Topolovec's friends found themselves, after heroic but fruitless efforts, compelled to give up the attempt to recover his body, Father Jacob Aljaž, the aged parish priest of Dovje-Mojstrana, consecrated the face and read the funeral service at the foot of it, so that the remains of the young mountaineer might repose in hallowed ground.—F. S. C.



Photo, Janko Škerlep.

TRIGLAV. N. Face.

were compelled to turn straight up the vertical wall by a narrow crack—about 8 m. high—at the top of which we came to a shale-strewn ledge. On this ledge Čop drove in a piton for security; but it was not firmly driven in, and it was lucky that, as I followed him, I came upon an iron piton firmly driven into a crevice, as if expressly for us. Probably it had been left there in 1926 by two Bavarians [2] who traversed thence into the 'Austrian' route. When we had snapped a *Karabiner* with the rope on to that piton it came in most useful, because the wall below was cut away quite sheer for 300 m. or so. By the ledge we climbed some 5 m. to the right to a roofed recess, and 2 m. beyond that straight up, across an overhang and by a smooth crack to another ledge, splaying out at both ends. So we negotiated another bulging overhang, above which we drove in a piton, as there was not enough handhold, and reached an easy step—moderately inclined and almost horizontal slabs—and so to the beginning of the Black Gully.

The Black Gully is a great scar, very wide, some 500 m. high, shut in on either side by black cliffs, scoured perfectly smooth, and lined with slabs polished and broken up by avalanches and strewn with stones and shale. In some places the inclination is moderate, but after every one of these places comes a step, sheer, smooth and high. At the very outset we came upon two such impassable steps [3] which fairly took our breath away for the moment. But as we looked around we discovered their weak point to the right. We also built a cairn here.

Then we got out our longer, 50 m., rope and began to climb. From our ledge we followed a smooth and fairly high chimney with an overhanging step somewhere about the middle. Čop negotiated it by wedging, but experienced difficulty in doing so, as it really is very hard. At the head of the chimney we had to break out to the left in order to round an overhanging bulge, thus gaining a rocky promontory up which I hauled our three sacks on a rope as we found it impossible to climb with them. Stane followed, after tying himself to the 25-m. rope as well, because 50 m. were no longer sufficient. After the promontory came another fairly difficult step, across smooth slabs tilted outwards to a broad ledge close to the watercourse at the bottom of the Black Gully. And so we rounded the first great step. The second is higher and equally unscaleable. We therefore followed the ledge upwards to the right and got on to a second ledge, higher up. At the edge of the wall we were able to turn left again, upward through two fairly easy chimneys debouching on the top of the second step. Thence we proceeded back by ledges to the trough of the gully, negotiable here,

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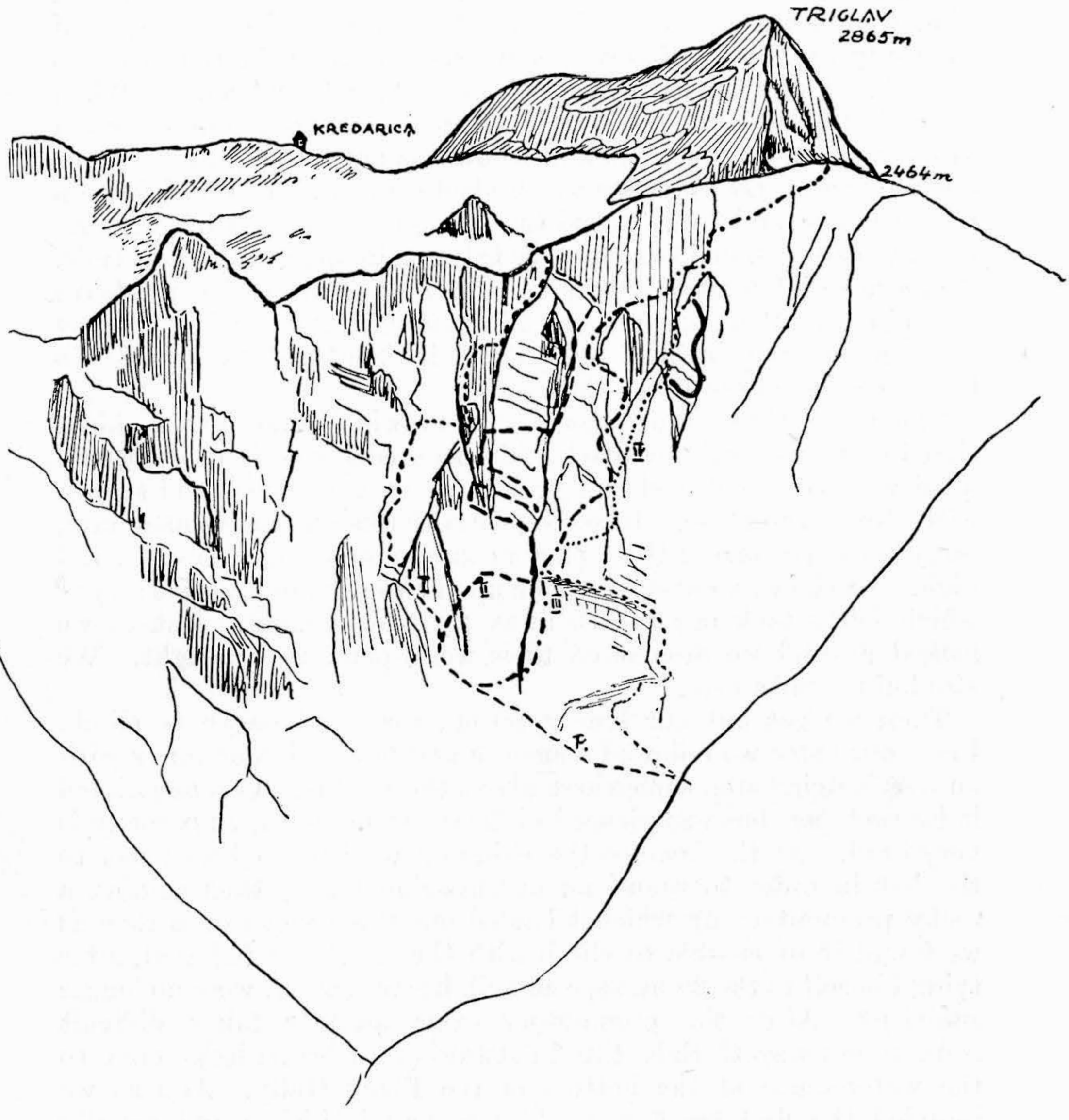
[2] *A.J.* **39,** 333.

