

Arizona, West Fork, Oak Creek Canyon (Sedona). On 15 February Dick Lee (22) was rappelling down an 80-90-foot cliff on a fast free rappel. He had completed two jumps and as he was pushing off into the third the rope ($\frac{3}{8}$ inch manila and $\frac{3}{8}$ inch nylon belay) broke just past the brake bar. Lee fell 35 feet onto a bed of rocks on his right side, bounced 4 feet up, flipped, and landed on his left side. He remained on his back for 2 hours before a doctor arrived with morphine. The temperature was approximately 25-28°F. He did not lose consciousness until the start of the second operation 5 hours later. He suffered extreme physical shock, no nausea. Frank Barker applied pressure to his pelvis and legs for 2 hours until the arrival of a doctor. It took 15-20 men one and a half to two hours to descend to an ambulance with Lee on a stretcher.

Source: Richard R. Lee.

Analysis: Complete and accurate check of equipment before use.

Colorado, Rocky Mountain National Park, Mt. Otis. On 25 July at about 3 P.M. a party of six climbers in the Rocky Mountain Guide Service Mountaineering School was participating in a rock climbing demonstration and practice on a rock formation on the south wall of Mt. Otis Rocky Mountain National Park. The school was demonstrating and practicing techniques of tension climbing under the direction of Chief Guide Tom Nash. The party consisted of Nash, Dr. William Eubank, Steve Mineto, Park Ranger Russell Betts, Tom Lea, and Henry Monroe. Mr. Monroe (61) was taking pictures of the other climbers while standing on the broad ledge in the cliff face about 200 feet above the valley floor. Mr. Monroe stepped down off a small rock, lost his balance and fell to the ground, twisting his right ankle which immediately caused pain. Mr. Monroe announced to the others that he had injured his ankle; at which time Dr. Eubank examined him and gave first aid which consisted of a splint from above the knee to the foot.

Source: Rangers Betts and Thompson.

Analysis: The party had been climbing most of the day in very warm weather at an elevation of about 11,000 feet. This may have resulted in some fatigue on the part of the victim due to his age and degree of acclimatization. It is felt that Mr. Monroe's loss of balance was due to this condition. He was not in a technical climbing situation at the time of the accident and the terrain did not suggest the likelihood of an accident. Due to the strength and extensive experience of members of the party, the technical evacuation was carried out with great efficiency.

Colorado, Estes Park, The Thumb. On 20 September Jim Russell (17), Gary Hartman (16), and Penny McMahon (16), one of two parties, started to climb The Needle. Jim Russell took the first lead and arrived at the ledge about forty feet above the ground, having placed only one piton because of a scarcity of suitable cracks. The piton used was a Holubar angle and could only be driven with great difficulty upside down. It was placed at approximately 25 feet above the ground — slightly over half-way to the ledge Russell had attained. It was placed considerably off to

the right of the most direct route to the ledge as this was the only crack to be found.

No piton could be driven at the ledge which Russell had attained and no piton cracks could be seen nearby. Hartman was then brought up. (He was tied-in near the center of the 150 foot Columbian Nylon rope.) The two climbers switched positions as Hartman wanted to take the lead. At this time Miss McMahon scrambled up about 10 feet off the ground to the top of a large rock leaning against the lower part of the face directly below the two climbers and proceeded to tie onto their rope.

The climbing party was now roped and ready to climb. Hartman took the lead, being belayed by Russell, who had found an adequate position on the ledge. Hartman had climbed only 6-10 feet above Russell when he slipped and fell. As he slid downwards he struck Russell, dislodging him from his belaying position and they both fell downwards. On his way down, Hartman struck Miss McMahon and landed on his back on the large rock on which she was standing — a fall of approximately 30 feet.

As Russell came down he was arrested by the piton which was clipped to the rope between him and Miss McMahon. He pendulummed across the face, jerking Miss McMahon into the air. They both ended up hanging from the piton a few feet above the ground.

Hartman was killed instantly as a result of a broken neck or backbone. Miss McMahon received a brain concussion and Russell received serious bruises. His hard hat prevented serious injury to his head, as there were two fractures found on the fiberglass "Bucco" helmet.

It is the general consensus of opinion that Gary Hartman's fatal injuries could not have been prevented by a hard hat. Russell and Miss McMahon were both confined to a hospital for several days.

Source: David Whiteman.

Analysis: This is another of those cases where a piton could not be placed for the protection of the leader. Perhaps a bolt should have been placed (neither of the climbers carried bolts) or perhaps another party should have gone up an easier route and belayed the climbers from above.

Jim Russell has suggested that perhaps they should not have attempted a climb of this severity on a CMC trip. He rated the climb as moderately difficult, but stresses that Hartman had often climbed more difficult routes than this. No reason can be offered to explain the fall.

Wyoming, Grand Teton National Park, Grand Teton. On 3 September a party of four had completed the ascent of the Grand Teton under good weather conditions. As the party was descending by the Owen Route Mr. Newcomb saw that the party was beginning to show signs of fatigue. At a point about halfway between the "Upper and Lower Saddles" he asked the members of the party to remain in position on a ledge while he looked for a spot where they could rest awhile and rope up for a short section of rather difficult rock they were coming to just below them. As no one saw Mrs. Rosenberg start to fall it has been supposed that she attempted to follow Newcomb and slipped or lost her balance while getting off the ledge. She slid down a short, almost vertical, section of rock and then across a gently sloping ledge about 5 feet wide. Then down about a 30 foot steep couloir onto a steep snowfield in the bottom of the main couloir