summit. We are certain of victory! Another scramble of a quarter of an hour, and we perceive not far from us the ladder abandoned by Rey after his last attempt.* The way reveals itself before us, difficulties diminish, the summit approaches. Proudly and full of confidence, we advance. We assemble on a little rock buttress whence we perceive the cross on the Italian summit. Twenty minutes more, and at 1.30 P.M. we attain the top. . . . We are mad with joy . . . we embrace and wave a red flag as a token of victory to our friends at Giomein.

At 3 P.M. we descend the ordinary route and at 10 P.M. we arrive at Giomein.

MARIO PIACENZA.
(Sezione di Biella)

From *Rivista Mensile*, 1911, pp. 320–7.

A Night on the Hintersustenhorn.

By H. L. HUTTON.

STORY? God bless you, mine is ancient history! In an unguarded moment I told it to the Editor in the train between Bern and Boulogne in September 1909. Then it was a living thing, now it is a recollection into which writer and reader must enter by an act of volition. But who may say nay to the repeated requests of the Editor? Flog my jaded memory into an ambling gait I must, and so reach the repose of print! 'I never can recapture that first, fine, careless rapture.'

This then is the recollection of how F. Harrison, H. L. Joseland, Rev. W. H. Hodges and the writer climbed the Hintersustenhorn from Stein on August 17, 1909. Hodges was chaplain at the Rhone Glacier and joined us the day before. His experience consisted of a snow peak and a snow pass, so he may be called a novice. We had promised him a little coaching in rock-work and general mountaineering without guides. He proved a pupil with a touch of genius: witness his faith in us. 'Come along,' we said, as he hesitated at each strange-looking traverse or chimney; 'come along! it 's quite easy. Put your hand here and your foot there.' He put his hand here and his foot there, and came. The

* This point is indicated by the letter 'd.'

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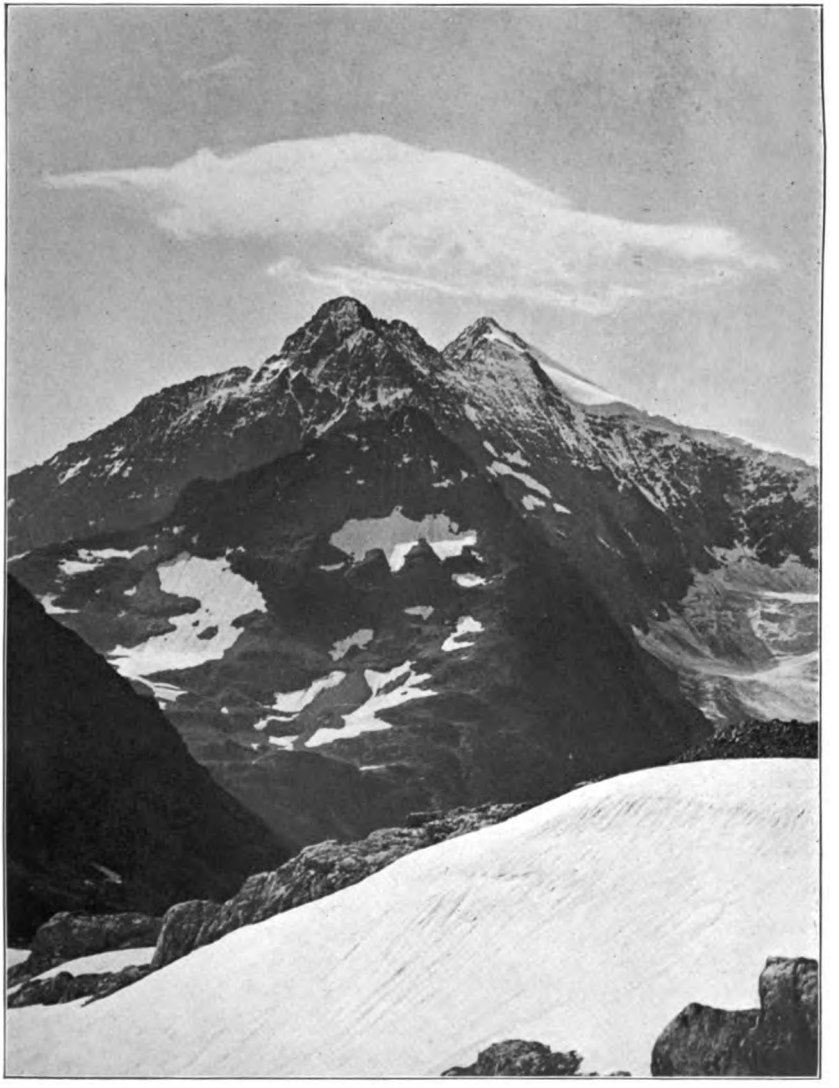

H. L. Joseland, photo. *Swan Electric Engraving Co., Ltd.*

THE SUSTENHÖRNER, FROM THE OBERTHAL GLACIER.

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repeated success of these movements confirmed his faith. Only when he had acquired a month's experience in thirty-eight hours, he remarked meditatively, 'I see now how much you bluffed me!' We other three had done many guideless climbs together.

