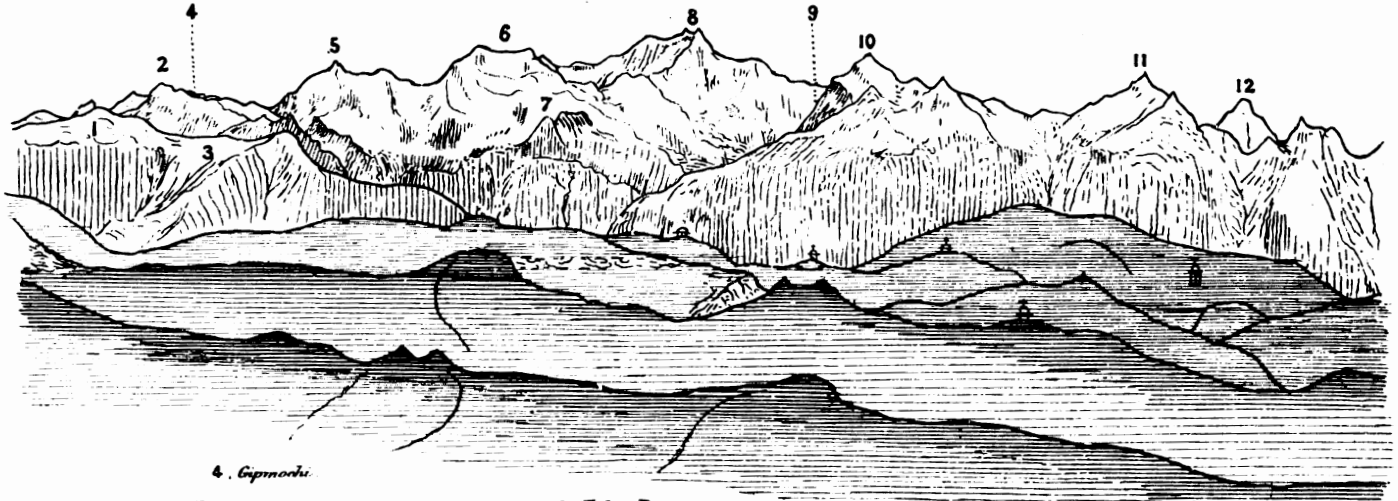

Fred^k Dangerfield. Lith. London.

PANORAMA OF THE KANGCHENJUNGA RANGE FROM DARJEELING.

(From a Sketch published at the Surveyor General's Office Calcutta 1882).

HIMÁLAYAN AND ALPINE MOUNTAINEERING.

By DOUGLAS W. FRESHFIELD, Sec. R.G.S.

MR. W. W. GRAHAM, in the account of his ascents in the Himálaya, recently given to the Royal Geographical Society, paid a warm tribute to the 'grand achievements' of the officers of the Indian Survey. At the same time he ventured to suggest that they might have done even more and better in the way of glacier exploration and mountain mapping had they had at their disposal any knowledge of icecraft as it is now understood and practised in Europe. He proposed that a few young surveyors should be given some experience in the Alps as part of their training, or that one or two alpine guides should be joined to one of the 'snow-parties' of the Survey. These suggestions, which, there is little doubt, might easily be carried into effect at a small cost, and could hardly fail to produce results of considerable scientific importance, appear to have been taken in very bad part by persons of many years' experience in Himálayan travel resident in India. Several writers, who claim to represent 'the Indian school of mountaineers,' and to speak in the name of the officers of the Survey in general, and of Mr. W. Robert of the Sikkim Survey in particular, have ventured, on the strength of newspaper paragraphs, and without waiting to study the full text of Mr. Graham's paper, to state their belief that he never made the principal ascents he has described.

Mr. Graham has done well to treat with indifference the allegations referred to. But he will pardon geographers who have had some share, perhaps, in instigating the movement which has led to the introduction of alpine craft among foreign Staffs, if, for their own purposes, they call attention to the attack to which he has been subjected. For by exposing, as they have done, the depths of their ignorance of all we of the Alpine Club mean by 'mountaineering,' the spokesmen of 'the Indian school of mountaineers' have, in the most unexpected and delightful manner, played into the hands of those who, with Mr. Graham and myself, are dissatisfied with the present progress of Himálayan exploration.