[3] 'Prag' = literally threshold. The 'Prag' Path takes its name from a rock of this type. You go up the sheer face by iron rungs.—F. S. C.

for some time. Suddenly Čop halted, and from under the rubble drew out a bit of brown check cloth, all torn and perished—the first trace of the dead Topolovec. We climbed on and up two flattened



Drawn by Oskar Delkin.]

TRIGLAV, N. FACE. (Central part.)

steps with good holds, because every scrap of rotten stone is carried away by avalanches and the water flowing over the next step higher up. Beneath this step Čop dug up a leather belt from under the stones, which we took away for Topolovec's relations. We got a fair distance up the gully, but at last further progress was blocked by a very lofty, beetling step. We rounded it by a rubble-strewn, inclined terrace to the right, thus gaining the ridge of the buttress

forming the right lip of the Black Gully from the base to the top of the wall. The inclination of the buttress is not extreme just here. It forms a gently inclined ridge, rising again later into perpendicular heights with tremendous precipices falling away on either side. On this ridge we built a big cairn, deposited our sacks, and ascended by a wide ledge into the innermost recess of the Black Gully to look for further relics of our dead friend. This, after all, was our principal object, to discover some definite trace of Vladimir Topolovec, and then to return down the face to Vrata if we should find it impossible to gain the top. The return would be very difficult; still, we could have managed it, because we had quite 20 pitons and 75 m. of rope (50 + 25). That recess was like a monstrous mortuary. No gleam of sunlight ever falls in there. Every few yards we found torn fragments of Topolovec's kit all buried in débris and terribly battered. So far as we could judge, the poor lad had fallen a sheer 500 m. We did not find any remains of his skeleton. As we looked upon these fragments, upon the grim, dripping walls and precipices, the gloomy view around, it was as if a grip of cold iron had tightened about our hearts.

When we examined the rock ahead of us, we realized that it did not look so terribly forbidding after all, and that it might be possible to find a way up, though probably an exceedingly difficult one. We were only at the beginning of the main problem of the wall towering some 500 m. above us. Down below, though very difficult in places, the face presents the difficulties of a normal rock climb. In this upper part of the ascent the work becomes serious.

Čop proposed that we go back to the ridge, where we had originally thought of bivouacking, collect our sacks, and climb another 200 m. or so, for we had still some three hours of daylight. We should be sure to find a suitable spot for a bivouac, for we had noticed some wide ledges farther up. Tominšek and I of course readily fell in with this suggestion. We returned to the ridge and then back into the gully. From the innermost recess we climbed up its left side by a smooth and vertical crack, with brittle rock, to a rounded overhang. To avoid that, we had to traverse to the right and get above the overhang by some steeply inclined slabs. Then straight up again—a difficult, exposed step where there was no proper anchorage. At one very exposed point we drove in a piton which we took out again after using it. In this way we made about 100 m. Just above us the wall now became unscaleable, smooth and wet. On our right, however, the last step was less steeply inclined for a few yards in the middle and seamed by a conveniently horizontal shelf leading very far to the right across the whole rampart. In the middle of this shelf we refilled our flasks from the water dripping down from above. Then we climbed the sheer and exposed face to a higher ledge, reaching by that the right edge of the step and the precipitous edge of the main buttress. Then we made quick progress by this edge, open rock and cracks, till we turned off to the left from the

buttress by a wide ledge. On this ledge we decided to bivouac, as it was already 7 P.M., and the rock ahead of us smooth and inclined at an angle of over 80°. We took off our sacks, untied the ropes and got to work. With our hammer we raked out stones and gravel so as to level our ledge which was some 3 m. wide and canted outward; we carpeted it with our ropes and empty rucksacks, and then pitched Tominšek's tent, which we pegged firmly to the rock and the ground with pitons. We had just finished this job when night closed in, still, clear, and starry. We crawled into our tent and lay down to rest. We tied ourselves together by our belts to prevent anyone rolling off our perch in his sleep, and so dozed off on our stony couch. Without, the wind rose, but within our tent the air got nicely warmed up, so that the cover got all wet outside and the water began to drip. It would have been warm enough if there had not been such an icy draught from below that we presently began to shiver and our teeth chattered. We slept very little, Čop not at all.

