

SCOUTING,  
PATROLLING,  
AND SNIPING

---

WAR DEPARTMENT • 6 FEBRUARY 1944

---

WAR DEPARTMENT,

Washington 25, D. C., 6 February, 1944.

FM 21-75, Scouting, Patrolling, and Sniping, is published for the information and guidance of all concerned.

[A.G. 300.7 (25 Jan. 44).]

BY ORDER OF THE SECRETARY OF WAR:

G. C. MARSHALL,

*Chief of Staff.*

OFFICIAL:

J. A. ULIO,

*Major General,*

*The Adjutant General.*

DISTRIBUTION:

Bn and H (2) ; C 2, 5, 7, 17, 18 (10) ; 3, 4, 6, 9-11,  
19 (2).

(For explanation of symbols see FM 21-6.)

# TABLE OF CONTENTS

---

	Paragraphs	Page
<b>PART ONE. SCOUTING.</b>		
<b>Chapter 1. General</b> .....	1-4	1
<b>Chapter 2. Scouting by day.</b>		
<i>Section I. Concealment</i> .....	5-7	3
<i>II. Movement</i> .....	8-11	10
<i>III. Reconnaissance</i> .....	12	24
<b>Chapter 3. Scouting by night.</b>		
<i>Section I. General</i> .....	13-17	29
<i>II. Concealment</i> .....	18	31
<i>III. Movement</i> .....	19-25	31
<b>Chapter 4. Maps and use of compass.</b>		
<i>Section I. Maps</i> .....	26-30	44
<i>II. Compass</i> .....	31-34	56
<b>Chapter 5. Observing and reporting.</b>		
<i>Section I. Observation</i> .....	35-41	64
<i>II. Reporting</i> .....	42	71
<b>Chapter 6. Operating procedure</b> ..	43-48	75
<b>Chapter 7. Exercises in scouting.</b>		
<i>Section I. Concealment</i> .....	49-51	77
<i>II. Individual movement</i>		
by day .....	52-58	78
<i>III. Scouting by night</i> .....	59-61	80
<i>IV. Map reading</i> .....	62-65	82
<i>V. The compass</i> .....	66	83
<i>VI. Observing</i> .....	67-71	83
<i>VII. Night vision</i> .....	72-77	85
<i>VIII. Messages</i> .....	78	86

## PART TWO. PATROLLING.

	Paragraph	Page
<b>Chapter 8. General</b> .....	79-82	88
<b>Chapter 9. Preparations.</b>		
<i>Section I. Duties of higher commander</i> .....	83-89	90
<i>II. Preliminary duties of patrol leader</i> .....	90-95	94
<i>III. Preparation by patrol members</i> .....	96-98	105
<b>Chapter 10. Formations</b> .....	99-101	107
<b>Chapter 11. Control</b> .....	102-105	117
<b>Chapter 12. Security</b> .....	106-110	119
<b>Chapter 13. Movement and halts.</b>		
<i>Section I. Movement</i> .....	111-125	123
<i>II. Halts</i> .....	126-127	130
<b>Chapter 14. Information, captured documents, prisoners and reports</b> .....	128-132	132
<b>Chapter 15. Reconnaissance patrols</b> .....	133-139	136
<b>Chapter 16. Combat patrols</b> .....	140-151	139
<b>Chapter 17. Exercises in patrolling.</b>		
<i>Section I. Advice to instructors</i> .....	152	152
<i>II. Conduct of exercise</i> ..	153-155	153
<i>III. Illustrative patrol problem</i> .....	156-160	157
<i>IV. Suggested exercises</i> ..	161-164	161

## PART THREE. SNIPING.

<b>Chapter 18. Sniping.</b>		
<i>Section I. General</i> .....	165-170	169
<i>II. Exercises in sniping</i> ..	171-180	174
<b>Index</b> .....		182



# PART ONE

## SCOUTING

---

### Chapter 1

#### GENERAL

---

**1. IMPORTANCE.** Commanders must have accurate, detailed, and timely information about the enemy, the terrain, and neighboring troops for successful combat. Well-trained scouts and capably led patrols are among the agencies which furnish them such information.

**2. THE SCOUT.** A scout is a soldier employed in reconnoitering under conditions which require exceptional ability in the use of arms, ground and cover, in movement, in observing, and in accurately reporting the results of his observation. Scouts usually operate in pairs.

**3. QUALIFICATIONS.** Although all soldiers should be able to act as scouts, some are better suited than others for this work. Men selected to be scouts should be reliable, persevering, intelligent, patient, and should be able to read and write clearly. They should be physically and mentally hard, have unimpaired vision and hearing, and be able to swim. Scouts must be resourceful and possess courage and initiative. They must be good shots and good

close-in fighters. Men with hay fever, night blindness and impaired sense of smell should not be given duty as scouts, for they will betray their own and others' presence.

**4. TRAINING.** In order to accomplish their mission of gathering information scouts must be able to operate by night and day over varied terrain and frequently close to or within the enemy position. This requires a high degree of training in concealment, movement, and observation. Scouts must be highly proficient in map reading, the use of the compass, simple sketching, and intelligent reporting. Scouting is best taught and best mastered by the applicatory system. (See FM 21-5.) Exercises in scouting are contained in chapter 7.

# SCOUTING BY DAY

---

### Section I. COVER AND CONCEALMENT

**5. COVER.** Cover is protection against the fire of hostile weapons. A reverse slope will give protection from rifle or machine-gun fire, but will not give full protection against the high-angle fire of mortars or howitzers. A person well trained in use of cover can find some protection from such fire on reverse slopes. Many natural objects, trees, rocks, ditches, embankments, and folds in the ground, as well as shell holes, afford protection from hostile fire. Such cover is readily apparent to the untrained eye. The scout must learn to study the terrain in order to appreciate the cover afforded by the slightest depressions and humps in ground that appears flat to the untrained eye. By making full use of all natural cover and using the method of movement best adapted to the situation (pars. 8-11) he will have considerable protection while moving under hostile fire. When looking for cover, he studies the terrain from the enemy's point of view. Many natural objects will give cover and, if time and the mission permit, artificial means can be used to obtain or improve cover. (See par. 7.)

**6. CONCEALMENT.** Concealment is protection from hostile air or ground observation, but not from hostile fire. Concealment may be natural or improvised. Natural concealment is that found on the ground without any change; artificial concealment may be constructed from various materials such as grass, leaves, or burlap. The scout must become expert in the use of concealment.



**a. The principles of individual concealment are:**

(1) *Remain motionless while observing.* Anything in motion instantly attracts the eye; therefore, movement most readily reveals the scout's position. He may be perfectly concealed when motionless but be easily detected when he moves. *All unnecessary movement must be avoided*, and when it becomes necessary to move he should move silently from one concealed position to another. (See pars. 8-11.)

(2) *Use all available concealment.* The scout must always conduct himself as though he is being watched. He should use the best concealment available.

(3) *Observe from prone position.* The prone position offers a low silhouette which makes enemy detection difficult.

(4) *Expose nothing which glistens.* The reflection of the sun from any smooth surface will instantly attract enemy observation.

(5) *Blend with background.* Contrasting colors are quickly observed. Clothing that does not blend with the surroundings will disclose the scout's presence.

(6) *Stay in shade.* A scout's shadow in open terrain, particularly if it is long and in motion, attracts enemy attention.

(7) *Break regular outline of objects.* Figures on the skyline can be seen from great distances and are instantly recognized by their outlines. *Scouts keep off the skyline.* Disruptive painting makes it difficult for an enemy observer to recognize an object.

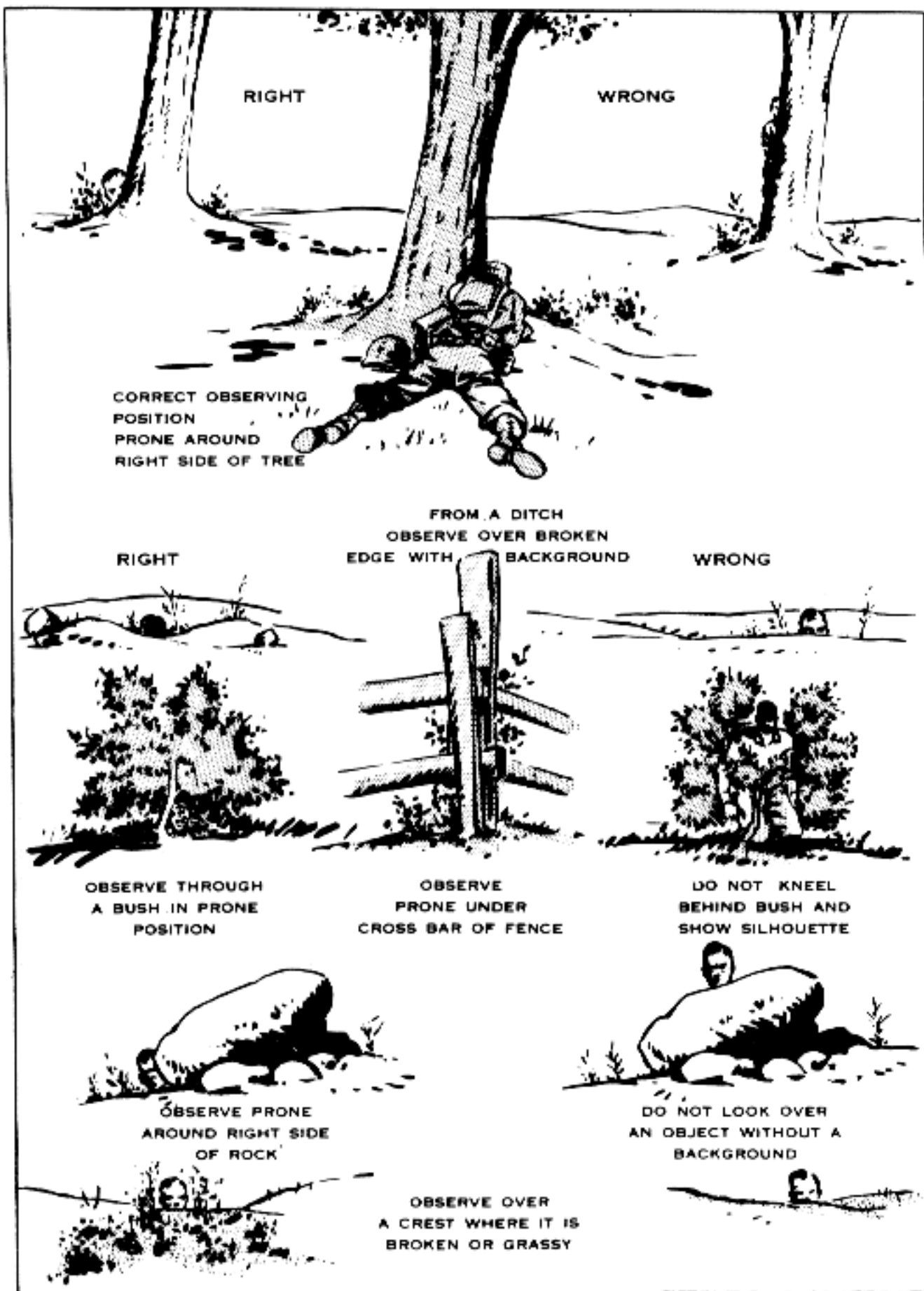
**b. The following aids for concealment will help the scout to remain undiscovered (see fig. 1).**

(1) Look around the right side of an object when observing, unless you can look through it.

(2) Fire around the right side of an object.

(3) Never look or fire over the top of concealment or cover unless the outline is broken.

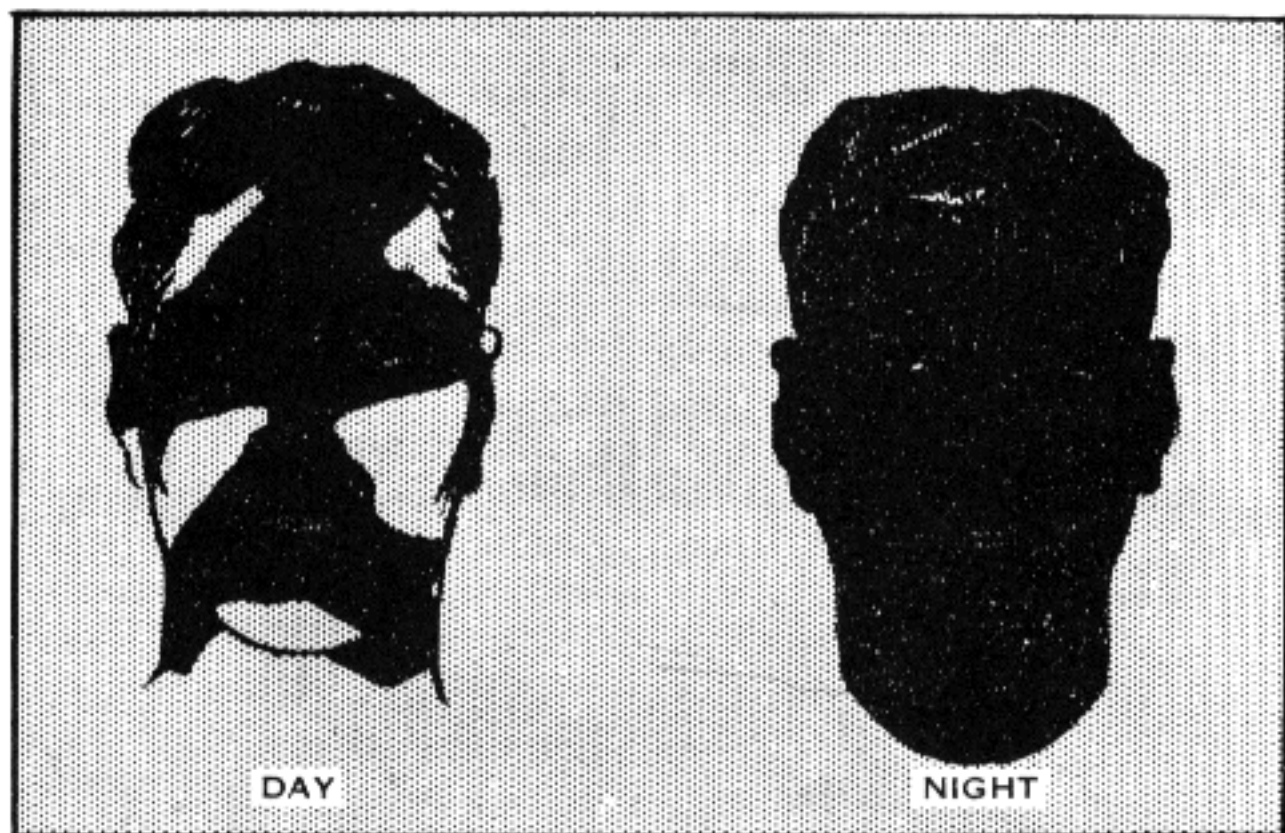
(4) Upon the approach of an airplane, take a prone position face down, and remain motionless. If surprised by an airplane remain in place. **COVER THE HANDS AND DO NOT LOOK UP.**



*Figure 1. Correct and incorrect methods of observing.*

(5) A small, thin bush in the shadow of a large bush makes a good observation point. Lone trees, or rocks, fence corners, and outstanding landmarks are easily picked up as targets by enemy observers.