The communications to which I refer, and out of which I propose to furnish alpine readers with a few minutes' rare entertainment, may be found in the weekly mail numbers of the leading Anglo-Indian journal, the 'Pioneer' of Allahabad, of July 27, August 3 and 10 last. Those in the July number profess to come from two separate pens. The first we will take up—for its author seems to be the *fons et origo* of the discussion—is written by one who has been for 'thirty years a wanderer in the Himálaya'; and is in communication, he tells us, with Mr. Robert, an officer of the Sikkim Survey, whose recent work has been singled out by Mr. Graham and Herr Boss for high praise. With all the advantages of his own life-long experience and Mr. Robert's professional aid, this ancient mountaineer sets himself to prove that Mr. Graham's ascent of Kabru is a fiction; that, in fact, he and his Swiss only climbed a neighbouring ridge with an almost identical name (Kabur), some 16,000 feet in height, and therefore hardly reach-

ing the snow-level. He maintains, that is, that a young Oxonian, an officer in the Swiss army, and a guide of high repute have combined to pass off an impudent mystification on an audience comprising Sir J. Hooker, Sir R. Temple, General R. Strachey, General Walker, and some of the best-known mountaineers of the Alpine Club, and have succeeded in their attempt. I put it plainly; for in cases like this it is only just to all concerned to brush aside sham circumlocutions and to substitute direct statements for insinuations which can hardly be called covert. If Mr. Graham wrote and Herr Boss gave the accounts they have written and given of the ascent of Kabru, when they had, in fact, only ascended a peak of 16,000 feet, they are—well—Baron Munchausen and Captain Lawson (*not* of New Guinea) were but babes in comparison to them in the art of story-telling.

The grounds on which this bold hypothesis commends itself to the mind of a Himálayan mountaineer are fortunately fully stated. They form a revelation of that state of mind which is singularly interesting. But they must speak for themselves. I quote the crucial sentences.

'1. The Bhooteas of the adjacent tracts, many of whom find their way to Darjeeling during the market-days, have been asked whether the summit of Kabru could be reached from Jongri, and they positively state that they would not venture to make the attempt under any circumstances. They are as strong and sturdy a race of men as any in the world, and certainly where a goat could climb they would. There is a well-authenticated story of a Bhootea woman, who, with a grand piano on her back, accomplished a journey of forty-six miles in three days.

'2. Mr. Graham's native guides say that while at Jongri the tourists made an excursion northward toward the snows, and returned the same evening to their camp. If so, they could only have gone as far as a peak called Kabur in the trigonometrical maps, the height of which is 16,000 feet.

'3. Mr. Roberts (*sic*) has taken angles with a theodolite at Kabur, and he says most decisively that no practicable ascent could be found from this point to Kabru; and that no amount of skill and experience can avoid the almost certain consequences of an attempt to clamber over sharp ledges of rock, and of the yielding of the snow-coating that covers over a concealed crevasse.'

The writer has altogether omitted to specify one most essential particular—whether the 'guides' interviewed were among those employed by Mr. Graham in his spring or his autumn journey. If, as seems from internal evidence more than probable, they belonged to the spring party, their report was of course absolutely valueless as to what was done in the autumn.

On one point only is any serious reply called for, or possible. The writer is evidently ignorant that Mr. Graham entirely agrees with Mr. Robert that Kabru is inaccessible from the south—that is, from Jongri—and that he has stated that his camp for the ascent was pitched, not at Jongri, as has been assumed, but at a height of about 18,500 feet, and that he made the ascent from the east, and not from Kabur or Jongri.

For the rest, to those who do not appreciate at a glance the exquisite absurdity of this argument, any comments of mine must, I fear, be useless. If Himálayan travellers really think the opinion of natives on a mountain ascent in which they did not take part of the slightest value, their own opinion is thereby shown to be worthless. One cannot teach