Next morning, August 28, at 7 A.M., we resumed climbing. We tied ourselves to the longer of the two ropes and climbed, all together, up a series of short steps connecting a series of ledges, up to what proved the stiffest part of the whole climb. It consisted of a great projecting rocky bastion quite sheer and overhanging in places, shaped roughly like the bows of a big barge with an overhanging roof, with the ridge of the buttress as its bows. To the left of the buttress the bastion is seamed by a very narrow crack, interrupted half-way by a tiny ledge, level, bare, and twice as wide as one's hand. From this ledge the crack extends upwards for another 4 m., then shallows, and at the most critical point loses itself in a smooth slab under the great overhanging eaves of rock. From the roof our route led to the left over an overhanging step into a short vertical crack, and then the angle of inclination became normal again. We negotiated this bit as follows: Čop climbed ahead to the crack and at once drove an iron piton in at the foot of it. By the help of a few sound holds he got on to the narrow ledge. It was extremely hard work and had to be done very cautiously. Above the ledge he drove in another piton, so as to secure himself and me, as I followed him—both without sacks, of course, as a rucksack is only a danger and a nuisance in a place like this. Then getting close together, I stepped on to the ledge, legs wide apart. My left hand found a small hole to hold on by; my right, grasping the rope with which I secured Čop, was in the crack, and my head I leaned against the rock. When I was thus firmly anchored, Čop climbed over me, stepped on to my shoulders, looking for a suitable place to drive in a piton, but without success. Accordingly he mounted higher, on to my head, and after a brief search began to hammer in a piton. He hammered and hammered, and meanwhile my legs began to tremble with the strain till we both swayed above the abyss. At last the piton was firm and the rope passed through the *Karabiner*.

Čop hoisted himself up from my head, but failing to reach a fresh foothold, had to step back. He took off again, this time finding handhold and precarious foothold whereby he got safely up the 4 m. through the crack and on to a safe platform. There he had to rest. Čop again drove in a piton at his resting-place, and used it, first as a hold and then as a step, as he drove in the next, by help of which he got up a little higher under the eaves I mentioned before. Čop's achievement here involved as much exertion as danger, and if I had not seen it myself I should not have realized how much a man can do. Meanwhile Čop proceeded with every precaution, driving in a piton wherever he could—he used more than 10![4] Several times he called out to me to keep good hold of the rope, as he might fall at any moment. And I clung desperately to that slender link on which depended all our lives. But Čop did not fall. On the contrary, he gained height inch by inch. Below the eaves he turned off a yard to the left to take another rest on a bit of safe ground, so as to gather new strength to overcome an extremely difficult overhang with small and insufficient holds. This, too, he managed splendidly. Above this overhang he again drove in a piton, holding on with two fingers of his left hand. Then he negotiated the last, still extremely difficult bit—an overhanging crack—reaching good and safe anchorage, where he proceeded to drive in three pitons, all close together, so as to belay me as I climbed up after him. First I hauled up my sack to the little shelf. Tominšek had stuffed Čop's into it as well. Next he followed himself, and then waited until I had reached the last piton but one, well secured, although the rope did not run very smoothly on account of the large number of pitons. Still we managed it all right. Then Tominšek came on after me, collecting the *Karabiner* from the pitons and retrieving three of the latter as well. The rest were too firmly driven in, and we had to leave them where they were. Meantime Čop, who had given up his place to me when I reached him so that I might secure Tominšek, had slipped off the rope and gone ahead to reconnoitre the terrain, which now became easy. Soon Tominšek joined me, and I went on to where Čop lay on a grassy ledge farther up, exhausted after his

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[4] I understand it was the Bavarians who introduced the wholesale use of pitons here. I never heard of their being used before 1925 (so far as I can remember), or even 1926. My students who went to study medicine at Innsbruck learned the use of pitons in Tyrol. Čop, being an ironworker, makes his own—good hefty pegs and eye-bolts, heavy to carry and very reassuring in appearance! My 'Innsbruckers' showed me some *Mauerhacken* which had nothing of the hook left about them but the name. They were of steel, very slight, leaf-shaped, and with a ring through one end. It was hard to believe that they would stand any strain likely to be put upon them and hold fast if only half an inch were driven into the rock!—F. S. C.

exertions, so that I again held Tominšek while he hammered out the last three pitons. Over this short stretch—about 40–50 m.—we had taken a good 2 hours, which speaks for itself. Čop declared that it was the toughest rock scramble he had ever tackled, while Tominšek protested that our bastion was stiffer by 50 per cent. than the Špik N. face ![5]

When we were all together once more, we tied ourselves to the short rope and bore to the right, up a grassy slope to the edge of the buttress. By that edge we made good headway, all together up cracks and chimneys and open rock, until, after a spell of easy, straightforward climbing, we left the wall at 10.30 A.M., beside the 'Bovec' snow patch close to the 'Kugy' ledge (*Ringweg*), and very near the highest point of the N. face. A strong wind and mist greeted us, so we hastily built a small cairn, hurried by the 'Kugy' ledge to the glacier, and thence to the Triglav House on the Kredarica, still in our rope-soled shoes, as we had left our boots below at the foot of the great wall.

We had spent 26 hours on the face without a hot sup or bite, and all the time on the strain. On the way down we changed back into our boots, which we retrieved below the face; the bags we left there as mementoes.

We decided to call our new route the *Gorenjska Smer* (Upland Route), and by this name be it honourably known, side by side with the 'Austrian,' 'Slovene,' and 'Jug.'

MIHA POTOČNIK.

[The date of the expedition was August 27–28, 1928. The party consisted of Messrs. Jože Čop, Stane Tominšek, and Miha Potočnik.]