We had been on the lower slopes of the Hintersustenhorn before for exercise and exploration, and with the knowledge gained and the times given in Ball, we decided on a start at daybreak. Dr. Dübi's S.A.C. translation of the 'English Climbers' Guides to the Bernese Alps,' vol. iv., we only saw afterwards; the routes are so clearly described there that I give references to them. It was nearly 5 o'clock when we left the inn, walked up the Lower Stein Glacier, traversed the shoulder of the Bockberg and crossed the Upper Stein Glacier to the grass slope opposite. (Dübi, p. 107, route 4, lies more to the right, i.e. to the S.) There is a snow couloir some little distance to the right (S.) of this slope. Those who wish for some mild excitement may find their way down it between the snow and the rock walls. It is better to zigzag up this slope to the head of the couloir rather than to make for the ridge, as the ridge is shaly and unpleasant to walk on.

We crossed the head of the couloir and ascended a chimney, narrow enough in smooth places to allow the use of legs against the sides, but full of loose stuff which the leader had to clear away and send down between the legs of the second man. Our general direction was to the right, and then back on to the main N.W. buttress, where we joined the route 5, p. 107 in Dübi, the continuation of the Kalchtallüche route. The distinguishing feature is 'numerous gendarmes.' The rocks here were much iced, and after making slow progress for some time we left the buttress (as in Dübi); but, after consultation at 2.30 P.M. we decided, in view of the iced condition of the rocks, not to work back on to it, but to traverse across the face to the right and reach the summit by the S. arête. A previous examination with field-glasses had made it clear that this traverse was possible at several points. I think that we took a route higher than the 'broad snow-band' described in Dübi, but at any rate, 'at a point almost directly under the summit' we mounted a narrow couloir, thickly iced, on to a rock platform. A direct attack on the wall opposite carried us on to the arête, a few minutes to the S. of the summit, at 4 P.M. (Dübi, p. 107, route 4.)

We had decided to take this last stage rather than descend owing to the information given in Ball, which implies that

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the arête leading down to the Steinjoch is easy. This is misleading.

We left the top at 4.15, feeling confident that we should have enough daylight to reach the meadows at the foot of the Steinjoch, if not the Stein-Wassen track. The first glance gave an impression of easiness. We followed the arête and then traversed the S.E. face, not far below the ridge, till our advance was unexpectedly blocked by the drop at the big gendarme, described in detail by Dübi, but not mentioned in Ball. Advance here was obviously impossible; we mounted to the arête once more. The gendarme was iced and looked difficult. Was a traverse on the N.W. possible? If, as Ball implied, the arête were easy, it must be only a question of finding the route. We could see our way down to a point level with the foot of the big gendarme. Could we cross the last hundred feet back on to the arête? We decided to try. The route was by difficult rocks—there was ice everywhere—with some help from a snow couloir, to a point where a slope sprinkled with snow and scree descended rather steeply into a snow couloir at the foot of the gendarme. Things did not look promising here, but if the snow in the couloir were good, it might still be possible to regain the arête. Anyhow, we must try.

The last man anchored himself immovably on a projecting spit of rock, and the second man was able to belay the first on a big knob as he descended half the slope. The third man then advanced to the knob and allowed the second to move forward till he had enough rope to let the leader reach the couloir. But the couloir was no better than the slope—smooth sloping rock, with but little more snow and no holds of any kind. So the leader was gently drawn back up the slope, and by this time it was dusk, too dark to reach the top again. We had risked and lost. There was nothing for it but to sit astride the projecting spit, which was just big enough to take four.

It was nearly 8. How long should we have to sit there? was our first thought. The moon would be up about 12.30, we calculated, and if the sky were clear we might be able to move to a more comfortable position. Cheered with the thought of a limited sit of five hours, we dined. We had not arranged for many meals out. We had sufficient, but plain, fare, and we had something over for to-morrow's breakfast, but we had little to drink. The writer carried the bag, and in recognition of his negligence, drank nothing—and suffered

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nothing, though as it turned out he was without drink, except for a few drops of cognac and a little snow, for 24 hours. Hodges, as a novice, had exerted himself and suffered much from thirst. It is difficult to write a true history. One member of the party remembers nothing about eating after 4 P.M.; another thinks we dined chiefly on thoughts of breakfast at Stein, which thoughts next day turned to 'at any rate lunch,' and then 'we hope dinner.'

It was a magnificent position. The flanks of the Hintersustenhorn dropped almost sheer below our feet. Facing us to the N. was the Stein Pass, and down this we could see wayfarers wandering with lanterns on their way to Wassen, so near and homely a sight that involuntarily we shouted into the deaf air. Below us the mists were gathered and would have hidden C. F. Hill's kindly lantern-signals from us, even if we had been on his side of the mountain. The mists surged up towards us, but never submerged us, and we watched the august procession of the stars as they climbed above the Spannorts, a blaze of light heralding their approach minutes before they rose, such as is seen only in 'the ampler, the diviner air' of mountain heights.