children to read before they know their letters! There are, it seems, in India 'mountaineers' of thirty years' standing who know less of mountaineering than Europeans did fifty years ago! They have not yet learnt that neither strong nor sturdy peasant—nay, not even the boldest chamois hunter who is a stranger to icecraft—can compete with the trained mountaineer. I have myself seen some of the boldest hunters of the Caucasus and Tyrol tremble and turn tail, leaving English climbers to complete their ascents alone. As I write a letter is brought to me dated from Urusbieh, and describing an ascent of Elbruz. 'Ismail,' says M. de Déchy, 'desired us to take one of his ibex-hunters 'as a witness to the ascent. The man was a great hindrance to us, 'particularly on the descent, slipping constantly on the hard snow in 'his native shoes.' On my table lies Dr. Güssfeldt's account of his recent travels in the Andes of Chili. 'For successful exploration,' he writes, 'the native guides, though very serviceable, are not sufficient; 'without alpine guides from Europe the traveller feels like a man in 'fetters, and it is only by an exception that he can reach one of the 'panoramic summits that afford the views essential to his undertaking.'

These Himálayan wanderers apparently think that strength of back is everything in mountain climbing. Messrs. Broadwood's piano-movers would, I suppose, be in their opinion perfectly qualified alpine guides! They might as well imagine that dock-porters would show sailors the way in going aloft! The Himálayans seem ignorant that the great peaks in the Alps, with exceptions to be counted on one hand, were pronounced inaccessible by the dwellers at their base up to the present century, and that the last has now fallen. They believe that an engineer can settle the question of the accessibility of a mountain by taking the angles of one side of it with a theodolite; and that he may safely do what the most experienced mountaineer now hesitates to do, and generally fails in doing when he attempts it, to wit, pronounce an opinion on the difficulty of a peak which he has not seriously attempted. 'Un feuillet mince absolument inaccessible' is the description given by one of the most cautious of scientific men, De Saussure, of a summit which any child may now reach. There are few of us who have not failed in similar estimates as egregiously as our distinguished predecessor. Finally, the 'Indian school' positively imagines that 'sharp ledges' (what is a sharp ledge?) and snow-concealed crevasses are enough to stop—or kill—the modern mountaineer. Had we not long ago learnt how to 'avoid the consequences' of concealed crevasses the whole Alpine Club would by this time be descending the Alps at the rate of a few inches a day, and in the condition of frozen meat!

I have sufficient respect for Mr. Robert, who is known as a very zealous and efficient surveyor, to believe that he will hardly thank the man who imputes to him such a primitive belief. Yet he may hold it without being far behind his colleagues. Only the other day one of the most distinguished of Indian Surveyors, a man of exceptional experience in mountain exploration, assured me that in the course of his many glacier expeditions he had never used the rope on rocks or steep slopes, and that he would not think of doing so, because he knew of no Himálayan mountaineer who in the case of a slip could hold up a companion.

That such a thing should be possible except on a comparatively level snowfield was a strange and hardly credible idea to him. His mental attitude resembled that of the Swiss peasants of the sixteenth century, described by Simler, who used the rope on the St. Theodul and Col de Collon, but never dreamt of the possibility of reaching Monte Rosa, much less the Matterhorn. The criticism on modern mountaineering of men with these notions must of necessity be wide of the mark. It is as if a rural cricketer who had never faced round-hand should dispute the feats of Grace or Spofforth, or the foreign journalist who records how, after a 'lutte terrible' of 4 hours, Oxford won by 23 minutes should proceed to comment unfavourably on the rowing of the winning crew.

The Himálayan veteran has, in two 'Occasional Notes,' the support of another anonymous writer. The two Indian critics cannot agree between themselves on the elementary facts either of the particular case or of the general subject they are discussing. One of them, for instance, states that 'as a matter of fact trigonometrical surveyors in Ladakh have taken observations with the theodolite at 23,000 or 24,000 feet above the sea;' while his comrade asserts that 'the Indian school of mountaineers maintain their belief that no Himálayan summit of over 20,000 feet has ever yet been reached;' in other words, that the reports of their own Survey Department are a mass of misstatements! One thinks Mr. Graham only attained 16,000 feet, the other will allow him 17,000!

However, let us hear their case out.