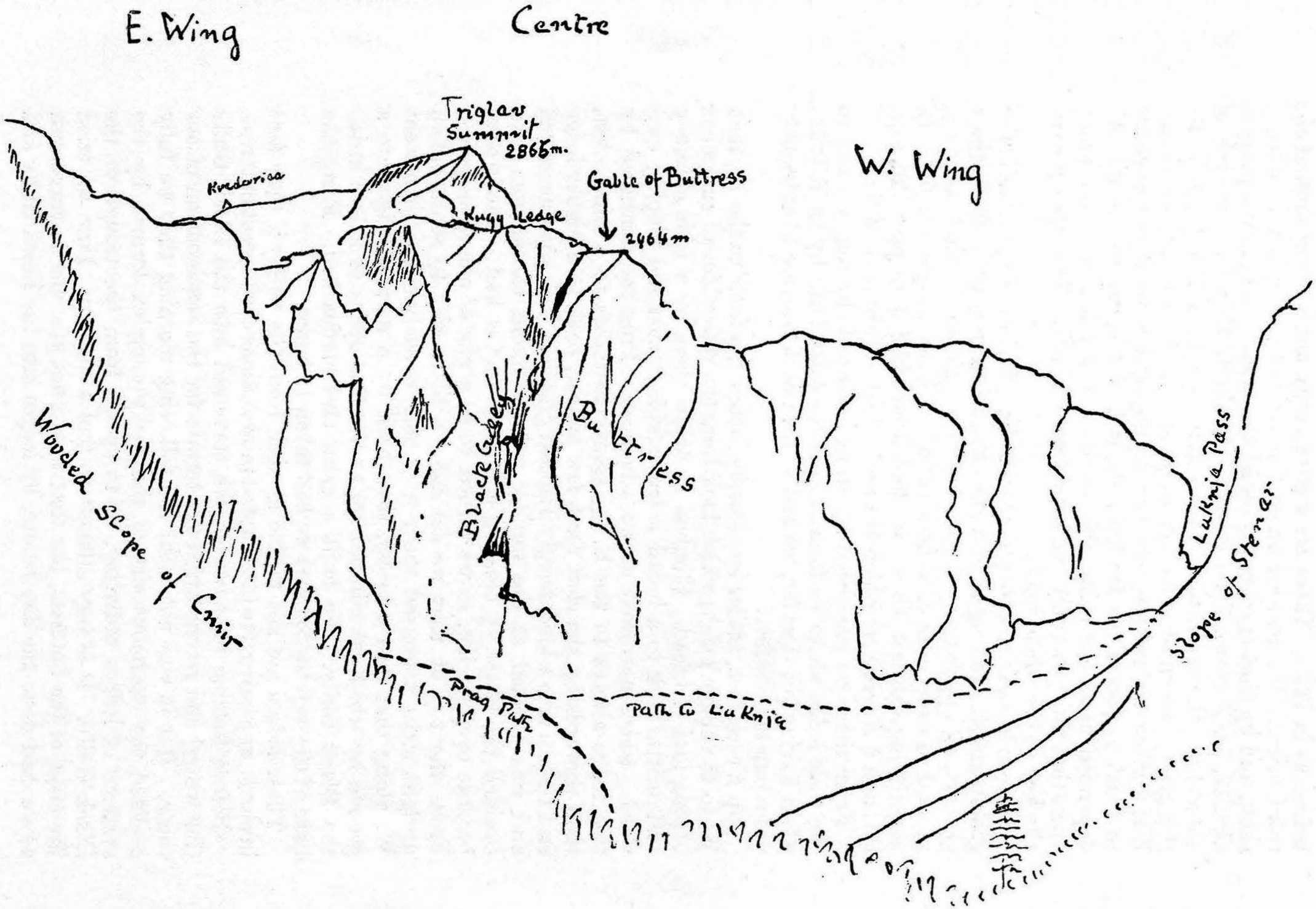
The 'Buttress' Route.

[August 9–13, 1929. Miss Pavla Jesih and Milan Gostiša.]

From the Aljaž House in the Vrata Valley the party proceeded by the path on the left bank of the watercourse, and on in that direction as far as the junction of the Prag path with that towards the Luknja, and thence by steep grass slopes to the foot of the wall or face.

A short spell of climbing took us to a very wide ledge. We followed it for a considerable length upwards W., and so to a ledge branching off E., and leading to the foot of the first tower. Then up a steep cleft and chimney W. of the tower into a vertical cleft, and so to the foot of a second tower. There we left the cleft, traversed E., then up a steep step and back again into the cleft. We left this by an opening formed by three big stones wedged at the back of the tower and so on to the top of it. From the top we crossed E. to the face and followed an inclined cleft to the third tower. From there we followed the inclined cleft to an enormous overhang. Here we found the highest piton left by those who attempted this ascent

[5] *A.J.* **39,** 138–41.



Drawn by Mrs. Copeland.]

TRIGLAV, N. FACE.

before us in 1928. There are a good many more pitons around the third tower. We crawled under the overhang along a very narrow shelf, and by that moving E., round the ' bulge ' and into a perpendicular, grass-grown little groove. I take it that for a stretch of about 10 m. the inclination of the wall must approximate [?] 90°. By this groove we climbed as high as possible under a second overhang. But further upward progress proving impossible, we were compelled to trust to precarious foothold about half a metre to the E. All depended upon our being able to drive in a piton here, for which operation there was only one hand free—the left. That spot proved the key to the whole route.