(6) Paint splotches across the nose, mouth, cheek, and hands with lampblack, burned wood, cork, crankcase oil, grease paint or vaseline with soot on it. Remember that mud dries light and many black substances glisten and reflect light. (See par. 7.) Green grass, crushed in the hands will make a stain that lasts for about ten hours. No exposed skin should be overlooked in splotch painting; back of neck, chest, lower arms, and both backs and palms of hands should be painted. For a position among rocks or in open terrain, tone skin to a solid dark color. (See fig. 2.)



*Figure 2. Correct method of darkening face.*

(7) Cover any equipment that reflects sunlight.

(8) Use extra care when you are tired. Fatigue leads to carelessness.

(9) Camouflage clothing can be improvised from gunny sacks or sand bags.

(10) White garments blend in with snowy terrain, especially on a cloudy, windy day.

(11) An improvised suit can be made in the field, when a standard camouflage suit (jungle suit or snow suit) is not available, by painting ordinary fatigues in irregular splotches. A dye, paint, grease, or oil may be applied with an improvised dauber, or a pattern may be stamped on with a block of wood.

(12) A few leaves and a net eliminate shine from the helmet and break its outline. (See par. 7b (2) (a).)

**7. CAMOUFLAGE.** Camouflage means work done to provide protective concealment of military objects from enemy observation. It also refers to the materials used in this work. Camouflage is used not only to conceal an object but also to make an object look like something else. A scout's mission will usually require him to camouflage himself and his position.

**a. Fundamentals.** (1) Objects are identified by their form (outline), shadow, texture, and color.

(2) The principal purpose of camouflage in the field is to prevent direct observation.

(3) Camouflage must be executed simultaneously with the occupation of a position.

(4) The use of too much material must be avoided. Even when using natural materials, too much should not be used since it makes the object and its shadow appear darker than the surroundings, attracts the attention of a hostile observer, or shows up in a photograph, and thus defeats the purpose of the camouflage.

(5) When the camouflage work is completed, it should be inspected, if possible, from the enemy's point of view. This is the surest way to check its effectiveness.

**b. Individual camouflage.** (1) Successful individual camouflage involves four factors:

(a) Ability to recognize and take advantage of all forms of natural concealment available. (See par. 6.)

(b) Knowledge of the proper use of the available vegetation, soil, and debris for camouflage purposes.

(c) Knowledge of the proper use of artificial camouflage materials.

(d) Camouflage discipline.

(2) The scout must realize the dominant colors and pattern of the terrain and, in order to conform, must change the appearance of his clothing and equipment accordingly.

(a) Attempts to camouflage the helmet should be directed at breaking up its shape, smooth surface, and shadow. Mud, blotched irregularly on the helmet, will disguise its form and dull its surface. A helmet cover may be used. Such a cover may be improvised from a piece of cloth or burlap, about 20 inches square, irregularly colored to blend with the background, and provided with a drawstring so that it can be gathered under the edge of the helmet. Another means of disguising the helmet is the garnished helmet net, shown in figure 3.

If helmet covers and nets are not available, a strand of wire or twine may be bound around the helmet and foliage inserted under the wire. The foliage should be draped so as to break up the dark shadow of the visor across the face. It should not be allowed to stick up like plumes, because the slightest movement of the head will cause the foliage to move and thus give the position away.

(b) An issue dye may be used to darken faded equipment. (See TM 5-267.) For other ways to camouflage the person and clothing, see paragraph 6 b.

(c) Methods of painting the face are shown in figure 2. They are intended to have both a concealing effect and, in hand-to-hand combat, a psychological effect. Patterns should break telltale shadow lines and mask the eyes and cheekbones. Wide solid bands and regular designs should not be used. Individuals may have to assist each other in applying patterns. Darkening the face itself is a much more practical solution than using a hood, since the hood may slip to one side or the other so that the scout's vision is cut off. This is especially dangerous in a situation demanding not only concealment, but immediate readiness for action. (See FM 5-20.)

(d) The straight line of the rifle, or other small arm, may be very conspicuous to an enemy sniper, or other close





*Figure 3. Helmet camouflage.*

observer. In the figure on the frontispiece of this manual, the barrel and hand guard of the rifle have been wrapped with tape of contrasting color to break the regular outline. On other terrain, strips of material normally used for garnishing nets and colored to blend in with the particular background can be used to advantage. Mud or dirt may be used to dull the reflecting surface of a polished stock, or a barrel from which the coloring has been worn. After use, the last six inches of the barrel of the M1 rifle shines brilliantly and is very conspicuous. Some benefit may be obtained by coating this part of the rifle with lampblack in the same way that a rifleman blackens his sights. The bayonet should be darkened or painted with a dull, dark paint.

## **Section II. MOVEMENT**

**8. PRINCIPLES OF MOVEMENT.** a. The scout moves from one concealed location to another. When not changing his position he remains *motionless*. The fire of light automatic weapons makes the above more important than ever before.

b. To observe, he lifts his head slowly yet steadily, and without abrupt movements.

c. From each position he selects his next stopping place. He avoids isolated, conspicuous places of concealment. Before leaving one position he must make certain that his next stopping place does not contain an enemy. Every location from which the enemy may observe must be considered as actually occupied by the enemy.

d. When changing position by running he must spring up, run with body bent low, and drop to the earth quickly. Advantage must always be taken of walls, ditches, or similar cover. If close to the enemy, a slight rise may enable the scout to advance even closer by creeping or crawling.

**9. AIDS TO MOVEMENT.** a. (1) A scout should carry only necessities. Additional weight causes premature fa-

tigue and impedes free movement.

(2) A scout should not disturb birds or animals whose flight would betray his presence. If the scout should alarm birds or animals, he remains motionless under cover for a few minutes as attention may have been attracted to his position.

(3) Any incident which diverts attention, such as an airplane flight, a distant disturbance, or sudden bursts of fire, diverts observation from the scout. He moves during such incidents.

(4) Fog or even light haze offers concealment for movement.

(5) When in the presence of the enemy, it is best to swim a body of water at night. If necessary to do so in the daytime, a small raft for concealing the head may be made with a few sticks or brush and tufts of grass. In any case, the scout should try to improvise a float for his rifle and equipment.

(6) A scout moving along a beach should keep close to the water's edge. The waves and spray will help to conceal him from a boat offshore, and to wash away his footprints.

(7) When in tall grass or similar growth, the scout should move when the wind blows, changing direction frequently, as a straight route will be noticed more readily.

(8) He should avoid making tracks wherever possible, especially in snow.

(9) In returning to his own lines, the scout avoids the route used in going out.

(10) In crossing a road the scout selects a position with shadows, or near a bend, and crosses rapidly in a low position.



*Figure 4. Prone position.*



(11) In crossing a plowed field the scout follows the length of the furrow to avoid the bobbing movement caused by crossing the furrows.

**b. Prone position.** The body is flat. The left cheek is on the ground. The legs are extended and spread. The heels, turned in, touch the ground. If the rifle is carried, it is grasped in the right hand at the balance, muzzle to the front, operating handle up. (See fig. 4.)

**c. Rushing from prone position.** See figure 5.



① *The soldier starts the rush from the prone position.*



② *He slowly raises his head to select a new position.*



③ *He slowly lowers his head, draws arms inward, and cocks the right leg forward, preparing to rush.*



- ④ *With one movement, he raises his body by straightening his arms.*



- ⑤ *He springs to his feet, stepping off with his left foot.*



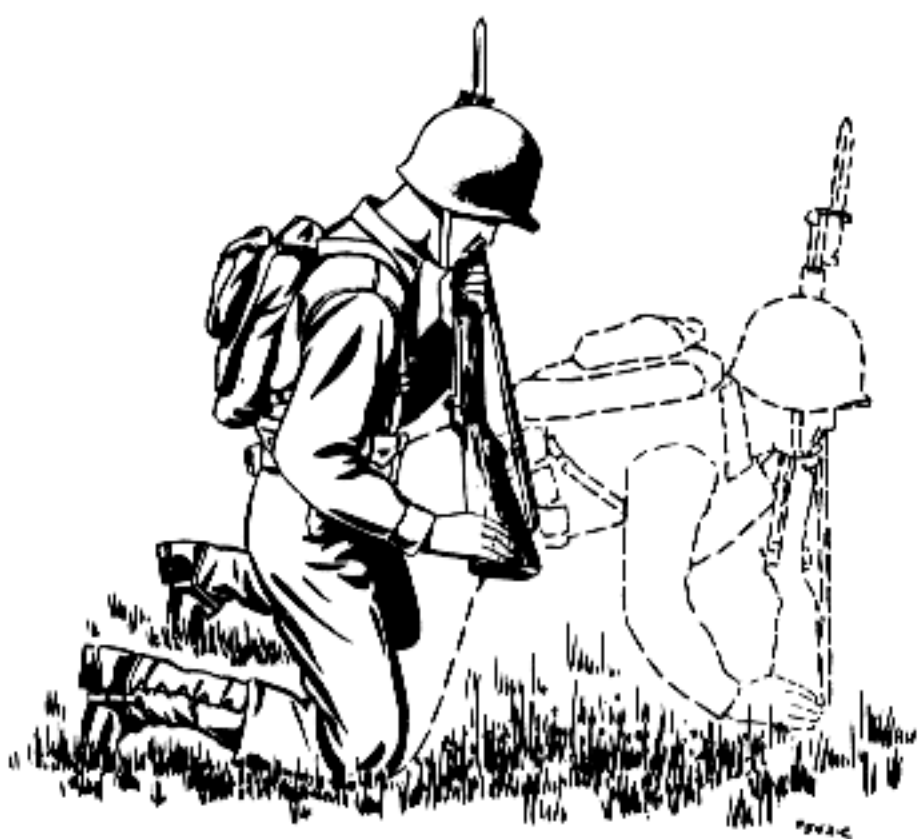
- ⑥ *He runs forward in a straight line, crouched low, to the new position.*

*Figure 5. Rushing from prone position.*

**d. Dropping to prone position. See figure 6.**



① *The soldier plants both feet in place.*



② *He drops to his knees, and at the same time slides his hand to the heel of his rifle.*



③ *He falls forward, breaking the fall with the butt of his rifle.*



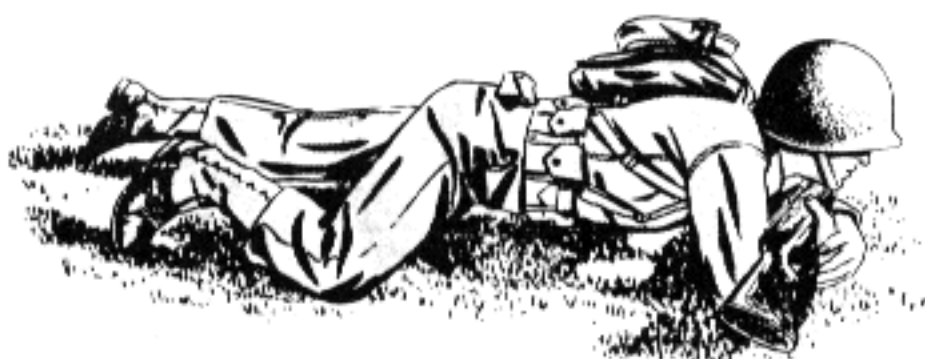
④ *He then rolls into the firing position, or lies as flat as possible on the ground. If he thinks he has been observed, and concealment exists, he moves a short distance toward a flank, moving in the most practicable manner.*

*Figure 6. Dropping to prone position.*

**e. Creeping.** See figure 7.



- ① *The body is kept free of the ground, and the weight of the body rests on the forearms and lower legs. The rifle is cradled in the arms, so that the muzzle is kept out of the dirt. Knees must be kept well behind the buttocks.*

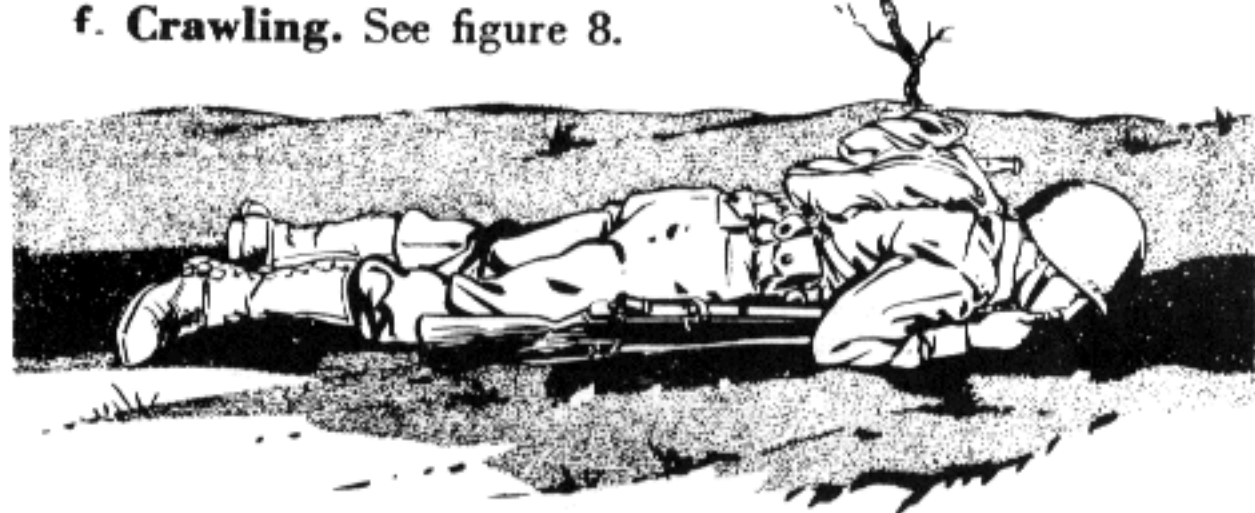


- ② *The soldier moves forward by alternately advancing the elbows and knees. The left elbow is advanced at the same time as the right knee.*



- ③ *In creeping, the soldier presents a higher silhouette than in crawling, but movement is faster.*

*Figure 7. Creeping.*



① *The body is as flat as possible against the ground. The cheek is flat against the ground. The rifle is carried at the balance, or dragged along on the toe of the butt with the thumb or forefinger over the muzzle. Care must be taken to keep the rifle muzzle out of the dirt.*



② *To move forward, the soldier pushes his arms forward and cocks one leg forward.*



③ *He pulls himself forward with his arms and pushes with the forward leg.*



④ *The soldier may move by pushing with one leg only, or may move faster (but be more exposed) by alternately pushing with either leg.*  
*Figure 8. Crawling.*

**10. DETERMINING DIRECTION WITHOUT COMPASS. a. General.** A scout should rarely, if ever, be without a compass. If he is, his most common means of assistance are heavenly bodies, the prevailing wind, and geographic features. To the experienced scout other means, such as natural signs, present themselves.