Mr. Graham, it is alleged, has given provocation to the Survey officers, as whose advocate the second writer poses. This is so far true that Mr. Graham and Herr Boss have criticised severely the topographical detail of one of the maps of the Department, and that they have drawn from European and Indian experience the conclusion that some knowledge of icecraft is essential to the success of surveyors in a snowy range. It 'naturally follows,' readers are told, that the 'Survey 'officers are not disposed to take Mr. Graham's account of his own 'achievements without question. . . . . The sceptics are prepared to 'show reason for their unbelief,' and they are 'those who have most 'experience in Himálayan mountaineering.' 'During the last cold 'weather a surveyor and some others who were working in the Sikkim 'hills took the same route as that followed by the alpine climbers, and 'had with them the same Bhootea guides. These men pointed out the 'various peaks and passes that were visited by the tourists, but when 'they came to the great peak of Kabru—Mr. Graham's crowning 'exploit—they pointed out a mountain to the S.W. bearing the same 'name as the one really ascended by the travellers. The hill is put 'down as probably not much over 17,000 feet.' *

Here, again, the reason given for unreason is so flimsy as almost to evade dissection. It is enough to repeat that no native having taken part

* This is an instance of the carelessness of Indian sceptics. The height of Kabur is officially given as 15,827 feet in the 'Panoramic Profile of Sikkim,' Surveyor General's Office, Calcutta, 1882, which Mr. Graham obtained in India. See illustration.

in the actual ascent of Kabru, no one of any mountaineering experience would expect a native to point out that peak as having been climbed. In the Alps, much more in the Caucasus and other wild countries, it is exceedingly rare for an ascent made by a traveller with guides strange to the locality to be recognised on the spot either at the time or subsequently. Lieutenant Payer, afterwards of Arctic fame—I may be excused the personal recollection, as the incident stands permanently recorded in 'Petermann's Mitteilungen'—had in 1864 to climb the Presanella and find my bottle in order to get the first hint of any previous ascent. The numerous ascents of Ararat are one and all disbelieved in by the dwellers at its base. But the fact is notorious, and every mountaineering periodical teems with instances of it. The man who can quote native opinion, as it is quoted by Mr. Graham's Indian detractors, shows that he is utterly ignorant of the history of mountain exploration.

Again, if the natural consequence of independent criticism on Survey officers is to lead them, or their representatives, on such flimsy grounds as I have cited, to endeavour to represent mountaineers outside what they are pleased to call their Indian school as untruthful braggarts, it is time some check was put on such exhibitions of reckless and perverse jealousy. I do not use these epithets at random. Of recklessness the following paragraph furnishes a more than sufficient proof.

'The alpine climbers have also credited themselves with the ascent of Pandim, a height of 22,018 feet; but here again the Bhootea account differs, and points to another peak in the neighbourhood, some 3,000 feet lower, as the one really climbed.'

Now Mr. Graham has never claimed to have ascended Pandim; on the contrary, he has described it as a peak of extraordinary difficulty, on no side of which could he see any promising line of attack.

For perversity the 'note' still in store could, I think, hardly be exceeded. It is devoted to proving that Mr. Graham and his companions made no discovery when, in October 1883, they drew attention to peaks beyond and probably higher than that now known in England as Mount Everest and abroad as Gaurisankar. The proof offered is, that, in the *following* February 1884, a survey party saw peaks the position of which is imperfectly indicated in the Note, but which are assumed to be identical with Mr. Graham's. Of these peaks measurements were taken which have not yet been worked out, but which the surveyors feel some confidence will prove the new peaks to be higher than any mountain yet measured. It is best to give the exact words, however, for a question rises on them. The position assigned to the surveyors' peaks is apparently identical with Mr. Graham's; but peaks in this position could hardly be seen over another chain and measured from 'the *southern* boundary of Nepal,' that is, from a distance of 180 miles, with the necessary accuracy.

'The idea of an undiscovered summit still higher than any of those yet known to us is perfectly familiar to Indian surveyors, who have already marked down the likely rivals, and if there is to be a discovery we probably stand on the threshold of it. Two of Colonel Tanner's assistants, while they were triangulating last cold weather along the southern boundary of Nepal, noticed

four or five peaks further north, and closer to the central mass of the range, which they think may possibly be as high as, if not higher than, Mount Everest. One peak in particular attracted their attention, on a very bright morning towards the end of February as they saw it standing boldly over and beyond another of great elevation; and if there is to be a new champion of the world it will probably be this. But as all Himálayan travellers know, the great mountains show themselves very differently according to the points from which they are observed, and appearances do not decide the question of heights. The observers managed to take vertical angles to the peaks, but all the data for computing their heights are not yet complete. Next cold weather, however, operations will be resumed, and the question of supremacy will be finally decided, the general opinion being at present in favour of one of the newly discovered rivals. The settlement of the matter will come as a surprise, no doubt, to Mr. Graham and his admirers, who seem to have gone on the principle of assuming that nothing was known because they did not know of it' (*sic*).

