

the last man, owing to extraneous causes, slipped and fell. The party was ascending diagonally at the time, over difficult rocks and ice, and below the actual crest of the ridge. As a result of the fall of the last man, the second man was pulled off and both he and the third man were swung into space. We give the concluding episode in the leader's own words: '*Twice* indeed the rope held in spite of the double fall into space. I will add that its thinness in this case proved an unexpected advantage as, owing to this fact, it slipped gradually through my fingers, causing it to act as a brake instead of giving me a violent shock which would doubtless have pulled me off as well. It is due to the light rope that my companions were saved, when we were all so nearly killed. The rope held *most admirably*.'

We may add that the said rope was in its *second* season, but had not suffered from being used on difficult rocks.

We shall not, of course, be suspected of favouring the light 'line' at the expense of the far stronger, Frost or Beale, ordinary Alpine rope.

WIDE ANGLE STEREOSCOPIC PHOTOGRAPHY AS A MEANS OF PROSPECTING MOUNTAINS FROM A DISTANCE.

SOME years ago it occurred to the writer that the principles of aerial stereoscopic photography might be applied to surveying distant or inaccessible mountain faces.

It is well known how flat an ordinary landscape appears from an aeroplane a few thousand feet above it, and similarly survey by direct aerial photography fails completely to show the contours of the land which is photographed. A well-recognized method of overcoming this deficiency is to take from the aeroplane two photographs of every strip of country, these photographs being taken from the same height, and at a considerable distance apart. They are then set up in a suitable binocular viewing apparatus, and the country viewed stands up in greatly exaggerated relief, so that the contours can be quite accurately sketched in by hand.

Precisely the same principles may be applied to obtain a picture of the form of a distant mountain, with the detail of its relief exaggerated to any required degree.

The appearance of a mountain face seen with the naked eye or telescope from afar is notoriously featureless in its deceptive flatness, for the distance of human eyes apart is so small that no conception of solid form or depths can be obtained at greater distances than a quarter of a mile or so. To get within so close a distance of a large mountain in order to prospect a possible route up it, is usually inconvenient, and requires such proximity to the lower parts of the face that all true impression is lost of the proportions of the top of the intended route.



Photo, B. R. Goodfellow.]



FROM E. RIDGE OF TOUR RONDE.
(Taken from 100 yards apart.)

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The method described here can be applied to give a relief picture of anything which can be photographed, whatever the distance.

In order to obtain this exaggerated picture it is necessary to take two single photographs of the mountain. Both these are best taken at the same level, equidistant from and at right angles to the face viewed, and as far apart from each other as convenient. Owing to the great accommodating power of the eyes, it is not essential that any of these conditions should be exactly obeyed.

Prints are made in the usual way, and in setting these up, the simplest method is to mount them exactly level and parallel, taking any prominent feature in the centre of the view as a 'base line'; the distance of the prints apart should be the same as those of a normal person's eyes—*i.e.* 60 to 65 mm. Care must be taken that the prints are set up so that the left eye views the picture taken from the left viewpoint, and the right eye, the picture from the right viewpoint. Many stereoscopes are fitted with diverging prismatic lenses, which enable a much greater distance to separate the centres of the pictures and so allow larger prints to be made.

To view the prints it is best to use any ordinary stereoscope, or failing this, the prints can be registered together quite well with a pair of ordinary convex lenses of the same power, or most simply of all, by medium-powered spectacles with convex lenses.

The photographs given as an example were taken from the S.E. ridge of the Tour Ronde, and show the Brenva face of Mont Blanc. They were taken about 100 yards apart.

When the prints are viewed in the manner described, an enormously exaggerated picture of the face is obtained, and vertical rock ribs, couloirs and snow ridges, stand out in the most striking relief.

When these photographs were taken it was impossible to distinguish with the naked eye the profile of the upper Péteret ridge from the Brouillard ridge beyond. When viewed stereoscopically these prints leave no doubt whatever in the matter.

It is suggested that this method, although involving the delay of printing and setting up the photographs, has very definite possibilities for surveying new routes and new mountains.

B. R. GOODFELLOW.

THE MOUNTAINEER AND THE MOUNTAIN FILM.

THE mountaineer and the mountain film belong, it would seem, to one another, and yet to those in any way familiar with Alpine literature I state nothing new when I remind them that nearly every film of the kind, whether dealing with sport, culture, expeditions, or a simple play, has been rejected more or less passionately in mountaineering circles.

The film of the present day is a peculiar product of *art*, *technique*, and *business*. Thus the film has its own laws, laws of which most