**b. By watch and sun.** Within latitudes of the north temperate zone, which include the continental limits of the United States, the following method, correct to within  $8^{\circ}$ , may be used from about 0600 to 1800. Set your watch at correct sun time for that locality, then hold it horizontally, face up, and point the hour hand at the sun; a line from the center of the dial passing halfway between the hour hand and 12 o'clock (bisecting the smaller arc) points south. Look along this line and pick out some object in line on the ground. (See fig. 9.)

**c. By the stars.** The two stars at the end of the bowl of the Big Dipper, known as the "pointers", indicate at any hour the position of the North Star. The Big Dipper revolves around the North Star and the pointers continue to indicate its position. The scout should remember that although the Big Dipper changes position in the sky the "pointers" continue to point to the North Star. To locate the North Star look out for a distance equal to five times the distance between the pointers in line with the pointers in the direction

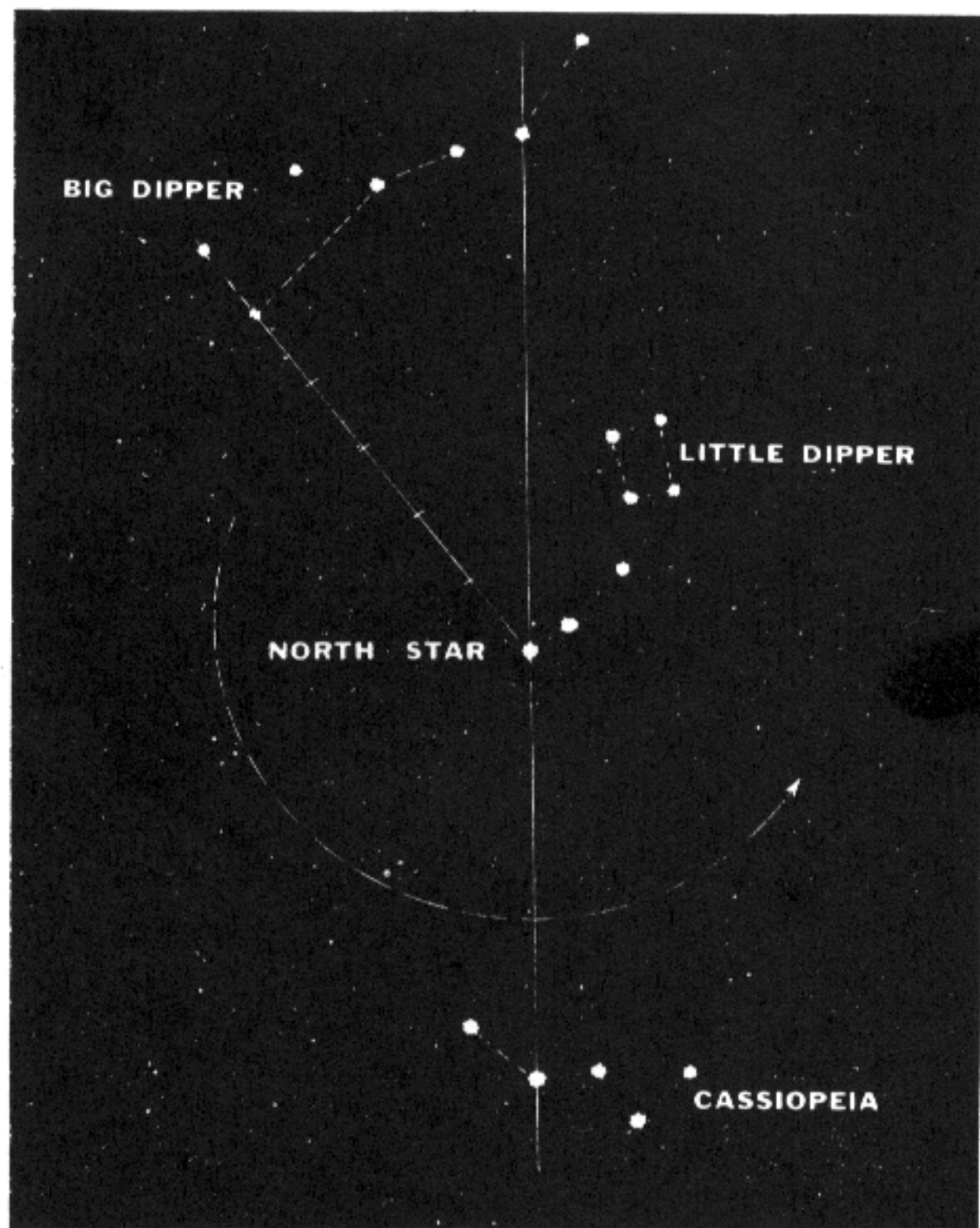


in which water would flow out of the dipper. Another constellation, Cassiopeia, may assist in locating the North Star. The five principal stars of Cassiopeia form a "W." This constellation is opposite the North Star from the Big Dipper. Note on the chart that the distance from the North Star to Cassiopeia and from the North Star to the Big Dipper is about the same. Cassiopeia also revolves about the North Star. The top of the "W" points generally in the direction of the North Star and the Big Dipper. The direction of the North Star is true north. (See figure 10.)



*Figure 9. Sun and watch method of determining direction.*





*Figure 10. Locating the North Star.*

If the scout is anywhere south of the equator, he will not be able to see the North Star. In this case the constellation known as the Southern Cross is used to indicate south. The stars in the long axis of the cross act as pointers, the foot of the cross pointing to the South Star, which is as far



**e. By other means.** Railways, smoke of cities, towers, telegraph lines, and the prevailing wind furnish other means to indicate direction.

**11. ROUTES. a. Considerations.** Before starting on his mission, the scout should, if a map or aerial photo is available, select his route according to the cover shown and the activity of the enemy. He may have to make wide detours around open spaces or those containing enemy patrols or suspected troops. His advance will rarely be in a straight line, for he must move along hedges, hollows, woods, and ravines which run parallel, or nearly so, to his course. (See fig. 12.) The scout should look back occasionally to note the relative position of landmarks, the slope of the ground, and the direction of streams. In picking a route from a map, the weather for the past few days must be considered for its effect on routes and probable enemy operations. This is particularly necessary if the route traverses low grounds, creek bottoms, or swamps. Brush is generally thicker in valleys and ravines than on summits and ridges. (This must be considered in night scouting when silence is essential.) The edge of a swamp offers a covered route. Many small features not shown on the map offer cover.

**b. Return route.** The scout should not return by the same route. His best guide to his return is his memory of the landmarks passed on the way out. He must cultivate the ability to recognize points he has once seen.

**c. To choose routes from a map.** Maps or aerial photos should be used to select covered routes, observation points, and to plan actions in advance. Before starting on his mission the scout should carefully study a map of the country to be traversed and fix in mind the general features, streams, ridges to be crossed, and their relation to the general direction to be taken. He should make notes of terrain features and landmarks along his proposed route and rely on his notes for guidance. He should—

(1) Decide where he must go to accomplish his mission.

(2) Study the map until he can picture in his mind the ground he must traverse. (See fig. 13.)

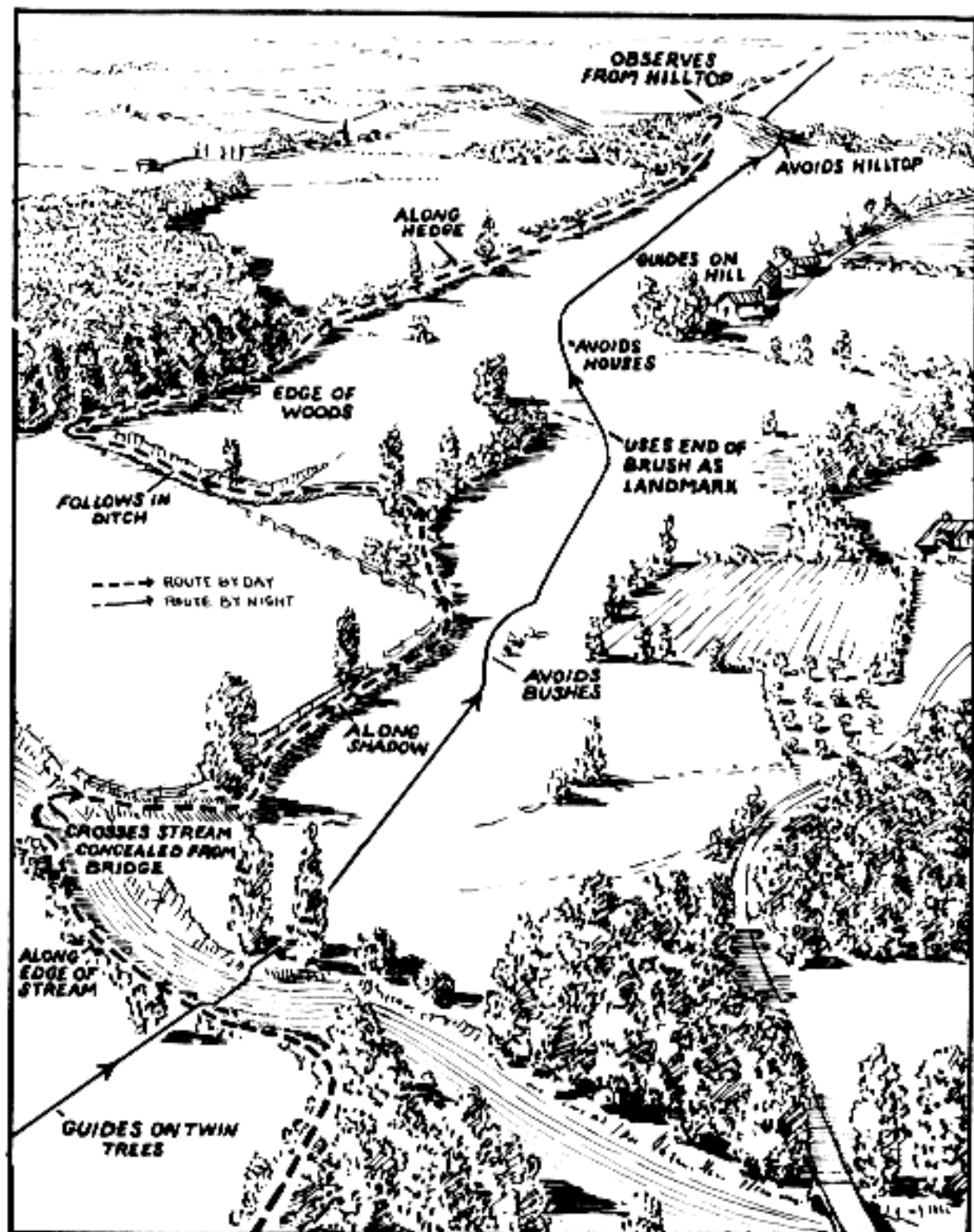


Figure 12. Day and night routes.

- (3) Note the probable dangerous areas such as cross-roads, villages, or high points.
- (4) Make a plan of procedure.
- (5) Select a route following low ground, hollows, and woods.

- (6) Pick intermediate observation points.
- (7) Determine the compass direction at the start and a reading for each change of direction.

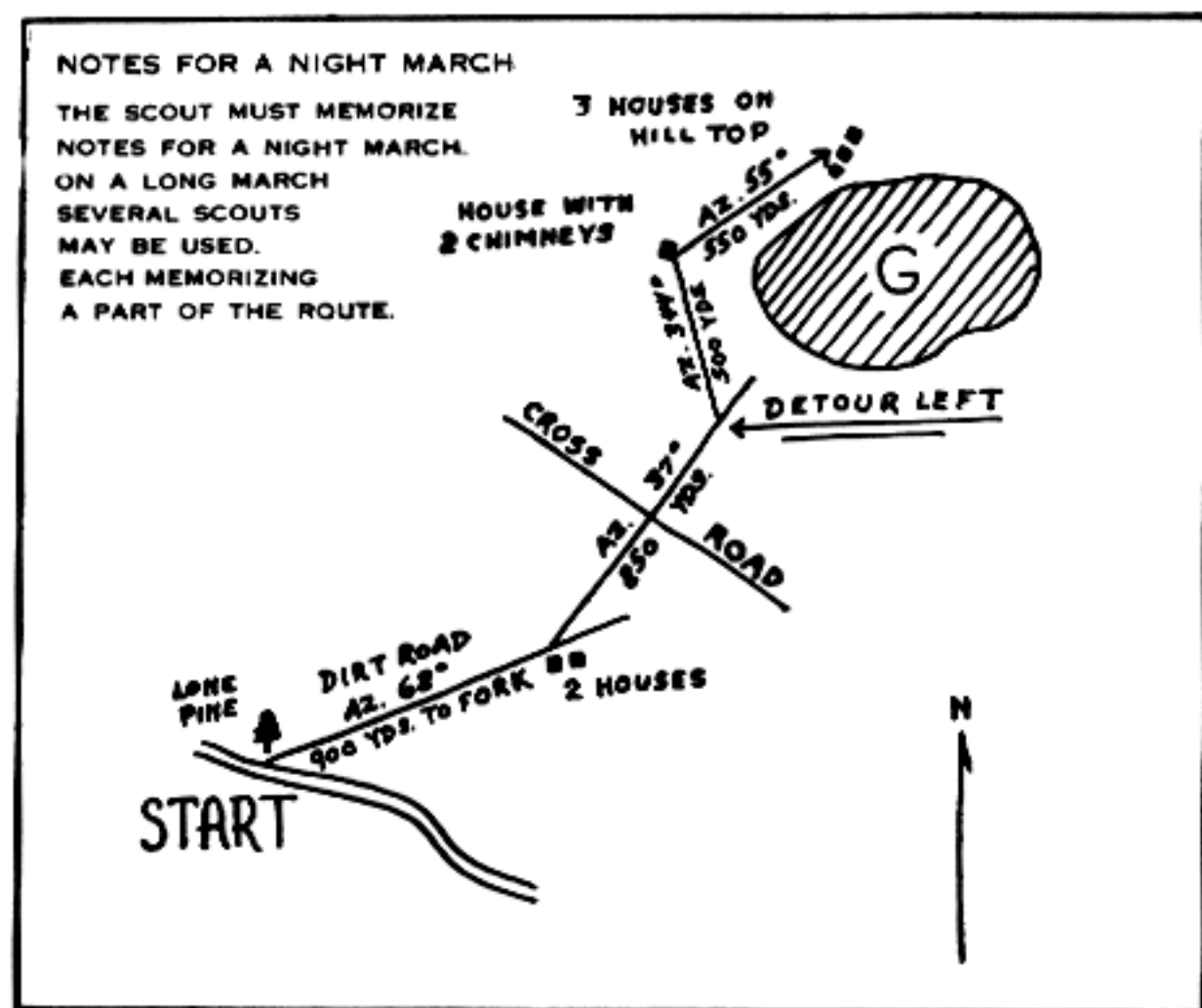


Figure 13. Choice of a route from a map.