The climbers assumed that 'nothing was known' up to the commencement of the present year, not, in the eccentric phrase of their critic, 'because they did not know of it,' but on the authority of the Survey Department itself; and General Walker has since been careful to explain that the 'very high snowy peak' placed on some maps near Mr. Graham's new mountains was based only on the authority of a native (Pundit No. 9), and might refer to a peak of anything between 20,000 and 30,000 feet. The theory that first found favour at Darjeeling was that the 'new peaks' were none other than Mount Everest itself, and this suggestion was publicly put forward by Sir H. Lefroy in his address to the British Association in Canada at the very moment it was found expedient to abandon it in India. Mr. Graham and his companions can of course feel nothing but satisfaction if the discovery they announced should, after having been doubted and disputed for six months, be finally confirmed and accepted. Whether the new peaks prove eventually to be loftier than Gaurisankar or not, their separate existence seems to have been established. And this is all that the alpine climbers have affirmed as of their own knowledge.

So much for the opening of the impeachment. On the 3rd and 10th of August fresh witnesses came forward. The main object of the letter of one J. C. on the 3rd was to contradict an assertion of the wanderer of thirty years' experience as to yak shooting; but he also expressed his opinion 'that any one who has had Himálayan experience must share the doubts as to Mr. Graham having attained the wonderful altitudes he supposes himself to have done.' It results from the two letters that either the wanderer knows very little about the wild yaks he discourses on so positively, or that J. C. has a passion for idle contradiction. When they have settled these little differences between themselves, explorers will be ready to pay some serious attention to their views on difficult matters of topography and altitude. Perhaps in thirty years more the wanderer will know all about wild yaks and have picked up the first principles of mountaineering! But for the present we must bid him farewell.

On the 10th of August Colonel Kinloch, a well-known Himálayan

sportsman, put forward fairly and forcibly his doubts with regard to the recent ascents. His statement of the grounds on which he finds it difficult to accept them leaves nothing to be desired. He does not weaken his case by ridiculous counter-assertions; he expressly denies any wish to 'impute to Mr. Graham that he has wilfully misrepresented facts;' he very judiciously 'sets aside' the mountaineering argument, and he relies on an objection which has considerable *primâ facie* weight, and on a supposition which, until the details of Mr. Graham's journey are taken into account, is sufficiently plausible. I welcome in his letter a serious statement of the arguments that have to be met, and one to which it is possible to reply in a similar spirit.

Colonel Kinloch believes that, at the height (24,000 *feet*) *alleged to have been reached, more inconvenience must have been felt from the rarity of the air. He has himself suffered considerable inconvenience at heights between* 18,000 and 20,000 *feet.*

The answer, I think, to this objection is as follows: During the past one hundred years the height to which some human frames can habituate themselves has been steadily increased. Fifty years ago no one would have been believed in an ascent of Mount Blanc in which the climber denied that he had felt ill on the top. Thirty-four years ago a very cautious writer, Sir J. Hooker, stated, as the result of his Sikkim experience, that he believed that men would train themselves to 'reach easily' 22,000 feet. According to the Survey Reports this prognostication has been more than once realised by the officers of the Department. Dr. Güssfeldt on Aconcagua has recently reached 21,000 feet without suffering any inconvenience sufficient to arrest further progress. Mr. Whymper's experiences are well known to readers of this journal. Mr. Graham and his companions did feel very abnormal action of the heart, though it did not stop them. I cannot expect others to be similarly impressed by a personal experience, but one man's experience is as good as another's; and I can never forget that I was once one of a party of six on a peak of 18,400 feet, none of whom suffered in any way from the air, though we almost ran up the last rocks of Elbruz. I may add that my friend Mr. C. T. Dent, who is a surgeon and a physiologist as well as a climber, and who has given special attention to the subject, agrees with me in dismissing this objection as untenable.*

Again, Colonel Kinloch supposes that the alpine climbers may have been mistaken in their identification of the principal peaks they ascended.