More or less secured, we traversed 3–4 m., E., into the perpendicular grassy groove, and up it to a smooth and narrow little shelf which gave us an opportunity for a rest, very welcome at that juncture, as we had every reason to be satisfied with our progress so far. In negotiating the last 10 m. we had been obliged to pass the rope through 6 *Karabiners* which the leader had to drive in and fix.

From there we proceeded by an inclined cleft leading W. and to the wide ledge where we found intact the cairn built by us in 1928; when having got thus far, we had to turn back because of extremely unfavourable weather.

Up a rock face, rather less steeply inclined, a little to the E., then W. to the smooth slabs which look from the valley like an enormous oblong loaf of bread. Climbed E. below them by a wide chimney and brittle rock to a broad ledge, rubble-strewn and sloping outwards, which narrowed as we advanced. Progress continued by this ledge always to the E. by scanty footholds to a small cleft, then upwards by the cleft for a few metres, back to a higher ledge and thence into a long steeply inclined groove. This soon narrowed and was blocked at the top by a large round chockstone. We avoided the latter by crossing a kind of roof it had. The groove became overhanging, so we turned E. to a pile of enormous rocks. From the top of that we *descended* a little way to some brown upright slabs, traversed them to a narrow shaly ledge, then went W. along that into a recess, then back by a narrow ledge into a groove by which we climbed up to the first series of ledges inside the Black Gully. We built a cairn and bivouacked. From the base of the wall to this spot we had taken 11 hours.

These ledges are not visible as such from the valley; they face inwards, appearing like interrupted intersections of the great buttress.

Before turning in, however, we traversed into the Black Gully (for water) and reconnoitred the terrain for the continuation of our route. But it was not until the following morning that we fully realized the enormous size of the rocky complex formed by the systems of ledges radiating, so to speak, from the trough of the Black Gully. It is very difficult to find a way up. First we tried the crest of the buttress, but that would not go. So we traversed, as we had done the day before, by ledges into the Black Gully and

tried to scale the smooth and fairly high step, but had to turn back again. So much time did we spend in fruitless search that it was 10 A.M. before we entered an inclined gutter off a ledge about mid-way between the ridge and the Black Gully. We followed the gutter upwards by fairly well broken-up terrain, where our long search was finally rewarded by our finding a way over a lofty overhang to a fairly wide ledge where stands the cairn erected by our friends (Jože Čop and his party in 1928.—F. S. C.) on their way up the Black Gully. It was now late in the afternoon. The summits were all disappearing in a blanket of clouds, and we thought it wiser to choose a spot for our primitive night's lodging; bivouac, only 4 hours real progress all day.

That ledge was the last of the system. The buttress became less and less broken up and very overhanging. From there the last of the ledges leads back into the Black Gully with a sharply inclined downward tendency (E.). As our purpose was to climb by the buttress and not by the Gully, we did not follow it, but traversed W. into the angle formed by the junction of the buttress and the face. By that to a chockstone, and thence by a narrow little ledge back to the buttress. We crawled on our stomachs to a narrow little gutter up to a point where it was blocked by a big rock. Throwing the rope up over the chockstone forming a huge overhang, we pulled ourselves up. For a while the gutter was moderately steep, but then continued at such an angle that further progress became impossible. So we pulled out E., by very precarious footholds, crossed the ridge into a neighbouring gutter, negotiated an overhang, and then climbed by the crest of the buttress to a ledge succeeded by three more ledges, all radiating, like those farther down, from the Black Gully. So we turned into the Gully by the first ledge to a patch of snow, skirted this, and then got on to the last and narrowest ledge. That day we had thunderstorms from 4.30 A.M. to 10 A.M., so that we could climb for a very short time only—about 8 hours—gaining but little in altitude. At 5 P.M. we had to stop again on account of heavy rain. (The Vrata Valley is very deep and narrow, and when thunderclouds get fairly trapped in it, and the storm breaks out, the effect is terrific, quite apart from the danger of being struck by lightning.) So we bivouacked for a third time on the ledge just described.

As rain and mist continued throughout the whole of the following day, we had to put in a fourth bivouac as well. On that ledge our buttress route joins the 'Upland' (Upper Carniolan) route (Gorenjska Smer), and coincides with it to the top of the face.

[Translated from the MS. Report by Miss Jesih and Mr. Gostiša in the Climbers' Book of the Tourist Club 'Skala,' Ljubljana. Since this account was written, a large part of the route was again ascended by Messrs. J. Čop and M. Potočnik, who, having fine weather, climbed the face between dawn and dusk of one day. They agree in declaring that this route and their own 'Black Gully' are the most

difficult ascents by far as yet achieved in the Julian Alps. It has been decided that the 'Buttress' shall be known as the *Skala Route*.—F. S. C.

No further comment is needed. We congratulate the August 1929 party on their endurance and escape.

We would express our warm thanks to Mrs. Copeland for the great trouble she has taken in translating and forwarding to us these interesting accounts of modern exploits by our Slovene colleagues.—*Editor*, 'A.J.']

Notes to Illustrations.

1. The photograph shows the full width of the Triglav Wall as well as any genuine photograph can. Only the extreme left East Wing is cut off by the wooded lower slopes of Cmir. If the climbing routes were drawn in, the base of the Slovene and Austrian routes would be hidden. The photograph is by Mr. Janko Škerlep, Ljubljana.

2. Sketch of the central part of the Wall (after a photograph) on which four routes are indicated :—

I. Slovene Route ('Tuma' Chimneys).

II. Austrian Route. It is really the 'central' variant of the Austrian Route usually followed, with the egress on to the 'Kugy' Ledge, rather farther W. The Austrian first ascent of 1906 (König-Reinl-Dommenig Route) is given in *Der Bergsteiger*, Oct.-Nov., 1929.