### Section III. RECONNAISSANCE

**12. GENERAL.** Prior to starting on his reconnaissance the scout should fix in mind firmly the general direction of his travel and any other means of information that may assist him in finding his way out and his way back. Knowledge of the *stream lines* is the first essential to an intelligent idea of the country. En route he must bear in mind the changes of direction he makes. He must look back frequently

on his way, so as to impress on his memory the appearance of the landscape as it will look to him on his return journey. This may be of great benefit to him to keep him from losing his way, especially if he is pursued. The experience and training of the scout will be his best guide in reconnoitering his objectives or the various other features that he encounters. Only suggestions can be offered in this manual. As a general rule, the scout first makes a distant observation of the place from a concealed position to discover if the enemy is in possession. Then, if his mission demands a *closer reconnaissance*, he studies the intervening terrain in order to determine the best means of approach. The scout avoids places such as houses, villages, and clumps of trees, unless his mission requires him to approach or enter them. The suggestions made below may influence or govern the scout in any close reconnaissance he must make.

**a. House.** A scout acting alone approaches a house rapidly, so as to reach it before the occupants can prepare to resist him. If there are two or more scouts, they approach rapidly from slightly different directions. Only one enters. The other(s) remain outside prepared to fight. Another method is for only one or two of a group to approach the house. The others remain under cover a short distance away, in readiness to open fire on any one offering resistance.

**b. Village.** A village or other inhabited area should be avoided by a scout unless his mission requires him to enter it.

**c. Woods.** A clump of trees is approached in the same manner as a house. In his observation of a large wood the scout may receive a hint of the presence of the enemy by smoke rising, or noticing the flight of birds, or the running of animals. A wood should be entered with caution. Once within the wood, the scout should occasionally stop to listen as well as to look, as he will frequently hear an enemy before he sees him.

**d. Hostile bivouac.** By skillful use of cover and concealment, the scout may work his way near enough to a hostile bivouac to observe indications which will enable the scout to estimate the enemy strength. (See par. 39.)



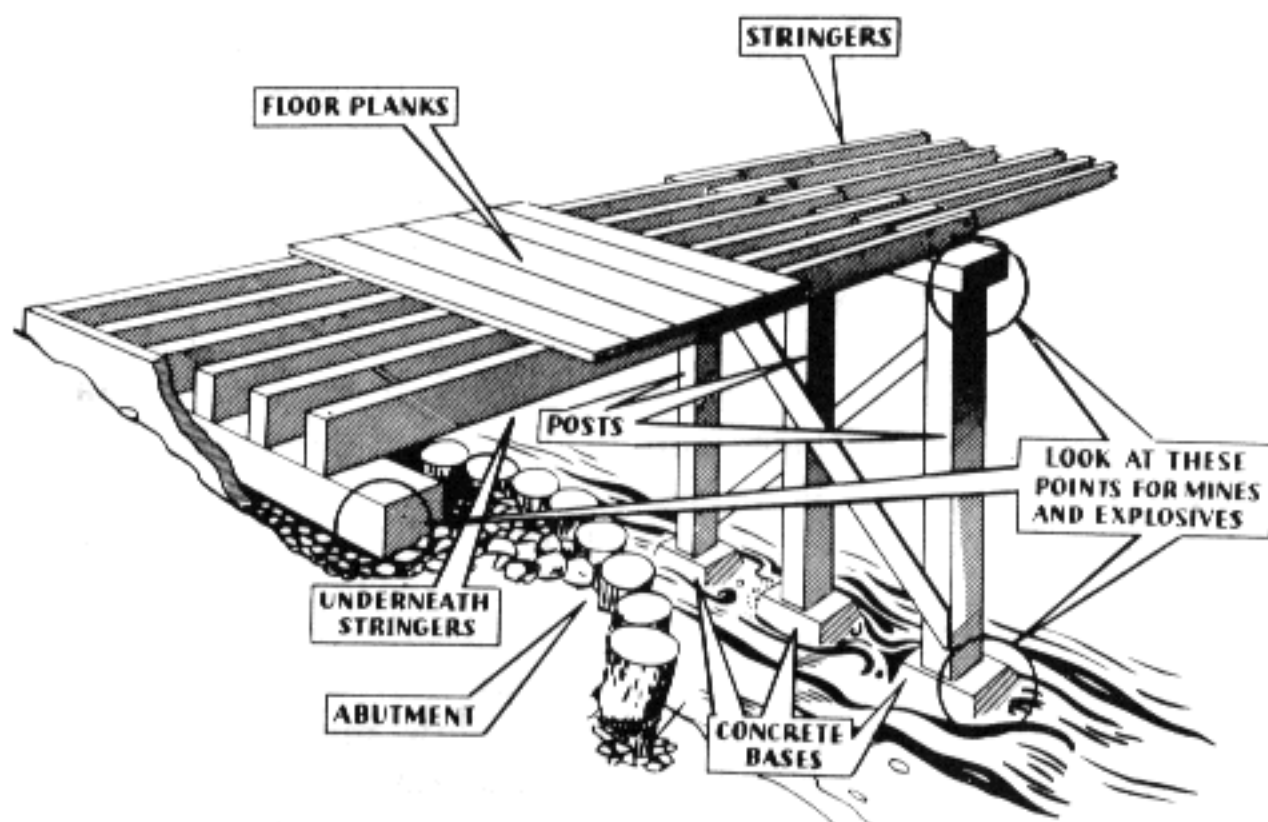


Figure 14. Points to be noted on bridge inspection.

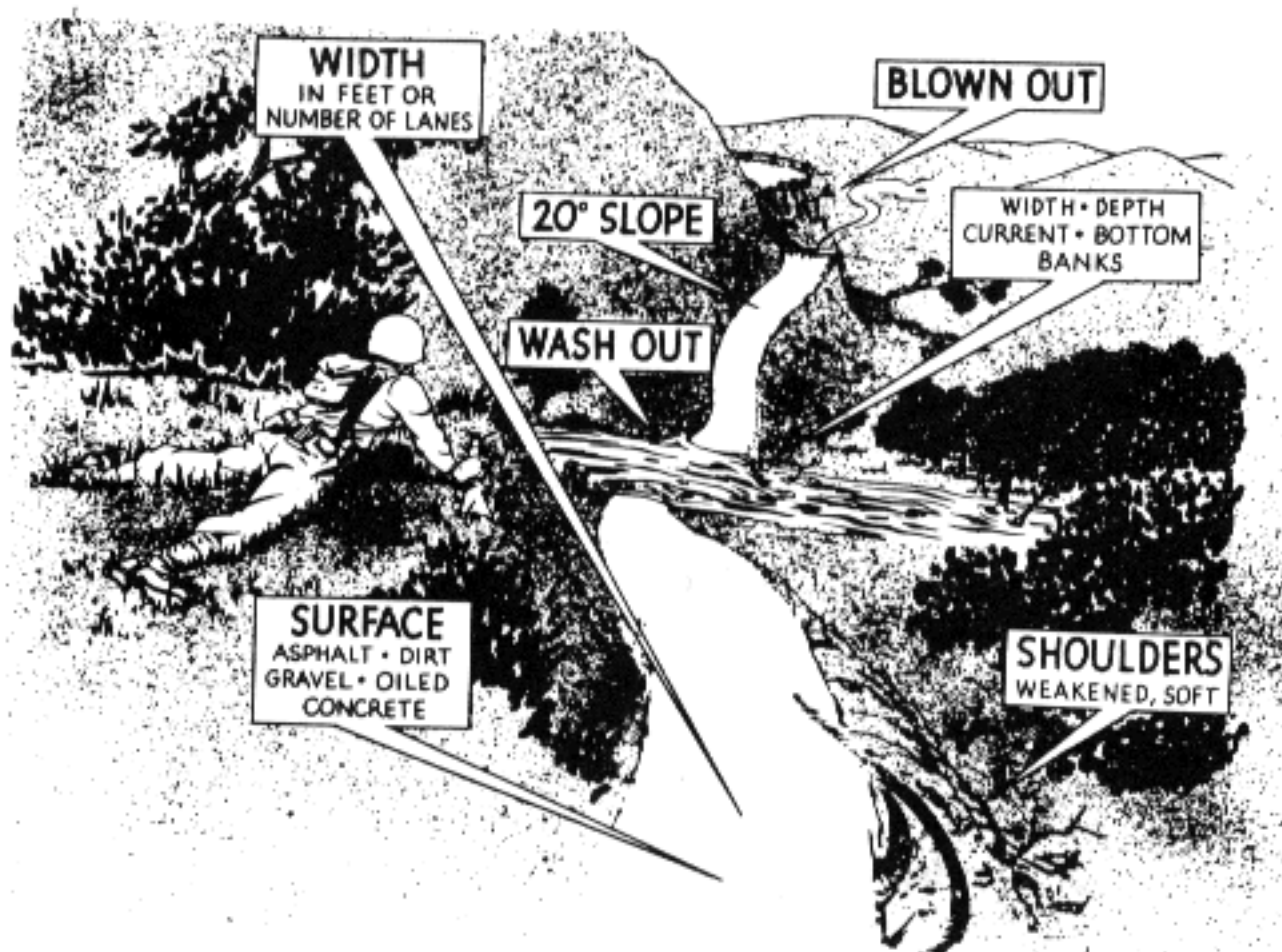
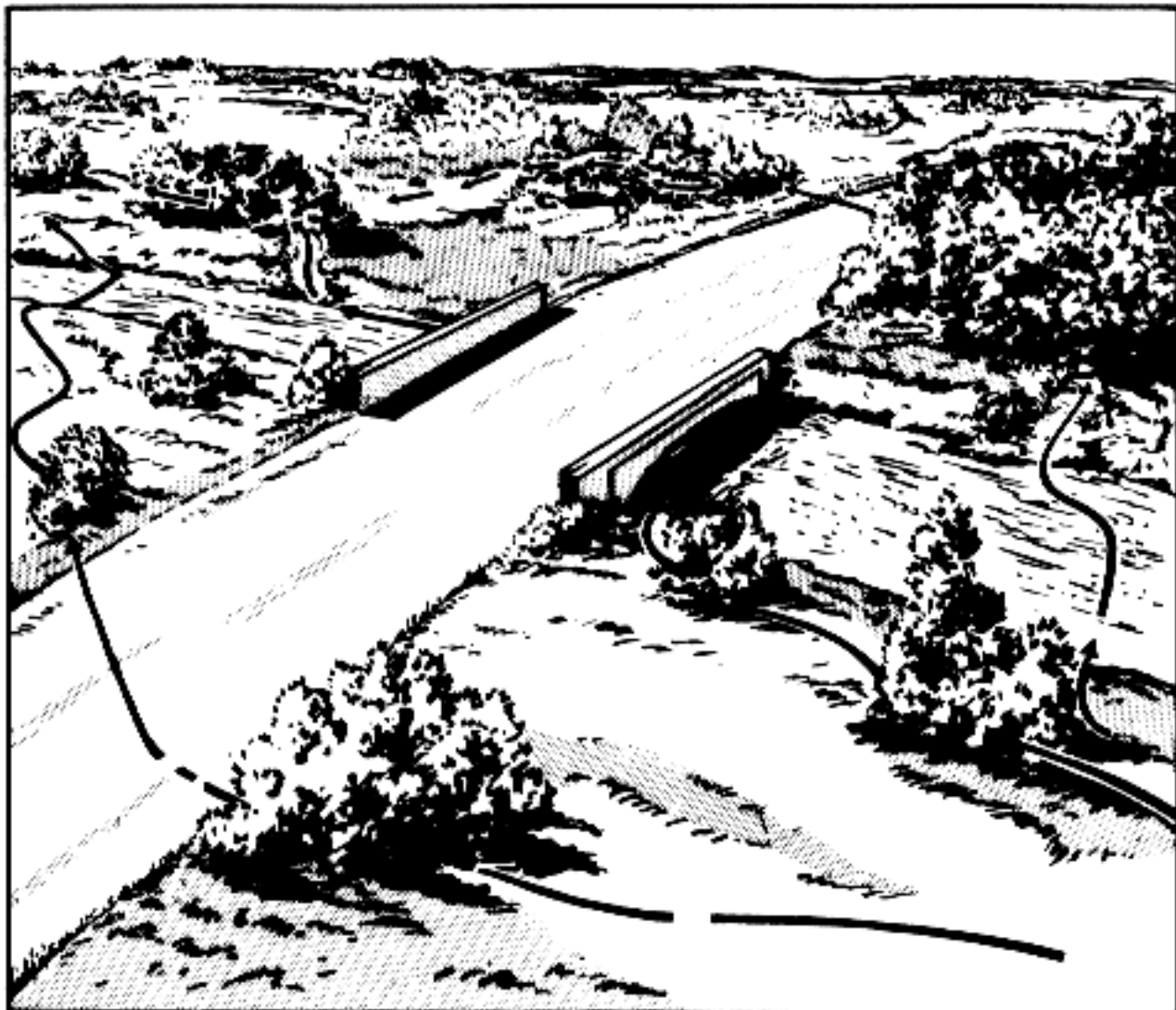


Figure 15. Points to be noted about roads.



*Figure 16. Possible routes for a scout to cross stream.  
The route under the bridge is the best.*

**e. Abandoned bivouac.** An abandoned bivouac may be examined thoroughly and a very accurate estimate formed as to the size of the force that camped there. The condition of ashes and appearance of tracks, when considered in connection with weather, may give an idea as to when the bivouac was occupied. Letters, insignia, equipment, and other articles may reveal the enemy discipline and organizations. (See pars. 38 and 46.)

**f. Moving troops.** Moving troops may often be observed from hills, edges of woodland, towers, and other similar points. The scout must exercise great prudence and watchfulness to avoid being captured or driven off prematurely by the enemy security patrols.



**g. Stream crossings and roads.** When the crossing does not appear to be held by the enemy, the scout should advance upon it rapidly. If there are two or more scouts, one or two should cross while the remainder protects him. When the first scout gets over safely, he takes a position to cover the other(s) who follow. The scout should note the length, width, and approaches of a bridge and road conditions and be able to report upon its suitability for use by forces of the various arms. The depth of the water, its width, its velocity, bottom, and approaches should be observed and noted. (See figs. 14 and 15.) If the crossing is held by the enemy, the scout seeks another crossing or dashes across, trusting to surprise and rapidity of movement for success. (See fig. 16.)

# SCOUTING BY NIGHT

---

### Section I. GENERAL

**13. NIGHT VISION. a. General.** The human eye adapts itself for seeing in the dark by enlarging the pupil in order to let in more light. Night vision decreases with fatigue and is sometimes affected by vitamin deficiency.

**b. Preparations.** Before leaving on a night mission the scout should prepare his eyes by remaining in complete darkness for about an hour if possible. If he cannot stay in darkness he should keep out of the lights around him as long as possible and avoid looking straight at them, use red goggles or red light, or keep one eye covered. If the eyes are exposed to light, even though red, full night vision is retarded or lost. (See par. 37b.)

**c. Training.** Practice is necessary in order to acquire the ability to use and care for the eyes at night. Exercises are contained in chapter 7.

**14. APPEARANCE OF OBJECTS.** Darkness not only makes it difficult or impossible to see objects, it also changes their appearance and apparent size, and details are blotted out. A tree seen against the night sky looks much smaller than it does in the daytime because the twigs at the tips of the branches cannot be seen at night. For the same reason, an airplane caught in the beam of a searchlight looks larger than the same plane seen as a black mass against a dimly lighted sky. Under ordinary conditions, a match can be seen from a plane or from the ground for several miles. Under ideal conditions of darkness and atmosphere, a candle is said to be visible for ten miles. The scout has to train himself to identify objects by black outlines at night.