This supposition, plausible as it may seem, is to my mind conclusively negatived when we come to consider the circumstances. Kabru, the great western supporter of Kinchinjanga, is conspicuous and well known to all who have studied either in nature or in art the panorama of Darjeeling. Mr. Graham paid two separate visits to the Kinchinjanga group, having in the interval full opportunity of comparing near and distant views. In these journeys he examined the mountain he climbed on every side and ascended many points in the vicinity; he had with him Mr. Robert's new two-inch to the mile

* See *Above the Snow Line*, pp. 313-15.

map and a sketch-map with a panoramic profile of the Kinchinjanga group and Gaurisankar.*

Mistakes in detail the climbers may have fallen into. To accuracy in measurements they have made no pretensions. But that they should have honestly mistaken their mountain seems to me altogether beyond the bounds of reasonable hypothesis; and the height of Kabru has been fixed by the Trigonometrical Survey.

One alleged instance of inaccuracy on Mr. Graham's part in the letter of the Wanderer of Thirty Years' Standing, which I had passed over, I must notice here, as it is referred to by Colonel Kinloch. The Wanderer tells his readers that 'a friend' tells him that Mr. Graham had told the friend that he had seen 'monals,' or snow-pheasants—a bird the upper limit of which is said erroneously by the wanderer (in whose natural history yaks seem to be not the only weak point) to be 13,000 feet—at a height of 20,000 feet. In his paper Mr. Graham says he saw 'monals' during the ascent of a peak of 22,000 feet. The reporters' misunderstanding is sufficiently obvious.

Now at length, 'solvuntur risu tabulæ;' and we are at liberty to return for a few last words to the authors, whoever they may be, of the anonymous articles. Writers so ridiculous and so contradictory might, it may well be thought, have been left alone in their obscurity. But this is no isolated attempt on the part of the Indian press to throw discredit on those who, unassisted by public funds or private associations, give their energy and money to furthering our knowledge of the Himálaya, and who claim in return the Englishman's privilege of speaking of things as they find them. It is time that such attacks should be met by the wholesome blast of ridicule, which, in any capital of Europe, would at once turn them back on the assailants. It is insufferable that private travellers should not be able to mountaineer in the Himálaya without being hailed on their arrival as fools and on their departure as knaves; and it will be felt in England as a lasting disgrace if similar unmannerly assaults are extended to foreign climbers who may be induced to follow in Mr. Graham's footsteps.

I have been compelled, in analysing these articles, to treat their authors in the character in which they offer themselves as representatives of the officers of the Survey Department. But it must not be assumed that they can prove their commission. Our Indian surveyors are perhaps not responsible for the foolish and unfair things put in their mouths. They will, we must hope, come forward and dis-

* This map and panorama had neither of them until this month officially reached England. The India Office knew them not. Of the panorama I owed a copy to the courtesy of an Hungarian gentleman resident at Odessa. Of the map (Original Plane Table Sketch of parts of Independent Sikkim, Bhutan, and Thibet, by Mr. W. Robert, Surveyor-General's Office, Calcutta, January 1883), one of Mr. Graham's sheets having been lost in transit, no complete copy as yet exists in this country, and in its absence the publication of a map to illustrate his paper has had to be postponed. The sheet in my hands is marked 'unpublished;' it has probably been withheld hitherto from the public on account of the Survey of which it forms part being still in progress. A copy of the panorama has just been supplied to the Geographical Society; the map has not yet arrived.

claim them. Or, if they cannot do this, the secretaries of the R.G.S. will no doubt receive a careful statement of the grounds on which the surveyors consider the statements made to the Society by Mr. Graham and to the Alpine Club by Herr Boss incredible. One or the other alternative they must surely for their own credit adopt.

In the meantime let me, speaking on behalf of mountaineers, disclaim most sincerely any intention of disparaging the higher work of surveyors, or even of comparing the ordinary difficulties surmounted by alpine climbers with those to be met with in Himálayan travel. Our only desire is to work with and assist the Survey in India as we have elsewhere. And our Indian surveyors deserve at this moment all the help and sympathy that can be afforded them. For, from no lack of goodwill on their own part, but by the policy of the Indian Government, they are perpetually hindered from showing, as they once did, their capacity as adventurous travellers. They must submit to hear from Sir Henry Rawlinson that 'very great praise is due to Russia for her scientific explorations; I could only wish England had done as much as regards her Indian frontier;' and from another authority (R. G. S. Supplementary Papers, 1884, vol. i., part 2): 'When we look for information on Central Asian subjects, it is to the Russians and their literature that we turn. There is no longer the same desire manifested by Englishmen to be first in the field of research.'