III. 'Gorenjska Smer' (Upper Carniolan or 'Upland' Route). First ascended by Jože Čop and his party in 1928. This route starts at the same point as the Austrian and Slovene routes, then makes for the Black Gully (*Schwarzer Graben, Črna Grapa*), follows that until it merges in impassable rocks, and then finishes over the gable of the Triglav Buttress, as native mountaineers have decided to call the big rock promontory that juts out from the central part of the faces.

IV. 'Skalaška Smer' ('Skala' Route). First ascended by Miss Pavla Jesih and Mr. Milan Gostiša in 1929. It starts considerably to the right (West) of Čop's route, touches it on two places, but keeps to the edge of the Buttress, until it joins Route III definitely on the gable.

Szalay's route runs still farther W., and emerges on the W. face of the Buttress gable. See *Der Bergsteiger*. It is stated that Miss Jesih's route is not correctly indicated there, but starts farther W.

The 'Jug' route ascends the extreme right (East) wing, and is not indicated either. The sketch is by Mr. Oskar Delkin.

P. denotes *Prag Path*.

3. A pen-and-ink transfer of Mr. Škerlep's photograph with the names of the different points written in, drawn by Mrs. Copeland.

A Traverse of the Täschhorn and Dom.

Towards the middle of the memorably wet month of August 1929, Letts and I, temporarily bent on sociability rather than climbing, arrived in Saas Fee. We had planned to spend several weeks in Dauphiné, accompanied for the first week by Leslie Letts's brother, but after climbing Les Bans in cloudless calm and traversing Mont Gioberney from the Col du Says in driving mist and snow, two further days of almost continuous rain, coupled with the barograph's dead straight tracing near the bottom of the scale, proved too depressing. Letts's brother went home two days before his time, and the other two of us, feeling that bad weather called for good company, moved round to Saas Fee. Our welcome from the cheery party assembled there under Mr. C. H. Pasteur's genial sway removed our depression, even though Nature's remained.

After several wet days we were fortunate enough, by means of an early start made just as a long downpour ceased, to have a pleasant and leisurely day on the Portjengrat, though persistent clouds over Italy deprived us of the famous view over Lake Maggiore. But this was more than compensated by the lifting, or rather the sinking, of the clouds over Switzerland. We had reached a point high up on the lower slopes of the peak at which, owing to our lack of local knowledge, a glimpse of the mountain became essential if we were to proceed, when suddenly the mists dissolved around us, revealing in the foreground a dark blue pool cradled in a basin of snow, and in the distance, floating on a sea of cloud under a sky of still deeper blue, the whole range of mighty peaks from Monte Rosa to the Lenzspitze and Nadelhorn, glittering with fresh snow. Visions such as these, instantaneous and sublime, leave one spell-bound; their memory is cherished and imperishable.

That day was the first of four successive fine days, broken only by a heavy thunderstorm on the third afternoon. On the second of these days Mr. Pasteur and his daughter, with two guides, ploughed their way knee-deep through soft snow up to the Mischabeljoch, a good test of endurance under such conditions, and the account they brought back from their leading guide of the traverse, occasionally done, and last effected from a bivouac on the Mischabeljoch, of the whole ridge comprising Täschhorn, Dom, Lenzspitze, and Nadelhorn, roused the ambitions of Letts and myself, and we decided to attempt a similar expedition, if conditions permitted. In the event the first two peaks proved sufficient and we were content to omit the other two.

The double traverse of Täschhorn and Dom has, of course, been done fairly frequently, but accounts in general appear to show that conditions on the N. ridge of the Täschhorn are exceptionally variable. This ridge, which is fairly level at each end and correspondingly steeper in the middle, rises just under 700 ft. in some

660 yds. When in good condition it has been described as steep but beautifully firm rock, ascents of 1 to 1½ hours being recorded by the early parties. On the other hand, on August 16, 1895, the Hon. Gerald Fitzgerald, with Ulrich Almer and Fritz Boss, took 3½ to 4 hours for the descent, sheltering several times from a cold wind under corniches. The times for the ascent or descent of the steeper S. ridge of the Dom vary less, being mostly between 2 and 3 hours. Owen Glyn Jones's time of 2¾ hours from top of Dom to top of Täschhorn on September 10, 1898, was, of course, exceptional.

For several seasons Hugh Pasteur, Letts and I have climbed together, but this year Pasteur was unable to come out. Accordingly Leslie Letts and I, being both of us believers in a party of three for a big expedition, engaged Mr. C. H. Pasteur's second guide, Oskar Kalbermatten, a young and enterprising fellow, to whom the whole ridge from the Mischabeljoch to the top of the Dom was new, an added qualification in our eyes. As things turned out we were glad that we took him, for we both agreed that under the conditions prevailing on part of the climb we should not have gone forward had we been only a party of two.

So on Friday, August 16, the fourth of the fine days, we moved off after lunch and strolled up the Lange Fluh to the little shed, formerly a tea shop, but now fitted up with stove and blankets, at which we proposed to rest for a few hours. My sister walked up with us, and after an early supper together she went down and we three turned in at 7.0 P.M.