He cannot depend upon details that are visible in daylight for identification. Night glasses make it possible to see objects or parts of objects that would be otherwise too small to be seen at all, and help to identify objects already spotted.

**15. SOUNDS.** A scout must depend largely upon his ears to obtain information of the enemy at night. Similarly, the enemy may detect him if he makes any noise. The scout must stop frequently to listen, removing his helmet (if worn) to eliminate unnatural or distorted sounds. The ability to listen for long periods in perfect silence must be cultivated by constant practice. Sound travels approximately 370 yards a second. When a scout sees a flash, he can often estimate the range to the weapon. He counts rapidly during the time interval between the flash and the hearing of the report. If he counts rapidly to three, for example, the range is approximately 300 yards. The correct cadence must be determined by actual practice at known distances. Sounds are transmitted a greater distance in wet weather and at night than in dry weather and in the daytime. If the scout holds his ear close to the ground, he can hear such sounds as the walking of persons and the noise of vehicles much better. The scout must be trained to identify and estimate the direction and distance to various common noises made at night by troops in the field.

**16. SMELLS.** The scout's sense of smell may warn him of enemy fires, cooking, picket lines, motor parks, gasoline and oil engines, bodies of water, and the presence of troops generally. Types of shells may also be identified by the characteristic odors of their bursts.

**17. TOUCH.** The scout must be able to feel and to recognize objects in the dark. He must be able to adjust and operate his equipment quietly by the sense of touch alone.

## Section II. CONCEALMENT

**18. GENERAL.** Although total darkness provides concealment, there will be many bright nights when the scout must observe the same principles of concealment as in the daytime. (See par. 6.) In addition, he must observe the principles of night movement (see par. 19) so that his presence is not disclosed by noise when he is close to the enemy.

## Section III. MOVEMENT

**19. PRINCIPLES OF MOVEMENT.** To accomplish a scouting mission at night, the scout must be able to move in absolute silence, for his security depends upon silent movement.

a. The scout operates by moving by bounds, preferably determined in advance. Each bound should follow some terrain feature which serves as a guide. When there are no terrain features to serve as guides, the scout moves in a straight or nearly straight line, from one defined locality to another, or maintains direction by use of the compass.

b. The scout seldom runs at night except in an emergency.

c. Scouts should stop frequently and listen intently at each stop.

d. Scouts should take advantage of sounds, which may distract the enemy, to cover up their own movements.

e. If the scout falls, he must fall silently without making an outcry.

**20. AIDS TO MOVEMENT.** The following aids to movement will assist the scout in accomplishing his mission:

a. **Walking at night.** In walking at night, the weight of the body is balanced on the rear foot, until a secure spot is found for the forward foot. The forward foot is lifted high to clear any stiff grass, brush, or other obstruction. With the weight still balanced on the rear foot, the forward foot is lowered gently, toe first (because the toe



*Figure 17. Walking at night.*

is more sensitive) to locate a spot free of any rocks, twigs, or other debris that might make a noise. Then the heel is lowered gently, the weight is balanced on that foot, and the other foot is advanced. (See fig. 17.)



*Figure 18. Dropping to prone position at night.*

**b. Dropping to prone position at night** (see fig. 18). The rifle is held as shown in the figure. The soldier goes down slowly on his right knee, stopping himself with his left hand. He moves his left leg carefully to the rear, and places his right leg beside the left. He then rolls into firing position, or lies flat against the ground.

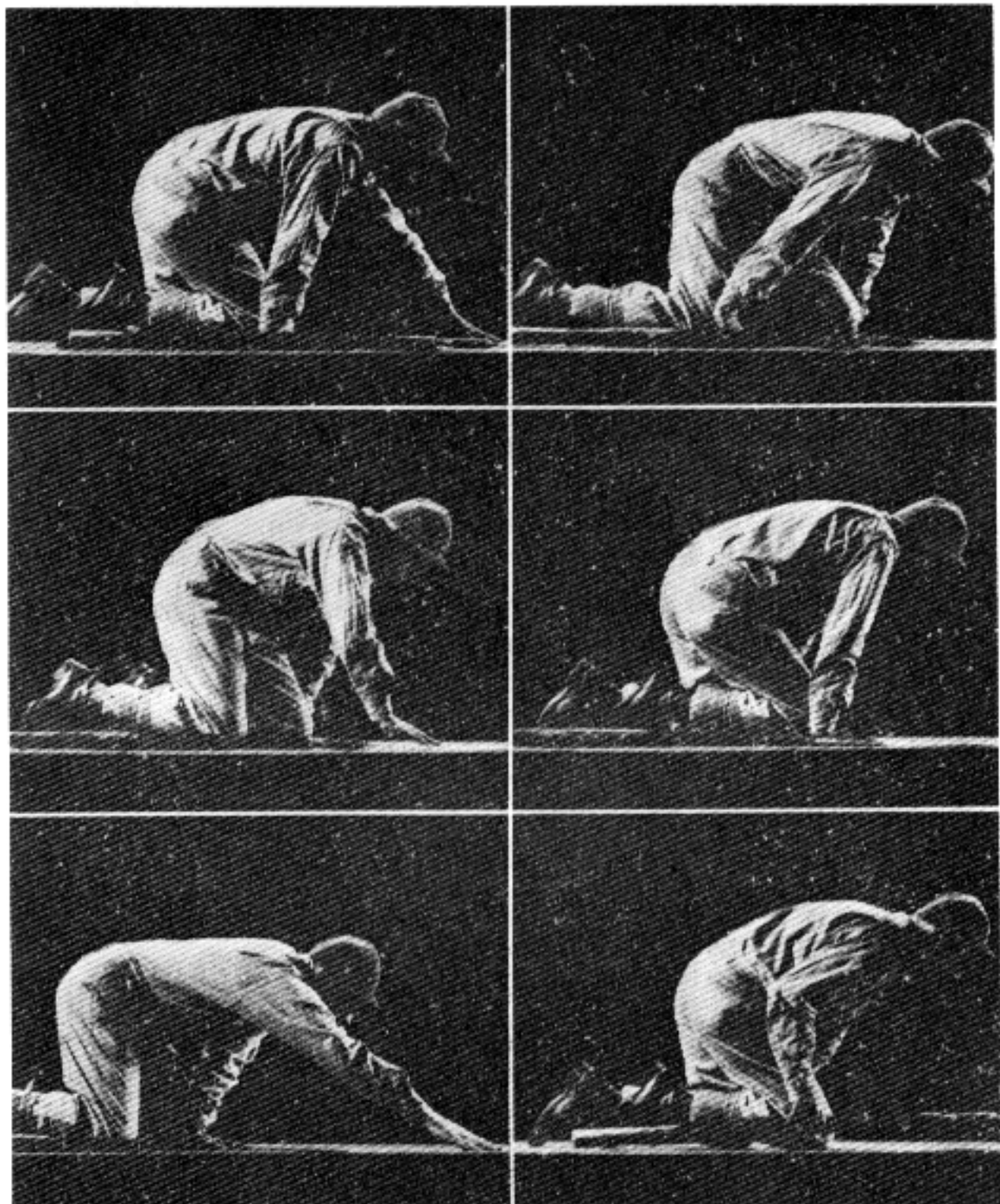
**c. Creeping at night** (see fig. 19). The soldier is down "on all fours," the weight of his body resting on his hands and knees. The rifle is on the ground to his right, operating handle up. With his left hand he feels for a place free of rocks or twigs in front of his left knee. He leaves his left hand in place, and moves that knee forward into the place he has cleared. He then repeats the process with the right hand and knee. As necessary, he clears a place for his rifle and lifts it forward.

**d. Crawling at night.** Crawling at night is comparable to the daytime method of crawling. Movement is slow and tedious, since it must be done silently.

**21. AIDS TO NIGHT SCOUTING.** The scout will find the following aids of value:

- a.** Tobacco chewing should not be allowed.
- b.** A threatened sneeze may often be stopped by pressing upward with the fingers against the nostrils.
- c.** A threatened cough may often be stopped by a slight pressure on the "Adam's apple."
- d.** A ringing noise in the head which interferes with hearing may often be stopped by yawning.
- e.** If it is necessary to whisper, expel most of the air from the lungs to avoid a hissing sound.
- f.** Keep out of depressions in damp and rainy weather when the enemy has been using gas; they may contain mustard gas.
- g.** Whenever the scout stops, he *looks* and *listens*.
- h.** Do not strain the eyes by concentrating on one object too long. If objects blur, lower the eyelids slowly, keep the eyes closed for a few seconds, then open them slowly. (See par. 37.)





*Figure 19. Creeping at night.*

i. Sounds of persons walking are heard better if the ear is held close to the ground. Sounds are transmitted a greater distance in wet weather than in dry.

j. If caught in a flare, the scout FREEZES, or he may drop quickly in the split second after flare lights while enemy is blinded. If the scout hears the flare discharged he

should drop to the prone position before it bursts. Never look at a flare. (See par. 13.) A flare which bursts in the air or on the ground behind a scout makes it easier for the enemy to see him.

**k.** All patrols or persons met should be considered unfriendly until the contrary is established. When some one is met, crouch low to get him silhouetted against the sky and at the same time to offer him an indistinct target if he proves to be an enemy. If fired on, do not return the fire except to avoid capture.

**l.** Luminous compasses or watches should be carried in a manner which covers the luminous dial.

**m.** The eyelids are kept partially closed to prevent light reflection.

**n.** If necessary to follow a gravel road, silent walking is easiest along the edges.

**22. ROUTES. a. Principles.** Before starting on a night mission the scout should, during daylight, study the ground in detail from an observation post, from airplane photographs and from a map, and make certain of compass direction, prominent points, bounds, outguards and friendly patrols.

**b. Application.** (1) The route of advance should be below the skyline.

(2) Unless the moon is bright, the scout should not pass through woods, ditches, ravines, and brush at night for the noise made in moving through them might lead to discovery.

(3) The scout working at night should *always* return by a route different from his advance, for in the darkness the enemy may easily approach the scout's own lines and wait in ambush for his return. The same route should not be used on successive nights.

**23. TO ESTIMATE DIRECTION AT NIGHT. a.** A scout who has no compass to use at night must understand other means of keeping his direction. Useful means for keeping direction at night are the direction of the wind, stream courses, stars, and prominent points in the skyline.



- b. Notes made from a map may be helpful in some cases.
- c. The North Star and Cassiopeia are excellent reference points and every scout should be able to recognize them. (See par. 10c.) (See fig. 11.)
- d. A prominent object on the skyline or a star near the horizon in the direction of advance may be used as a guide.
- e. Signal lights may be sent up from the outguards to guide scouts who are working out in front.

**24. RECONNAISSANCE.** Before starting a night reconnaissance the scout should, whenever possible, supplement his map and aerial photo study with a daylight study, from a vantage point, of the actual ground over which he will operate. He can thus determine each bound or terrain feature. Many features on the ground are not shown on a map. Delicate reconnaissance missions can best be carried out on dark, stormy nights. When the enemy is using many flares, he probably has few patrols out; when he is not using flares his patrols are likely to be numerous. A scout



*Figure 20. Passing over wire.*

should not enter a trench unless his mission requires it, or unless he is ordered to do so; in such cases he should first jump the trench, stop to listen, and enter it from the rear.

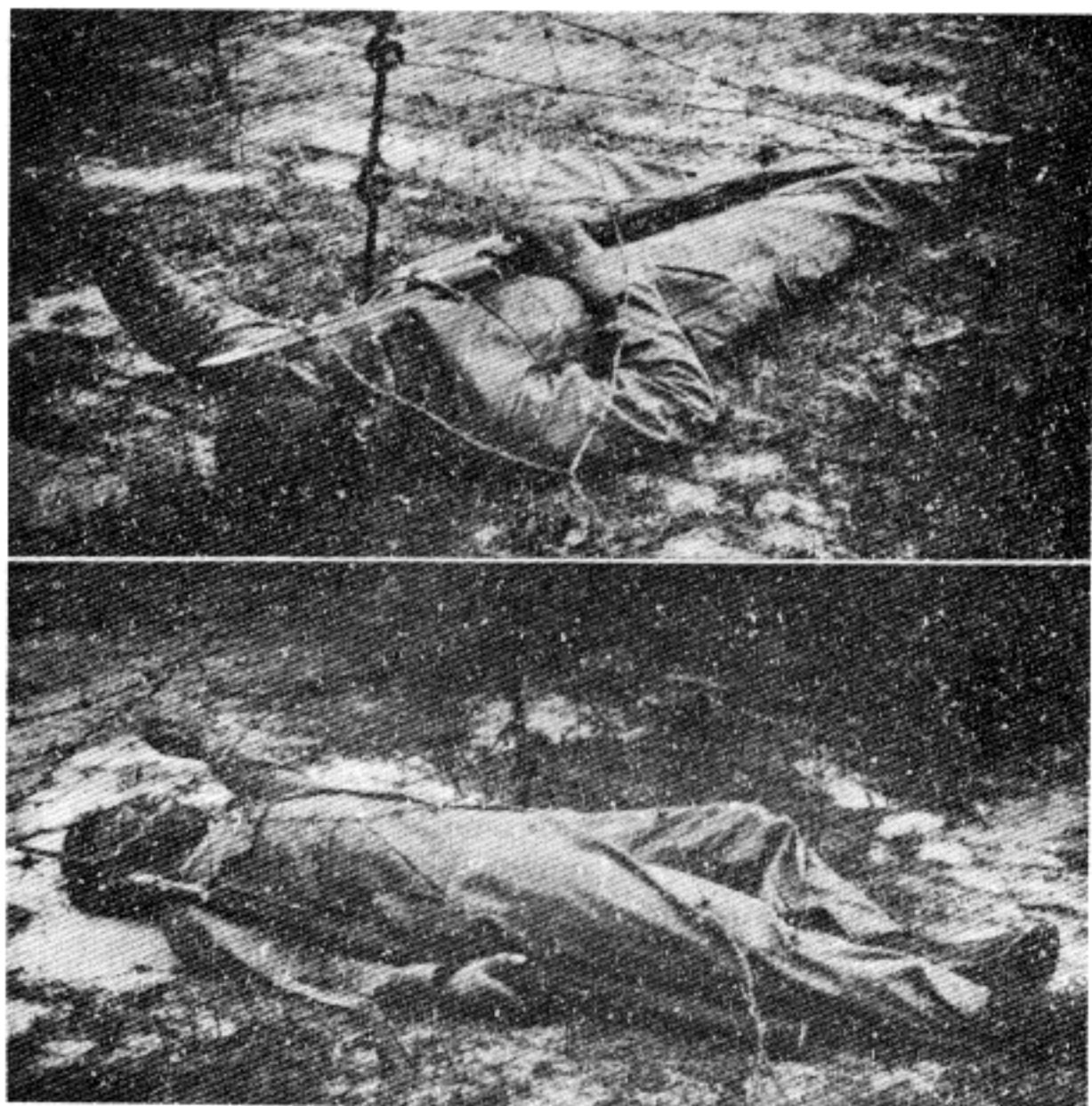
**25. PASSING OBSTACLES. a. Principles.** All movement near wire is slow and cautious because of the danger of booby traps and mines. Wherever possible, the scout avoids enemy obstacles which are frequently covered by fire. He may expect to find enemy detachments covering obstacles.