The will surely is there, but the way is barred. Russia says, 'Go if you like; if you succeed, you shall be handsomely rewarded; if you get into trouble, expect no aid.' England: 'I dare not let you go, for you may get into trouble, and if so, I may have to help you.' An Asiatic war, if it lies in our destiny, will arise, we may think, from the want of knowledge rather than in its pursuit. But this is not the place for high politics, and, if the Government of India believes that it is in the national interest that our officers should explore as little as possible beyond our frontiers, and should keep back as long as possible what they are permitted to discover, surveyors and geographers must alike submit. Let us hope that the Afghan Frontier Commission, despite all forebodings, may prove a fresh departure.

But if our surveyors are to have no new regions opened to them, they should all the more welcome those who would, by teaching them mountaineering, show the way to a field of research within their reach. Sir H. Lefroy in his geographical address at Montreal expressed his desire that the Survey officers should obtain more Pisgah views into the unknown region. We would fain help them to do so. We shall rejoice if we can place Indian surveyors in a position in which they are no longer likely to profess their inability to climb higher than a Bhootea, if we can at least rescue them from that ignorance of their own ignorance which has betrayed them into the singular indiscretion of imputing to alpine mountaineers similar limitations.

For I must repeat here at the end what I said at the beginning: the fact that it is possible for a leading Anglo-Indian journal to publish in the name of the 'Indian school of mountaineers' communications showing utter ignorance of the history of mountain exploration and the elements of icecraft goes far to prove that no such school exists,

and is a very valuable and opportune testimony to the appositeness of the suggestions made in the last number of this Journal, and, on that account, if on no other, is well worthy of the notice not only of the Alpine Club and the Geographical Society, but also of the heads of the Survey Department in India. The surveyor who in his youth has been

> 'tied to run afoot
> Even to the frozen ridges of the Alps,'

will go on with greater confidence to

> 'any other ground inhabitable
> Where ever Englishman durst set his foot.'

The draftsman who has become familiar with the mountain work of the Federal Staff will be more competent to 'sketch the principal features' of the Himálaya on the scale of an inch to the mile than Mr. Ryall's 'confused' assistants. A man who has never seen a tree might as well be put to manage forests, as a man who has had 'no training in hill-work' to map the highest mountains in the world. We may surely hope that the very just observations of Mr. Graham and Herr Boss on the Kumaon Survey will prevent the repetition of such an absurdity, and the consequent presentation to the world of maps containing a mass of details which, not corresponding to nature, had far better have been frankly left out.

ALPINE ACCIDENTS.

Of late years we have frequently had to chronicle under this heading more than one fatal catastrophe. The last summer, however, has happily passed by with the loss of a single life only in the Higher Alps. Of this accident we take the following details from a letter by Signor F. Farinet, published in the 'Gazzetta del Popolo' of July 16, and reprinted in the July number of the 'Rivista Alpina Italiana.' M. Guttinger, of Geneva, started on the morning of July 11 from Cormayeur, accompanied by J. M. Rey and Julien Proment, to sleep at the hut on the Grandes Jorasses, intending to complete the ascent next day. About 4 P.M. the party came to a couloir of about 65 feet, which had to be ascended in order to gain the shelf on which stands the hut. The glacier being in a bad condition, owing to the late hour of the day, the guides resolved to go up by the rocks and to let down a rope by which the traveller could mount without touching the ice. They warned M. Guttinger to shelter himself under an overhanging rock, for fear of causing loose stones to fall upon him while they were climbing up. M. Guttinger took this advice, and Rey, aided by Proment, began to climb up the rocks; but seeing his traveller leaving his shelter to see how the obstacle was being overcome, Proment called out to him to go back. The unfortunate traveller is stated to have replied that he was too curious to see how the guides were getting on to allow him to do so. Rey went on climbing up, when a stone began to move, carried others with it, and all fell down towards M.