

Mountaineering

Deutsches Gebirgsjäger

1939

Overview

- a) General Weltanschauung
- b) Scale of Requirements
- c) Technique
- d) Bivouacs
- e) Self-preservation & Orientation
- f) Mountain Guides

a) General

- Leverage the recruit's inner pride in his Alpine heritage so that he only ever wants to serve as a Gebirgsjäger
- Build self-confidence with patient and systematic pace
- Raise physical and technical requirements gradually to unconsciously build the calm confidence required.
- Climbing and skiing for recreation encouraged but always supervised by mountain guide officers.
- Service in the mountains quickly tests character, revealing which men are best to become NCO's

b) Scale of Requirements

- Training is systematized according to grades of difficulty based on terrain and length of march:
 - Easy Walking
 - Difficult Walking
 - Easy Climbing
 - Moderately Difficult Climbing
 - Difficult>Very Difficult>Extremely Difficult

b) Scale of Requirements (Easy Walking)

- Training is systematized according to grades of difficulty based on terrain and length of march:
 - Easy Walking: Pathless terrain, including ridges and slopes, over which men can walk without danger of falling.

b) Scale of Requirements (Difficult Walking)

- Training is systematized according to grades of difficulty based on terrain and length of march:
 - Easy Walking
 - Difficult Walking Terrain: Steep rock ridges and ragged slopes over which the men can move without using their hand if they choose the right route, but where they run the risk of slipping

b) Scale of Requirements (Easy Climbing)

- Training is systematized according to grades of difficulty based on terrain and length of march:
 - Easy Walking
 - Difficult Walking
 - Easy Climbing: Exposed grass or rock ridges where even the trained climber must use his hands to keep his balance and sense of security, BUT has not trouble choosing a route.

b) Scale of Requirements (Moderately Difficult Climbing)

- Training is systematized according to grades of difficulty based on terrain and length of march:
 - Easy Walking
 - Difficult Walking
 - Easy Climbing
 - Moderately Difficult Climbing: ridges and faces of grass or rock with small but good handholds and footholds. This terrain requires no special technique but calls for acumen and experience in selecting a route that avoids major difficulties.

b) Scale of Requirements (Difficult Climbing)

- Training is systematized according to grades of difficulty based on terrain and length of march:
 - Easy Walking
 - Difficult Walking
 - Easy Climbing
 - Moderately Difficult Climbing
 - Difficult>Very Difficult>Extremely Difficult: Very Steep, exposed ridges, some parts of which can be climbed only with special technique and equipment.

b) Scale of Requirements– “Plus One”

- Bad weather or coat of ice increases the degree of difficulty by at least one degree
- Movement under full pack and arms increases degree of difficulty by one degree (i.e., Easy Walking becomes Difficult Walking)

Scale of Requirements: Minimum Proficiency

- Able to make any kind of *STEIGEN* (ascent) on a road or path free of snow.
- Able to walk on easy wooded grass and scree slopes until they can master fairly difficult terrain on moderately difficult climbs
- Able to walk through snow with snowshoes on roads, easy and difficult terrain
- Able to get over icy stretches on moderately hard climbs
- GOAL: Mountain soldier under normal conditions of marching and combat can move about in all kinds of terrain quietly, orderly and confidently without wasting time or taking unnecessary risks.

c) Technique – Mountain Marching

- Slow and rhythmic pace
- Consistent stride not too long
- Erect stance, not leaning into slope
- Breathe deeply
- Avoid talking
- “Switch back” vs. straight ascent
- Avoid haste
- Maintain prescribed distance between climbers
- Arrive at destination in condition to fight

c) Technique - Climbing

- Start with easy rocks to get a feel for the work
- Use legs slowly and rhythmically; they do most of the work.
- Use arms only for stability and balance; only pull climber when necessary
- Handholds and Footholds
 - Not too far apart
 - Grasp slowly and test them
 - Always keep weight on 3 points going up
 - Breathe quietly and slowly
 - Achieve perfect balance

c) Technique - Descending

- Avoid sitting which gives way to sliding too fast for control
- Descend back to rock if not too steep and footholds good.
- Use extra caution on steep grass slopes
 - Grass tufts are good footholds but not handholds
 - Kick toe into grass if descending facing slope
 - Keep inner edge of foot close to slope