**b. Passing wire.** (1) *Over wire.* When the scout is without arms, he walks over low wire at night by grasping the first strand with one hand; with the other hand, he reaches forward and feels for a clear spot on the ground where his foot can be placed without touching another strand or a mine or booby trap or any other object that might make a noise. He lifts his foot up and over, close to the hand grasping the wire, and places it beside his other hand, to avoid catching it upon another strand. If armed, the scout may sling his rifle across his back, and proceed as above. To cross in the daytime, the scout keeps his rifle ready for instant use. He may use the butt to help in pressing the wire down. (See fig. 20.)

(2) *Under wire.* To cross under wire, without arms, the scout moves on his back. He feels ahead and above for the strands of wire and "inches" himself along, holding the wire clear of his body. He is careful not to tug on the wire or to jerk it, thus causing a noise and possibly setting off booby traps or antipersonnel mines. If armed, the scout may carry his rifle in one or two ways. (See fig. 21.)

(a) He may carry it on his stomach with the bayonet beside his head. In this manner he has both hands free to feel for and to hold the wire and is ready to make a quick bayonet thrust, should someone approach him as he emerges.

(b) He may carry the rifle by holding it between his body and right arm with the bayonet resting on his shoulder.

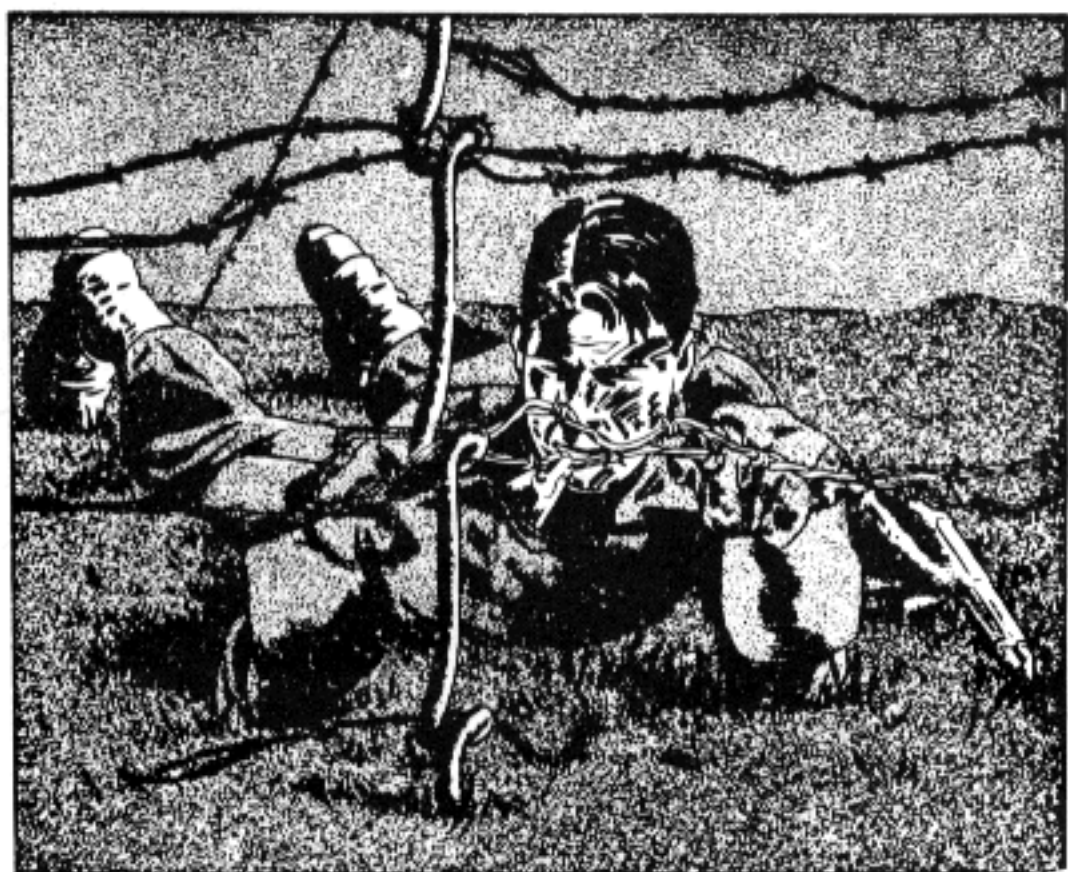


*Figure 21. Passing under wire.*

**c. Cutting wire.** To cut his way through wire, the scout, when alone, cuts the wire near a picket to avoid having two loose ends fly back. To muffle the sound of cutting, he wraps gun patches, rolled leaves, or other material, around the wire. He grasps the wire near the picket with one hand and places the cutters over the patches between his hand and the picket. He slowly increases the pressure until the wire is cut. When the scout is operating with another, one holds the wire in both hands while the other cuts the wire between the holder's hands, muffling the sound of cutting as described above. The cut strands are carefully bent or rolled back, the short pieces to the nearest pickets and the



long pieces far enough back to make an opening sufficient for a passage. The gap is cut diagonally to the front and the top strand is left intact so as to avoid leaving a well-defined, easily discovered passageway. (See fig. 22.)



*Figure 22. Cutting wire.*

**d. Crossing trenches.** See figures 23 and 24 for the way to cross a narrow trench. If it is a wide trench, the soldier climbs silently and slowly down into the trench and out the other side, using revetments to assist him.



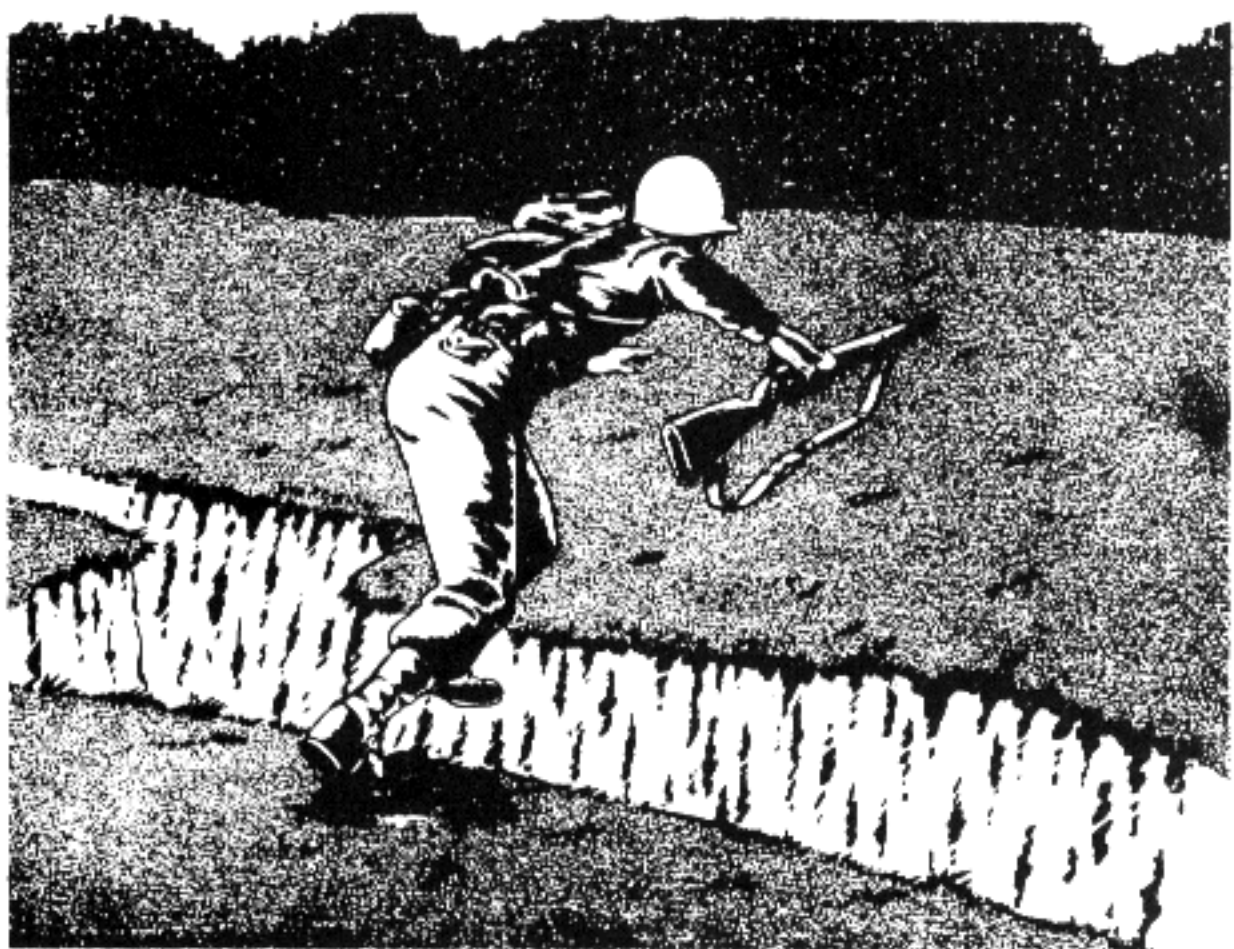
- ① *The scout selects a point at a distance from any junction with a connecting trench. Before crossing, he waits for a short time and listens.*



- ② *He crawls up to the edge of the trench and cautiously looks into it. He removes all loose dirt and rocks from the edge and looks at the other side to be sure it is firm and clear of debris.*



③ *He springs up and jumps across.*



④ *He lands on one foot.*





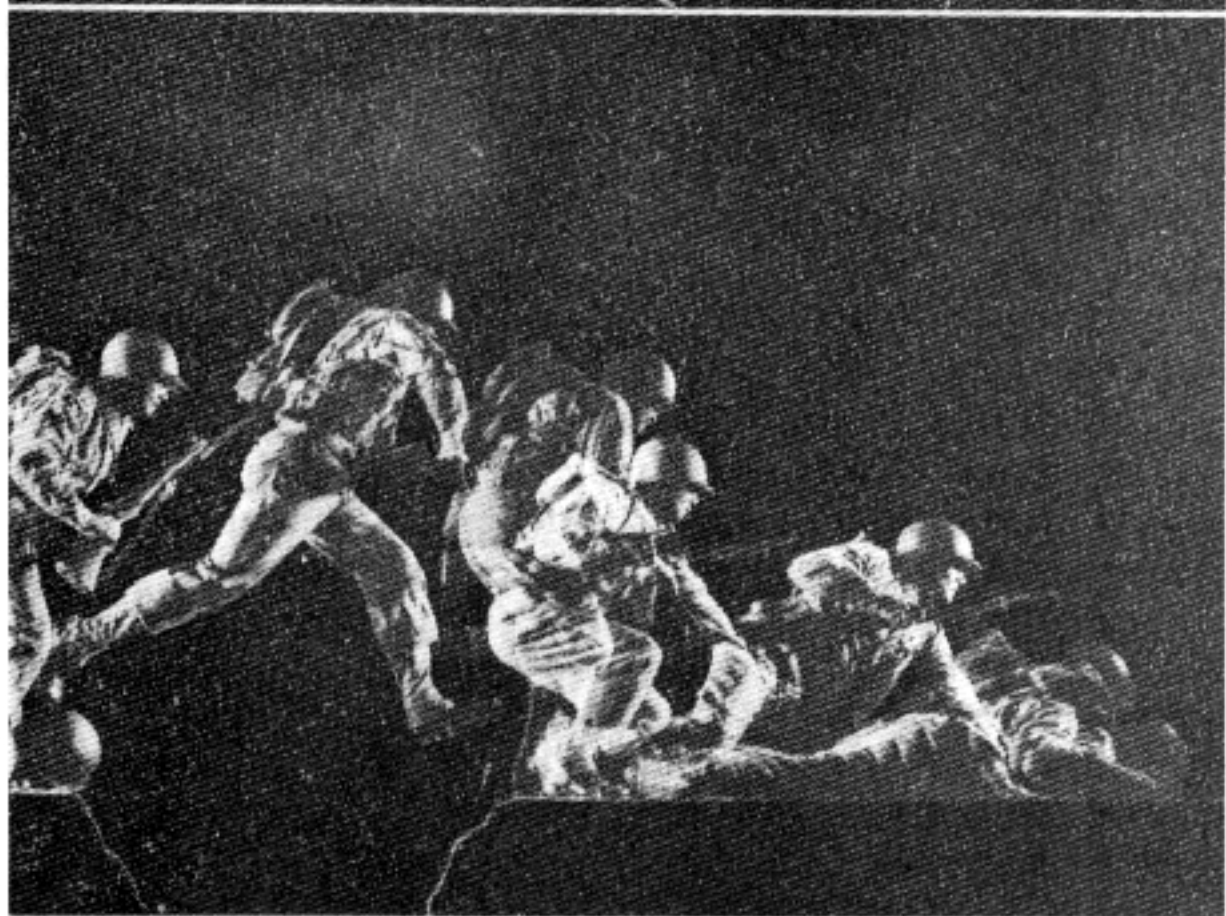
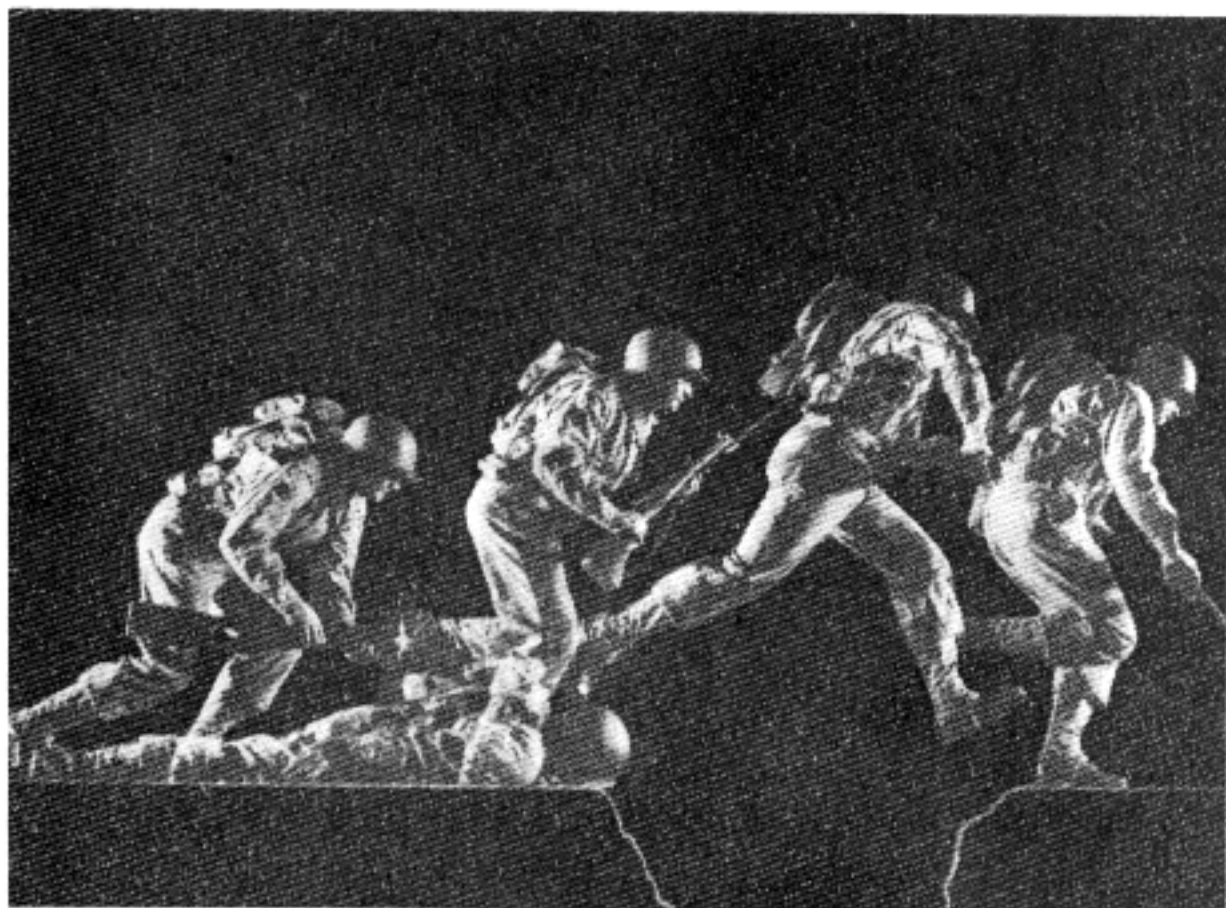
⑤ *He sinks quietly to the ground.*