Our rock-saddle was sharp, uneven-edged; only two had sacks to sit on, and change of position was impossible. From time to time each man leaned back, clasped in the arms of the man behind, for rest and warmth; but the weight on the chest could not be borne for long. We wound up our watches, we kicked our heels against the rock-flanks to keep up some semblance of circulation. Song and peppermint-lozenges warmed our hearts in turn. A cold wind from the N. rose and pierced us; it was a mercy that it did not last long. So the hours passed till moonrise. Would the mists rise with the moon? No; never did moon shed purer, intenser light; but the rock walls behind us only stood up the blacker. To climb them was not to be thought of. It was 1 o'clock by the time we reached this decision. By 4 surely it would be light enough to move. And we told stories—the alpine joke, other jokes, tales of mystery and adventure; all were gratefully but quietly received. Heads nodded, bodies swayed; a vigorous shake from a wakeful arm was needed. We began to reckon the flight of time correctly without our watches.

Nearly 4, but it is not so light as it was. The mist has wrapped us round and snow is falling. At 5, we scramble one by one off our rock-saddle bed, swallow a drop of cognac and wonder what our feet feel like, and our hands. Numb,

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but not frost-bitten. Ten minutes' exertion on the rocks sets the blood flowing; in twenty we are warm. It takes a full hour to climb to the ridge again, and there in view of the fresh snow, fallen and falling, we decide to make our way down to the Wallenbühl Glacier and over the Steinjoch to the Stein-Wassen track.

We descend slightly to the left for half-an-hour to a snug shelter where with greater prudence we might have spent the night, and breakfast. Our last crust of bread has been sat upon and soddened. We discover unexpected pears. Chocolate and raisins we have in plenty, but some cannot eat them without a drop to drink.

The mists lift but little; we pick our way by instinct rather than reason to the left and strike a spot where by creeping on all fours along rock-ledges we descend a long drop easily on to a snow-covered rib. This rib we follow down till the snow ends, and then cross to a smooth gently sloping rib on our right. This rib leads us at last into a corner with a rock-wall on our right, where a couloir enables us to drop on to a steep slope, half snow and half ice. (We may have used three ribs in this descent. Owing to the mist it is difficult to locate our exact route. Dübi, p. 106, route 1, a.) The patches of ice made a glissade impossible, and the kicking and cutting of steps was laborious. The bottom of the slope was much crevassed. Once across the crevasses, we were on the flat of the Wallenbühl Glacier. It was now 2 P.M. We could hear water to our right, but the thirstiest was more eager to cross the Sustenjoch than to drink, so we pushed on up the easy slope to the joch. Just before we reached it, we heard a shout, and as we reached the other side an English invitation to afternoon tea. Messrs. Ashley and Gillett were watching for us. We had discussed the descent to the Voralp Hut with them, and they had felt sure we had spent the night there and should return this way. Tea would be ready for us in the meadows below.

Our troubles seemed over, but our dangers now began. Perhaps the taking off of the rope relaxed our attention, perhaps the thought of tea hurried us, perhaps the rotten rocks exasperated our strained nerves. As Joseland turned to see if Hodges were following, the boulder he held spun round, taking him with it. He clasped another with his disengaged arm and that did not move. Lower down, he stepped carefully on to a jammed stone, tested it cautiously and let go his handhold. It tipped. A leap saved him from incalculable

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consequences. Harrison varied these experiments with fate. He jumped from a rock-ledge on to a snow-slope to glissade and started well. His hat blew off. Involuntarily he raised his hand from his axe to clutch it. With the brake off, his pace quickened. A big stone lay in his way. He jumped, cleared the stone, but lost his axe and his balance, then whirled round and round, faster and faster down the slope. By luck he got his feet foremost and pulled up close to the rocks at the bottom. Some bruises and a finger cut to the bone were light punishments for all this. We met again round the tea-things at 4 P.M.

In the strength of that tea we walked with pleasure three hours to Stein: three hours that might have been four and a weariness without tea.

As we crossed the Susten Pass, a gun-shot gave the official signal to a search-party of local guides to retire—they had found our tracks and watched the base of the mountain all day. A wire to Meiringen stopped the departure of a strong relief column: its labours were limited to drinking our health.

All visitors at the Stein Inn considerately refrained from leaving the dining-room, but the good landlady and her maids stood in line to welcome us: 'We thought you were dead! We knew you had nothing to eat. We thought you were dead.' Thanks to the tea, we were not even dead tired.

The route up is certainly interesting, and probably more direct than route 4 of the guide. Under good conditions the complete ascent of the N.W. buttress should be very attractive. The best route down is a question to consider. Our route was long and without much climbing interest.

Indoor Training for Climbers.

By R. P. COCKBURN, M.D.

(Read before the Alpine Club, April 9, 1912.)

BEFORE success can be attained in any of the several branches of athletics, a certain qualifying examination as it were, common to them all, has to be passed. The entrance examination requires a certain measure of health, a certain standard of general muscular development, a certain rapidity

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