c) Technique – Steep Snow & Ice

- Use crampons or kick/cut steps for yourself
- Short steps and zigzag/switchback to save strength.
- *GLISSADING (Sliding down)*
 - Only when the bottom of a snow slope can be seen from the top
 - Never with crampons
 - Never on solid frozen ice
 - Ice axe used to turn, slow down or stop

c) Technique – Special Equipment

- Basic principle: all equipment weight kept to a minimum
- The surface determines the equipment:
 - Rock: Pitons, Snaplinks (carabiners), Rope, *KLETTERSCHUE* (felt-soled rock climbing shoes), Ice Axe
 - Grass: Mountain boots or Crampons, Ice Axe
 - Snow: Snowshoes (on flats), Crampons, Snaplinks and Ice Pitons

c) Technique – Special Equipment

- Rope
 - Most Important piece of equipment
 - 100 feet of twisted hemp, highest quality, 7/16 inch diameter
 - Dries in open air, hung from a peg in loose loops, repaired promptly
 - First thing he learns are three basic knots
 - Overhand noose– secures men to rope
 - Square knot– secures two ropes together
 - Sling– secures rope to a projection in order to belay
 - Climb three men to a rope with a mountain guide for a rope leader
 - Men secured to rope around belly with an overhand noose knot
 - Used for all difficult climbing as determined by the men

c) Technique – Special Equipment

- Belaying with Rope
 - Prevents a climber who slips from falling far
 - Climber can belay up or down
 - Pay out rope if the next climber is moving away; take up slack if moving toward; keep taut but never pull climber off his holds
 - If no suitable rock projection, use axe/piton/snaplink or your own body
 - Technique for Roping Down:
 - Pass rope between legs, up across chest and over shoulder
 - Hold dangling end with one hand and suspending part of rope with other hand
 - Slide by raising the dangling part over his shoulder
 - Stop by pulling down over shoulder

c) Technique – Special Equipment

- Crampons

- Whenever possible used rather than the axe on icy slopes
- Steel frames with twelve 2 inch iron spikes attached.
- Fit the bottom of the ski-mountain boot and strap over the top
- Save labor and avoid noise involved with cutting steps
- Can also be used on difficult grass slopes

c) Technique – Special Equipment

- Ice Axe

- 2.5 lb 10 inch crosshead axe with a 3 foot wooden shaft.
- Crosshead has an adze end and a pick end; base is shot with a long iron point
- Used for extra support for ease and firmness in walking
- Handled with care to avoid injuring self and companions
- On rock with no other holds, used as a hand hold or foothold
- Can be used as a belay on grass slopes if thrust in deep
- Used to control glissading
- Tests strengths of snow crossings with it
- Cutting steps with pick end and clearing the step with adze end.

c) Technique – Special Equipment

- Pitons and Snap Links
 - When no natural belaying point available or body belay unsafe
 - Rock pitons up to 6 inches long; Ice pitons up to 10 inches long
 - Snaplink inserted through piton eyelet
 - Piton used as a belaying point is hammered into the rock and left behind
 - Snaplinks are collected and used again as the men pass down

Equipment Illustrations

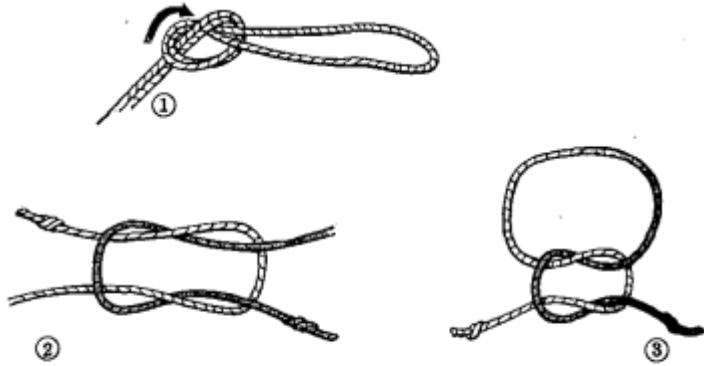


Figure 17.—Basic knots used by German mountain troops. (1) Overhand noose, for securing a man to the rope; (2) square knot, for joining ropes together; (3) sling, for securing the rope to a projection for the purpose of belaying.)