⑥ *He remains there for a moment, listening before proceeding.*

*Figure 23. Crossing narrow trenches silently at night.*





*Figure 24. Crossing a narrow trench.*

# MAPS AND USE OF COMPASS

---

---

### Section I. MAPS

**26. MAP READING IN THE FIELD. a. General.** The scout must have a practical knowledge of map reading and aerial photographs (see FM 21-25). He must be able to recognize and use the military terms for features of the terrain. He must know how to orient a map by compass by two points, by watch and sun, or by the North Star (see par. 10); understand conventional signs, be able to determine elevation from contours, scale distance on a map, solve simple visibility problems, and find his position upon the map or know his position in relation to other objects on the ground.

**b. Orientation.** A map is oriented when its north line points north. Every line will then be parallel to the corresponding line on the ground and all points will be in the same relative positions as the actual points on the ground.

**c. Methods of map orientation.** (1) *Inspection.* Figure 25 shows how a map may be oriented by carefully observing the road system and terrain features in the immediate vicinity. Note that the map has been rotated horizontally until the road on the map parallels the road on the ground and the positions of nearby ground features are in similar relation to their corresponding conventional signs as shown on the map. This is the most practical method for ordinary purposes and may be used as a rough check on more accurate methods.

(2) *By compass.* Magnetic north is shown on most maps by a line with a barb on it and is also indicated by the north end of the compass needle. Figure 26 illustrates use

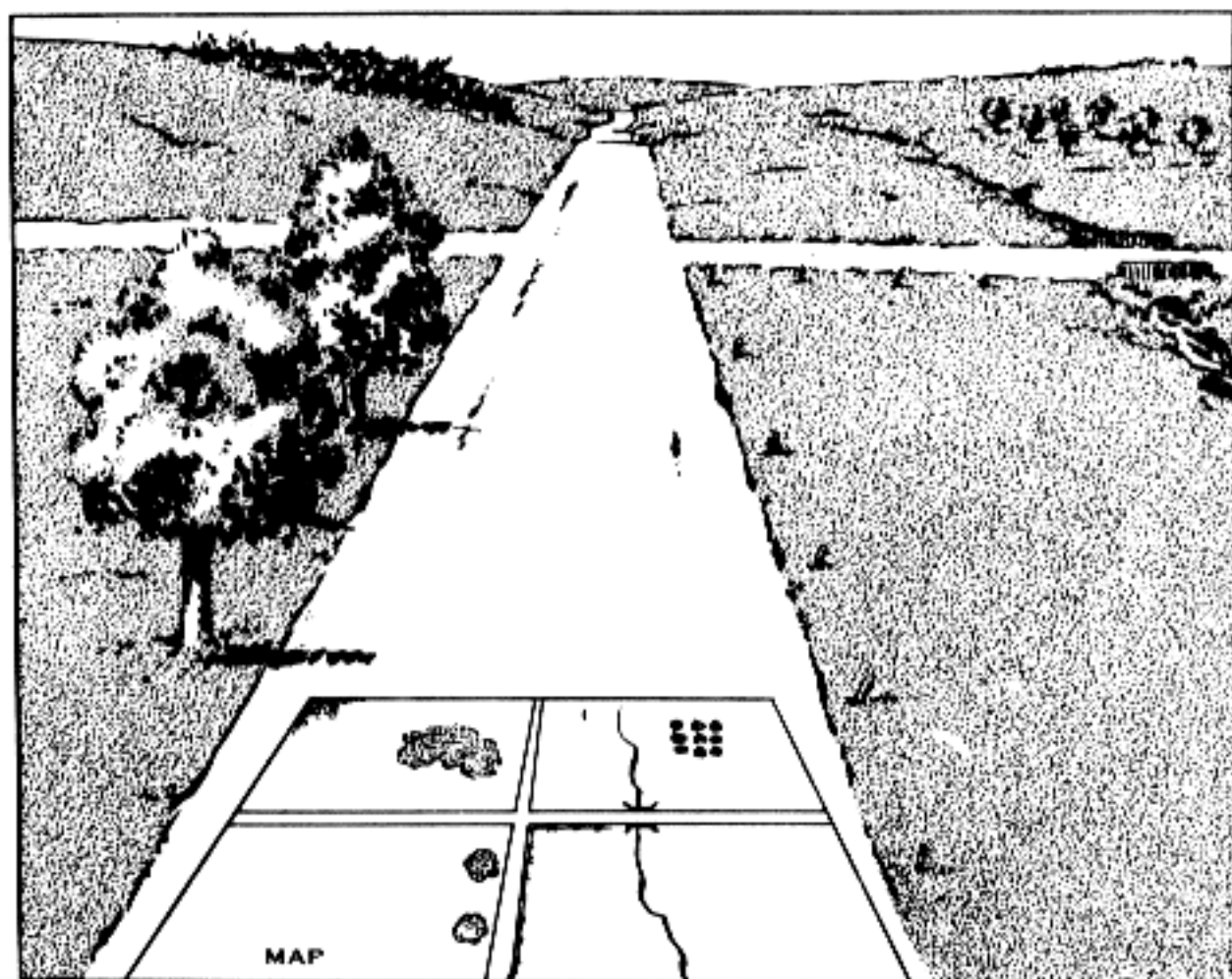
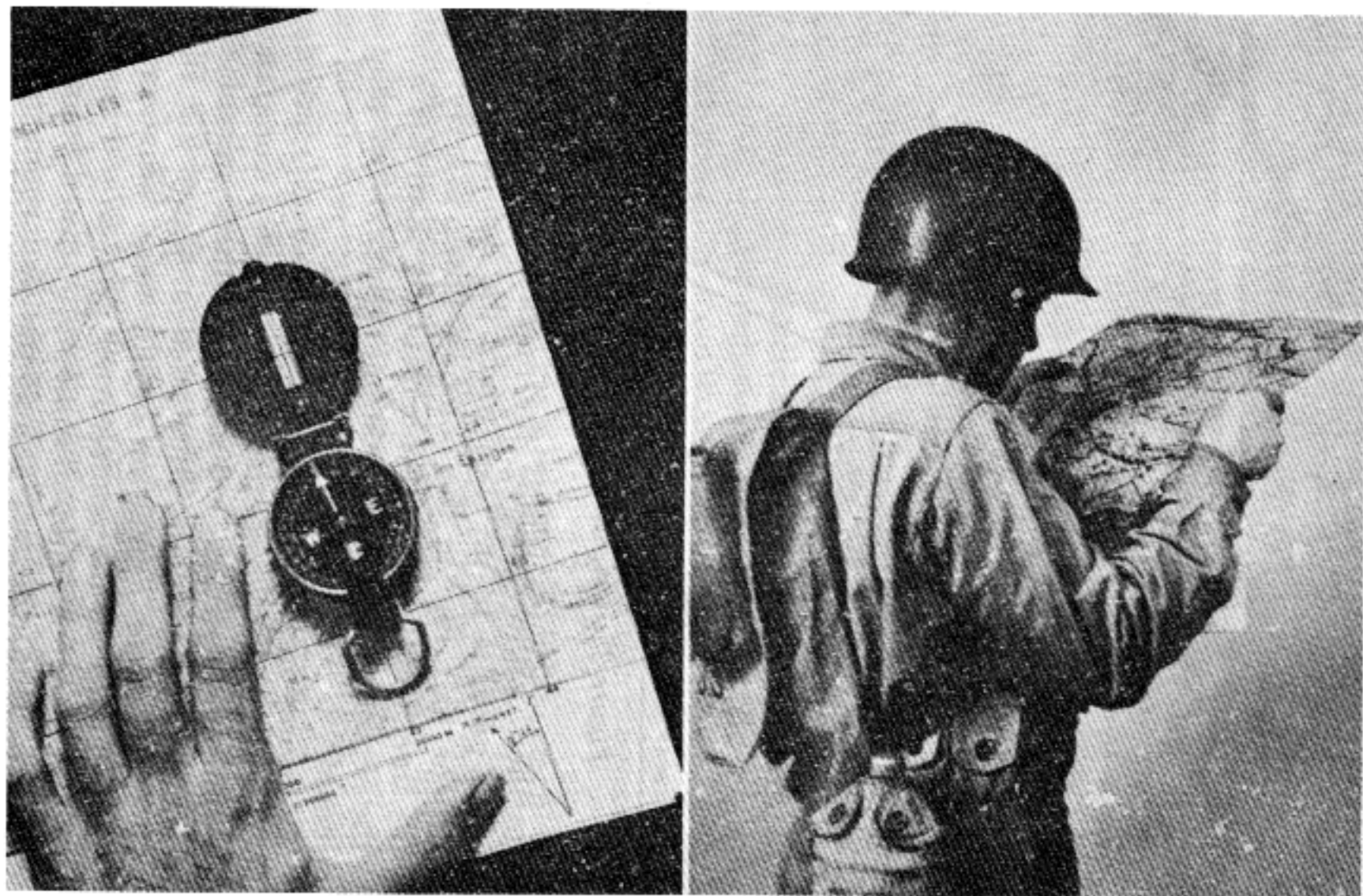


Figure 25. Orienting map by inspection.

of this method. Either prolong the magnetic north line or draw a line parallel to it. Then place the compass on the map with the hair line in the compass cover exactly over this north line. Rotate the map horizontally until the north end of the needle points to the stationary index. The map is now oriented.

(3) *By means of distant point when observer's position is known.* A method of orienting a map when a compass is not available and there are no nearby features suitable for orientation by inspection is illustrated in figure 27. Place a pin at the observer's position on the map. This may be found by reference to the fence corner (fig. 27). Place another pin on the map location of some well-defined point such as the church. Hold the map horizontal and rotate it until the line of pins is aligned on the church. The map is now oriented. A more precise orientation is secured if more than one point can be used. Once the map is oriented, the ap-



*Figure 26. Orientation of map by compass.*



proximate map location of a target or other point may be determined as follows: keeping the map in its oriented position, sight over pin at observer's position toward the designated point, and place a pin on the line of sight. From a study of the map, or by estimation or measurement of the distance, fix location of the point.

**d. Finding scout's position on map.** (1) *Inspection.* If his approximate location on a map is known, all the scout has to do is to study the visible terrain for distinctive features. His position can be found by identifying these features on the map. This procedure is greatly simplified if the map is oriented to the ground. Figure 28 is an example of this method.

(2) *By striding or estimation of distance when along road, railroad, etc.* The scout identifies on the ground the

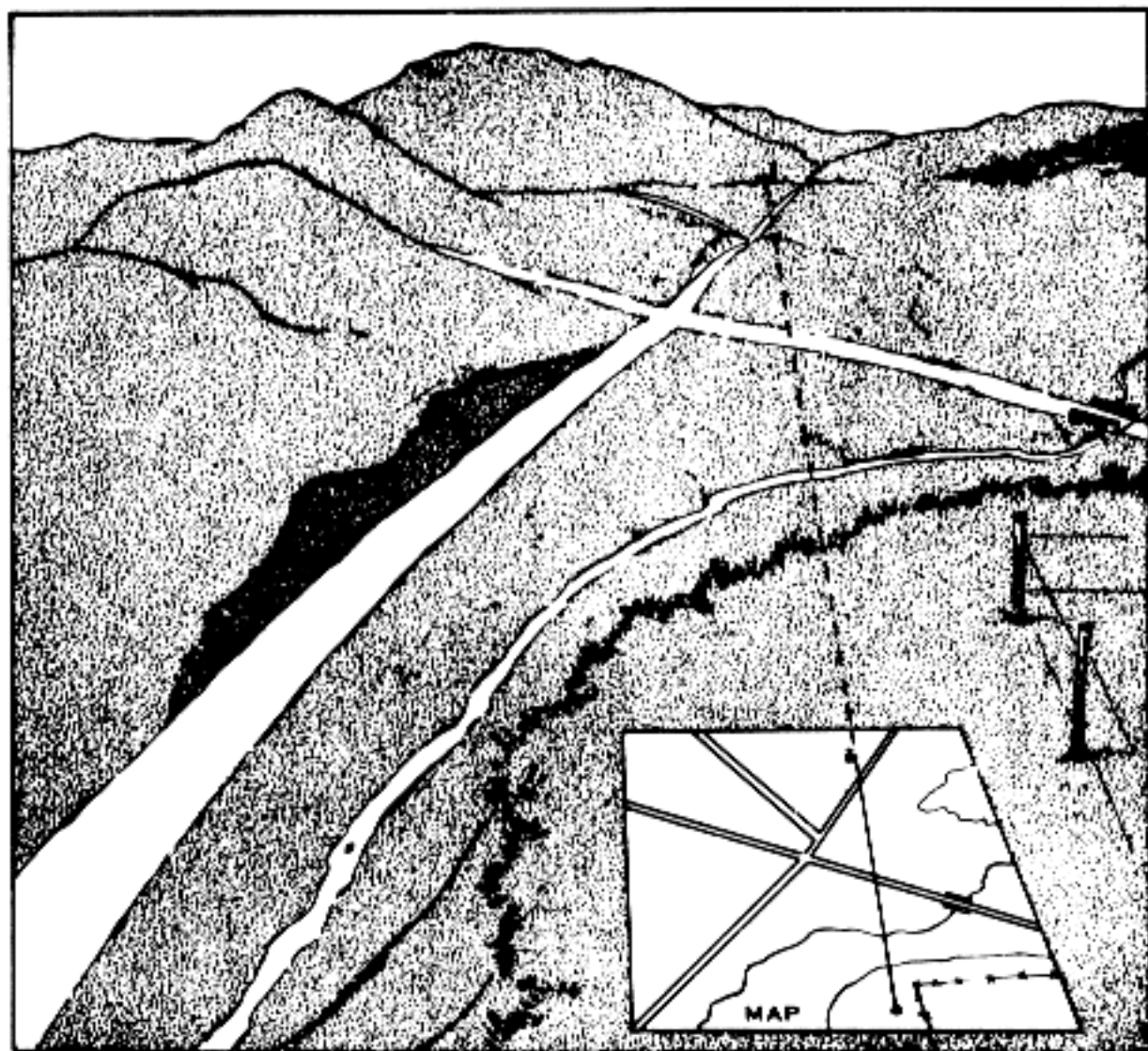


Figure 27. Orienting map by means of a distant point.