We had planned to be away at 10.30 P.M., but we overslept and only woke at that hour. Hurriedly we brewed tea and ate a meal which, with the aid of Einstein's theory of relativity, we called first breakfast, and were off at 11.15 P.M. A half-moon, though already below our horizon, gave sufficient diffused light to render the lantern unnecessary; summer or storm lightning, we knew not which, flickered in the distance. Roping up almost immediately, we crossed the glacier to the rocky spur running due N. from the Alphubel, which in turn was crossed at a point of marked disintegration by a winding route terminating with a scrabble by friction up a smooth and holdless slab of moderate angle. In the absence of a previous reconnaissance, Kalbermatten's local knowledge was invaluable here, as also on the dry glacier just above, where he led us unerringly among big crevasses until we hit the tracks of Mr. Pasteur's party where the snow began. These we followed over good snow to the Mischabeljoch, which we reached at 3.0 A.M.

For the last half-hour clouds had begun to gather from the S., but somehow the weather neither looked nor felt bad and we expected only mist on the tops, a forecast which proved correct. The moon having now set, we lit the lantern and, after halting for 25 minutes for a relatively second breakfast, proceeded to tackle the somewhat steep and loose but otherwise easy rocks at the foot of the long S.E. ridge of the Täschhorn. Once up these the going was good,



Photo, V. Selia.

TAESCHHORN and DOM from ALPHUBEL.
Showing the F. LOCHMATTER-YOUNG-RYAN Route, 1906.

sometimes on rock, more often on snow in excellent condition, while occasionally short slopes of ice necessitated the cutting of a few steps. With the early dawn, about 4.45 A.M., the lantern was put out, and we gazed in the half-light over the forbidding S. face of the peak, the scene of Winthrop Young's memorable climb, but without being able to identify his terrible overhang. About 5.15 A.M., when at a height of some 13,500 ft., the mists closed round us, and save for a few momentary rifts visibility never exceeded 60 yards until we reached the top of the Dom 9 hours later. We pushed on rapidly and, making good time, arrived without difficulty on the summit of the Täschhorn at 6.50 A.M.

From the start Letts's stomach had been out of order, due, so he said, to the pemmican which has formed our staple evening diet for several seasons, though I unsympathetically attributed it to high living at Saas Fee, and he had been going, for him, thoroughly badly. A tot of brandy after the first hour of the ridge failed to produce any effect, and by the light of dawn he looked so ill that it almost seemed as though we should have to turn back, though possibly Kalbermatten and I might have completed the ascent of the Täschhorn first. He stuck to it, however, and shortly after taking a second tot of brandy he suddenly remarked 'I am feeling better.' Thenceforth he climbed with all his accustomed skill and steadiness, and without any return of the trouble.

It was windy and rather cold, so after 5 minutes on the summit we made our way along the easy initial portion of the N. ridge and then halted in a sheltered spot for a meal. At 7.30 A.M. we moved on again, and then our difficulties began.

Kalbermatten had informed me, while walking up the previous afternoon, that he had been told by another guide who had recently seen this ridge from the Dom that we should probably be unable to make the descent owing to the amount of fresh snow, and almost immediately we were faced with steep slabs, or so we judged them to be, literally smothered with snow and disappearing down into the mist towards the Domjoch. However, while eating our meal a momentary glimpse of the S. ridge of the Dom had shown us that that ridge was practically free of snow and would go if we could get down to it, so we determined to try the descent. It proved to be a veritable cat-walk. The more abrupt steps were all covered with 1 to 2 ins. of snow and could only be negotiated by grasping the rock edge forming the actual crest of the ridge and sliding down sideways, clearing the snow in the process; fortunately the most uninviting one which we tackled in this way proved to have a long crack just big enough for the finger-tips on the far side of and parallel with the edge, thus giving a good sound hold. Where the angle eased off the snow was 6 to 8 ins. deep and partially consolidated, and here we had to judge by that indefinable feel of the foot whether the snow could be trusted or whether its condition and slope were such as to endanger a slip. Wherever possible we stuck to the arête, but on

a number of occasions some extra steep snowed-up slab or the unstable conditions under foot forced us for considerable distances on to the E. face. This, however, always proved equally uninviting, being composed of steep loose rock intermingled with soft snow and treacherous little patches of ice, with the result that the apparently feasible route not infrequently failed to go and we had to find another. Consequently we were always glad to go up and try our luck on the arête again. A retreat up the ridge, while not impossible, would certainly have been unpleasant, and Letts's remark at one stage, 'I suppose this has got to go,' aptly expressed the feelings of the party. So with great care, often moving only one at a time, we worked our way down, until at last, after a delicate but unavoidable traverse along the steep snow-covered western slope, we saw the Domjoch just below and finally reached it with a certain feeling of relief at 11.0 A.M., the descent having taken $3\frac{1}{2}$ hours.

This descent had been a ticklish business, but with our 120-ft. rope enabling us to take full advantage of occasional sound stances we had been able to make it reasonably safe. One escape, however, we did have, and though such incidents sometimes, from mixed motives, remain untold, this one may perhaps be mentioned by way of warning.

