

THE SNAP-LINK PULLEY BELAY

By A. L. CRAM

SNAP-LINKS may be employed as pulleys, fixed on belays, to raise, to lower and to rescue.

In place of a shoulder-belay, safeguarding the lower man ascending, three coils of the rope are wound loosely round a spike, the leader being tied to the short end, but retaining a sufficiency of rope to enable him to move freely. A snap-link embraces all three coils and hangs down. The rope to the lower man is run through the link. The ascending rope is guided by the left hand and the descending part is gathered in by the right, before and after the link respectively. A continuous but barely perceptible tension can be maintained on the waist-loop of the ascending man, while any slip can be immediately checked by grasping both ropes together in the two hands. A loop of rope may easily be wound round the spike to make a solid hitch. The belay is useful in places where the first man is obliged to kneel or crouch. By putting a twist of rope in the link, that is, winding the rope once round the body of the link and again snapping it through, more friction and control are obtained. This method is of equal service when a rock-pin is used for a belay and the snap-link hangs from the pin. In such an instance, it is frequently better if the first man attaches himself to one pin and uses another pin as a belay for the second man.

To raise a disabled second or one who finds a pitch beyond his powers, the rope, after being passed through the top link, as already described, may be dropped in a loop, which the second snaps into a link at his waist. The first man then once more snaps the rope through the top link and pulls his second up by means of the powerful pulley action. In the event of the upper climber being still unable to raise the lower, he can throw down the rope end so that the lower man can pull upon it. Meantime a second rope, with a loop ready-made to fasten to a second link on the lower man's waist loop, is dropped and the leader pulls upon this.

The pulley method is also of service when an injured person has to be lowered by a single man, or, in a case where the leader cannot trust an inexperienced second to descend by himself on the doubled rope. Twists may be made in the link or links to increase the friction. In this instance nylon rope is not suitable. Not only does the rope become hot but the links may be too hot to touch. It must not be overlooked that double pulleys substantially decrease the effective lowering distance. Ordinarily, one man should be able to lower another without strain, using one or even two twists of the rope in the link and using the top link only. The last man to descend can use this method as well, provided it is considered necessary to abandon the top

link and the rope-loop or pin to which it is fixed. Holding one rope in his hands he may descend either with or without using his feet. In the latter event he could grip both ropes, one in either hand. He may even be assisted or lowered down by the second man, requiring less time or precaution than if he had no safeguard. These methods are useful when there is no time to use the second rope or when only one rope has been carried.

The pulley method may be combined with other tactics in rescuing a man who has gone deeply into a crevasse. It is not necessary to emphasise the need to prevent early exhaustion by placing a foot as soon as possible in a loop in one of the ropes. Where there are only two climbers, the belay on the axe, ice-pin, or fashioned ice belay, can be left in the rear with the ropes running through a link while the man above the ice may advance nearer to the crevasse, still maintaining tension on the ropes, still safeguarded by them, and still able to operate the pulleys from any point on his route. The value of the double pulleys is that the lower man can powerfully assist in his own rescue, by pulling on one of the ropes.

To make a comfortable seat in the rope, it should be wound three times in figure-of-eight round both legs at the crotch. A snap-link is inserted where the ropes cross. The double rope is then passed through the link as in the so-called 'abseil' loop.

To make use of these and like devices, the climber is called upon to burden himself with no more than two snap-links. A new hard-aluminium link, manufactured at Chamonix, weighs only one-third of a steel link, cools more rapidly, and stands the strain well.