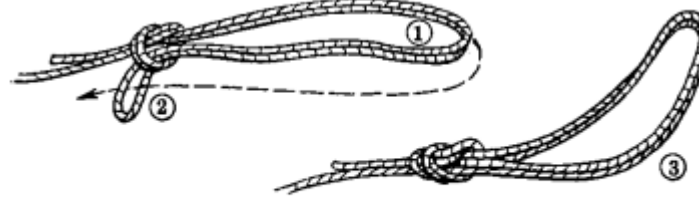
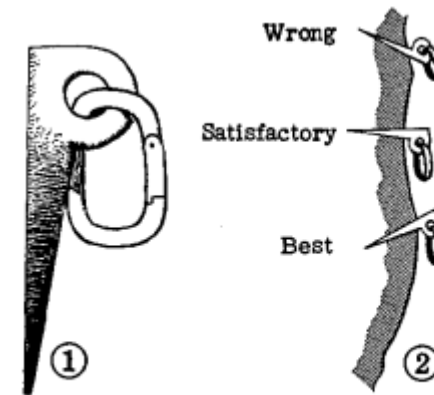


Figure 18.—Double overhand noose. (This is the preferred knot for roping up. The end of the simple overhand noose (1) is inserted in the loop (2), and pulled through. The result is the noose (3).)



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—German piton and snaplink (1), and ways of inserting pitons (2).

Technique Illustrations



Figure 19.—Roping down a rock face.



Figure 21.—Rock climbing.

d) Bivouacs

- Mountain soldier must get all rest possible under difficult conditions
- Adequate rest is necessary for operating in mountains and means difference between life and death
- Types
 - Lean-to using rock ledge for roof and one wall
 - Snow holes
 - Snow huts

e) Self-Preservation; Orientation

- Natural perils far more costly than casualties from enemy contact
 - Rockfalls
 - Landslides
 - Cornice fractures
 - Snowdrifts
 - Avalanches
 - Glacial crevasses
 - Icefalls
 - Ice-slides

e) Self-Preservation; Orientation

- Natural perils far more costly than casualties from enemy contact
 - Weather
 - Lightning
 - Snow blindness, glacial sunburn, exhaustion and exposure
 - Rain, Snowstorms and Coldsnap occur suddenly
 - Learn to Forecast
 - Bad weather incoming: ring around the moon, unusual twinkling of morning stars, rising clouds, bright red sunrise, early morning warmth, sun shine through mist.
 - Fair dry weather: red sunset, evening clouds in valleys, lack of wind in clearing weather, heavy morning dew, cold nights. Up valley wind during day and down valley wind at night.

e) Self-Preservation; Orientation

- Natural perils far more costly than casualties from enemy contact
 - Protection:
 - Goggles for snow blindness
 - Lanolin for glacial sunburn
 - Clothing must be warm but shouldn't make you sweat– moisture is disastrous
 - Light clothing while moving
 - Heavy clothing during rest and bivouacs
 - Newspaper for body insulation
 - Keep feet and hands dry
 - Must stay awake when there is danger of freezing to death
 - Must be able to describe orally and in writing the terrain and paths they have traversed.
 - Memory retention is essential

f) Mountain Guides- *Heeresgebirgsführer*

- All officers of mountain divisions
- A portion of NCOs and enlisted personnel
- Staffs of mountain training centers
- Entire personnel of high mountain battalions
- No special pay but is pre-requisite for promotion

f) Mountain Guides- *Heeresgebirgsführer*

- Training
 - Make climbs of utmost difficulty and act as rope leaders
 - Learn to select routes for a climb- mistakes jeopardize the military mission
 - Extensive testing of orientation ability in both bad weather and night
 - Must have some skiing experience
 - Ski training has a 15:1 student:instructor ratio to afford individual attention
 - Ski training eschews expert technique for simpler practical technique that can be executed in various snow types with a rucksack
 - Mountain soldiers are taught to avoid speed that involves unnecessary risk.
 - Extensive testing of map reading and technical understanding of hazards and rescue techniques.