The S.E. ridge of the Täschhorn is described in Ball's *Guide* as usually heavily corniched. After studying this ridge carefully, and the N. ridge to a lesser degree, on the walk up the previous afternoon, I had remarked to Kilbermatten that we should not be troubled with corniches, with which he agreed. The former ridge proved to be almost entirely free, but the latter had one, some three-quarters of the way down, which we failed to observe, probably the only one on the whole descent, though bad weather prevented subsequent verification of this through the hotel telescope. We had just regained the arête from one of our descents on to the E. face, to find the general angle of the ridge beginning to level out and the usual covering of snow on the steepish slabs of the W. face. As we advanced, we moved slightly to the right, where the footing seemed more secure, and so got on to a 6-ft. corniche less than 200 ft. in length, which suddenly gave way. The first man happened to be exactly on the line of cleavage and landed on the ledge of rock which had supported the corniche, where he remained poised. The second man went down, applying what brake he could with his axe. The last man, who was not yet on the corniche, just had time for three or four hurried steps down the reverse slope, but was then brought by the combination of insecure foothold and the pull of the rope into a sitting position in which he was pulled some 10 ft. obliquely down the ridge before coming to a stop. The first and second men scrambled up unhurt, but we realized that our luck had been in; for had the first man been one foot farther on to his right, or had the last man reached the corniche, the consequences must have been more serious.

Let it be said at once that, judged by all ordinary standards, neither of us considers Kalbermatten to blame for this incident. Theoretically each member of the party ought to have spotted the corniche, whatever the circumstances or his position on the rope, and our failure to do so must be counted as bad mountaineering. But having regard to the difficulty of the actual climbing conditions, involving continuous concentration on every movement, to the low visibility, coupled at that moment with a stinging gust of snowdrift, and to the fact that we had been able to descend on to and ascend from the E. face at will without encountering the semblance of a corniche, I venture to think that the party as a whole can plead some excuse, and that many guides of twice his age and experience, and most amateurs, would have failed to spot the trap. In every other respect his judgment throughout the day was as unerring as his companionship was pleasant. The lesson of the incident is not likely to be forgotten by any of us.

On reaching the Domjoch the advisability of a direct descent on to the Kien Glacier, which could be dimly seen below, was discussed; but as the weather appeared to be holding, and there were known to be tracks off the Dom by the ordinary route, we decided that the ridge ahead, which our one glimpse had shown to be in better condition, would be preferable to the mixture of broken rock and snow visible beneath. The discussion arose, I believe, partly out of shaken morale, the unspoken realization of which helped us to decide as we did. So after advancing for some 10 minutes along the ridge we found a sheltered spot where we halted for a meal, during which a momentary gleam of blue sky confirmed our opinion of the weather.

Getting under way again at 11.45 A.M., we kicked steps up a short and steep snow arête to the first big gendarme, which we turned by the E. face. My chief impression of the next $2\frac{1}{2}$ hours is of gendarme after gendarme looming aloft in the mist. Ordinarily, I believe, the crest of the ridge is followed throughout after the first gendarme, but in the mist the wall leading up to the arête always looked so forbidding that we found ourselves continually bearing to the right and climbing entirely on the E. face. This, for some reason, was much less snowed up than the corresponding face of the Täschhorn, but the rocks were steep and abominably loose. The selection of any general line of attack was impossible, and we took what at a range of some 50 yds. appeared to be the easiest route, with the inevitable result that we encountered several distinctly nasty passages; in particular I remember one traverse across a vertical face where every handhold and every foothold shook. Eventually, however, a little couloir of steep hard snow led up to the arête and, after following this for a few minutes, we found ourselves on the summit.

Here, quite unexpectedly, we got out of the cloud at last and could see the Lenzspitze and Nadelhorn under a grey sky. But the time was now 2.15 P.M.; two valuable hours had been lost on the descent to the Domjoch. We reckoned that it would take

at least another 5 hours, exclusive of halts, to traverse the Lenzspitze to the Nadelhorn, so that we could no longer expect to reach the Mischabel hut before dark. Moreover, the most interesting part of the climb was behind us, and we were all rather tired. So we decided to cut out the two additional peaks and descend to Randa.

Accordingly, after a short rest, we started down by the deep tracks of the ordinary route. Soon we called a more leisurely halt to satisfy the inner man, after which there followed the long snow walk, interrupted by an unexpected little ice slope, down the Hohberg Glacier, the scramble down the rocks from the gap in the ridge between the Hohberg and Festi Glaciers, and the final bit of dry glacier leading on to the moraine just above the Dom hut, where we unroped at 5.15 P.M. At the hut we rested for 45 minutes while partaking of a bottle of the guardian's wine, then dropped down by the steep and winding path, with the snow-clad Matterhorn looking almost ethereal against the pale evening light, and, after a brief shower of rain, reached Randa at 7.50 P.M., well content with our day.

But we all agreed over coffee and cognac that we should require the N. ridge of the Täschhorn to be in considerably better condition before embarking upon it again.

W. B. CARSLAKE.

DR. PACCARD'S 'LOST NARRATIVE.'

SOME CORRIGENDA AND ADDENDA.

BY E. H. STEVENS.

(*References to pages or notes, without further specification, apply to the article under the above title in* '*A.J.*' **41,** 98–156.)

A. Readers interested in this subject are asked to make the following corrections in the previous article.

P. 104, note 20, line 6, *for* 'Michael' *read* 'Michel.'

P. 108, note 32, *for* '156' *read* '157.'

P. 114, note 66, line 3: better [as G. M. (1), note 53] 'Aiguille d'Envers d'Argentière,' with no necessary reference to the Montenvers.

P. 114. Title of view should be 'Tacul Basin, Mt. Blanc, and the Aiguilles.'

P. 116, note 80, last line, *for* '70' *read* '73.'

P. 116. Title of view should be 'Upper Tier of Rochers Rouges, Upper Ancien Passage. . . .' (Part of the lower A.P. appears on the extreme left; the lower tier of the R.R. and the Corridor would be still farther to the left, off the picture.)

P. 124, note 98, interchange 'that' and 'which.'