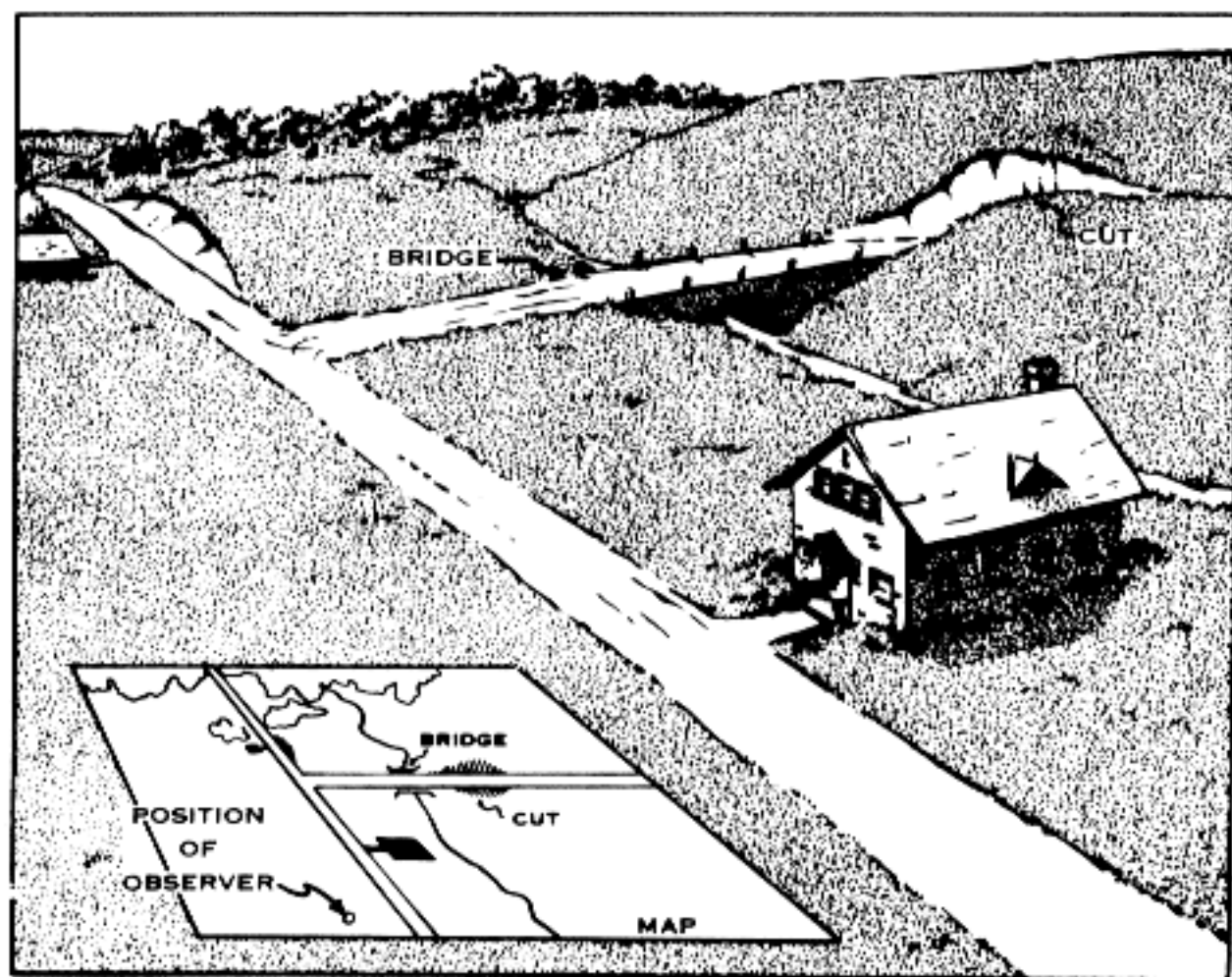


Figure 28. Locating position on map by inspection.

nearest road bend, road junction, bridge, etc., which appears on the map. He then estimates the distance to this point or measures the distance by striding. His position on the map is then obtained by laying off the distance to the scale of the map.

(3) *By resection from two known points.* This method is illustrated in figure 29. The scout first orients the map accurately. He then looks over the terrain and selects two distinct visible features on the ground, *B* and *C*, that are so located that lines radiating from the scout to them form an angle of as near  $90^\circ$  as possible. He places a pin in *B*, lays a straightedge (ruler or pencil) against the pin, turns the straightedge until it points at *B*, and draws a line on the map from the pin toward his position. He repeats the operation with point *C*. The intersection of the two lines is the scout's location on the map. Care must be exercised to see

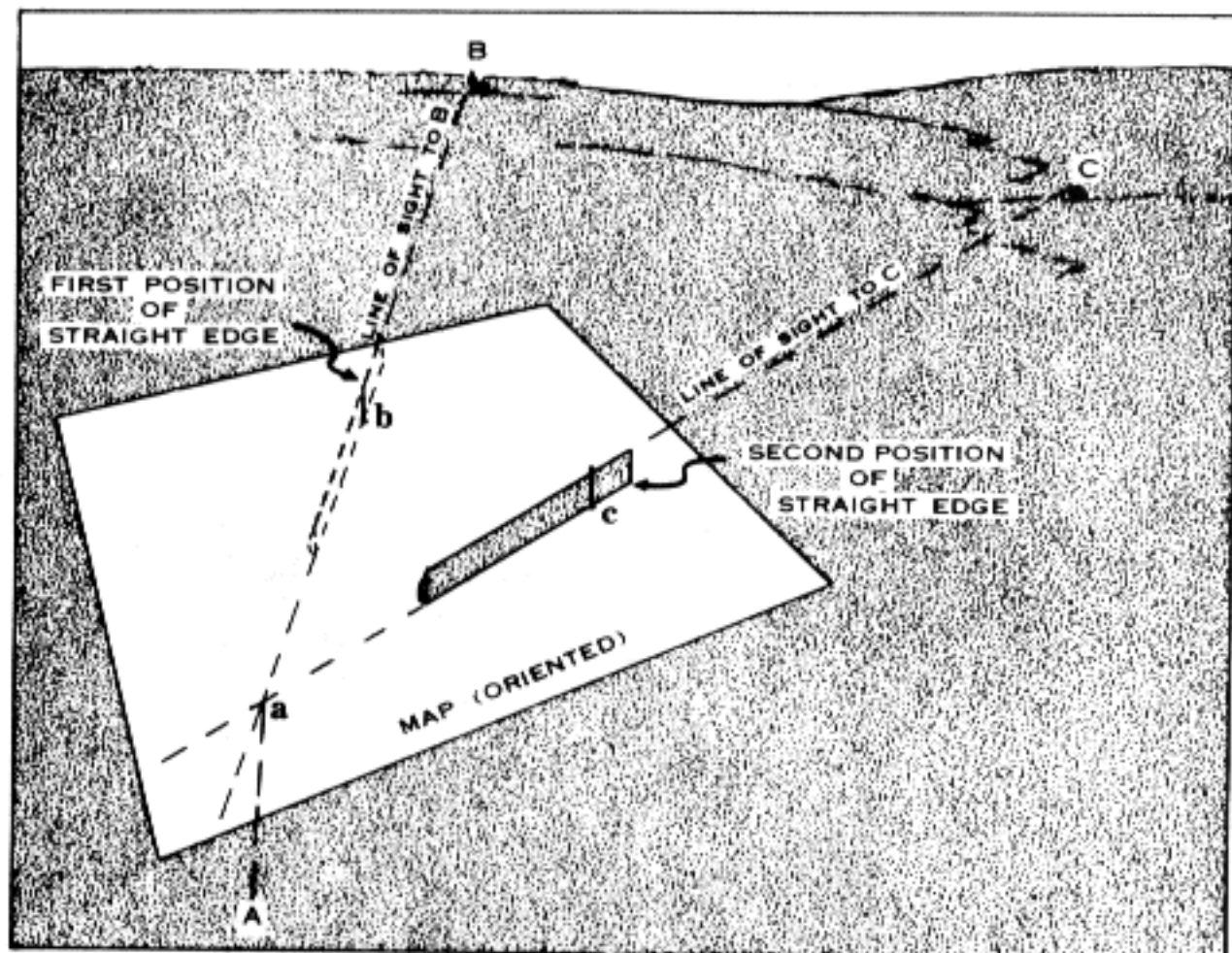


Figure 29. Location of observer's position on map by resection from two distant points (graphic method).

that the map remains oriented during the entire procedure. If three points are used instead of two, the scout's location on the map will probably be more accurate.

**e. Ground forms.** Ground forms are shown by means of contours. A contour is an imaginary line joining points of equal elevation. (See FM 21-25.)

**f. Scales.** To find the actual distance between two points on the map, the distance is measured with a paper or string and the distance so obtained is compared with the scale of the map.

**27. TERRAIN FEATURES.** In addition to the usual standard terrain terms such as hill, ridge, valley, etc., certain other words are used to describe features of military importance. (See fig. 30.)



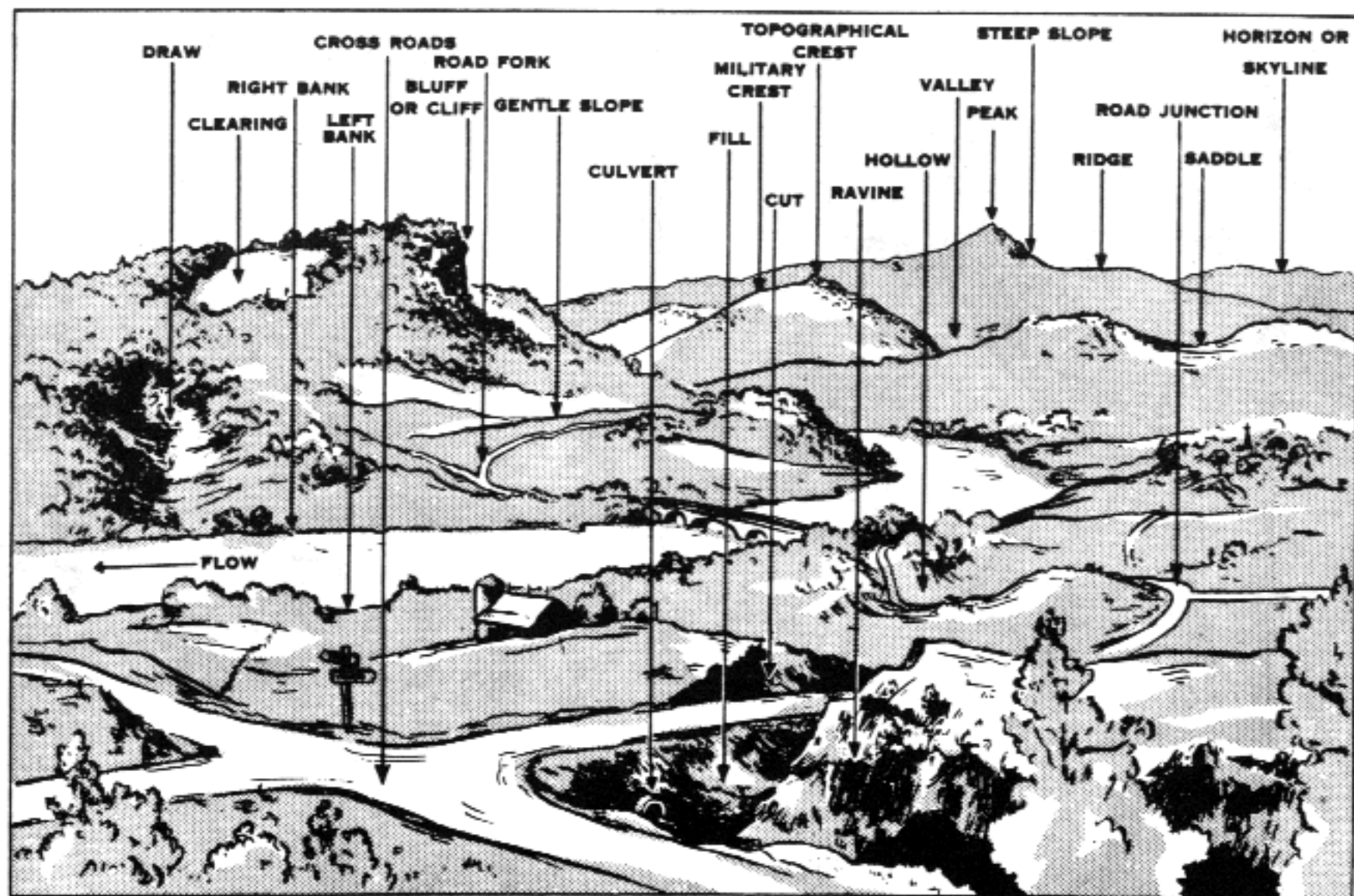


Figure 30. Terrain features.

**28. TERRAIN.** a. A scout should be able to evaluate terrain and report by a memory sketch "the lay of the land" that he has observed.

b. Terrain can always be evaluated in terms of the following five factors: observation, fields of fire, concealment and cover, obstacles, and routes of communication.

(1) Observation is a protection against surprise and permits an evaluation of the terrain. Good observation also allows the delivery of effective fire upon the enemy. High ground allows the best observation.

(2) Fields of fire are necessary for the most effective employment of firearms. A good field of fire is essential to defense. In attack, routes of approach are sought which prevent the enemy from having good fields of fire. The best fields of fire are over level or uniformly sloping open terrain.

(3) Concealment and cover are important. Concealment may exist without cover or they may occur together. (See pars. 5 and 6.) The ideal position for defense provides concealment and cover for the defenders with neither cover nor concealment in front to aid an attacking enemy. Attack is favored by terrain that offers good concealment or cover to approach the enemy. Wooded or rough terrain provide the maximum in cover and concealment.

(4) Obstacles are of increasing importance in modern warfare because of mechanized units. Obstacles are chiefly of advantage to the defense but may be used to protect the flanks of attacking units. Natural obstacles of the terrain include mountains, rivers, bodies of water, marshes, gullies, steep inclines, and extensive woods.

(5) Routes of communication allow the movement of troops and supplies to the front. They are important to both defense and offense. Routes of communication include roads, covered approaches, waterways, trails, airfields, and their facilities.

**29. SKETCHES.** A scout may show accurately by means of a sketch information which would be difficult to convey otherwise. Sketches are of two types—panoramic and topographic.

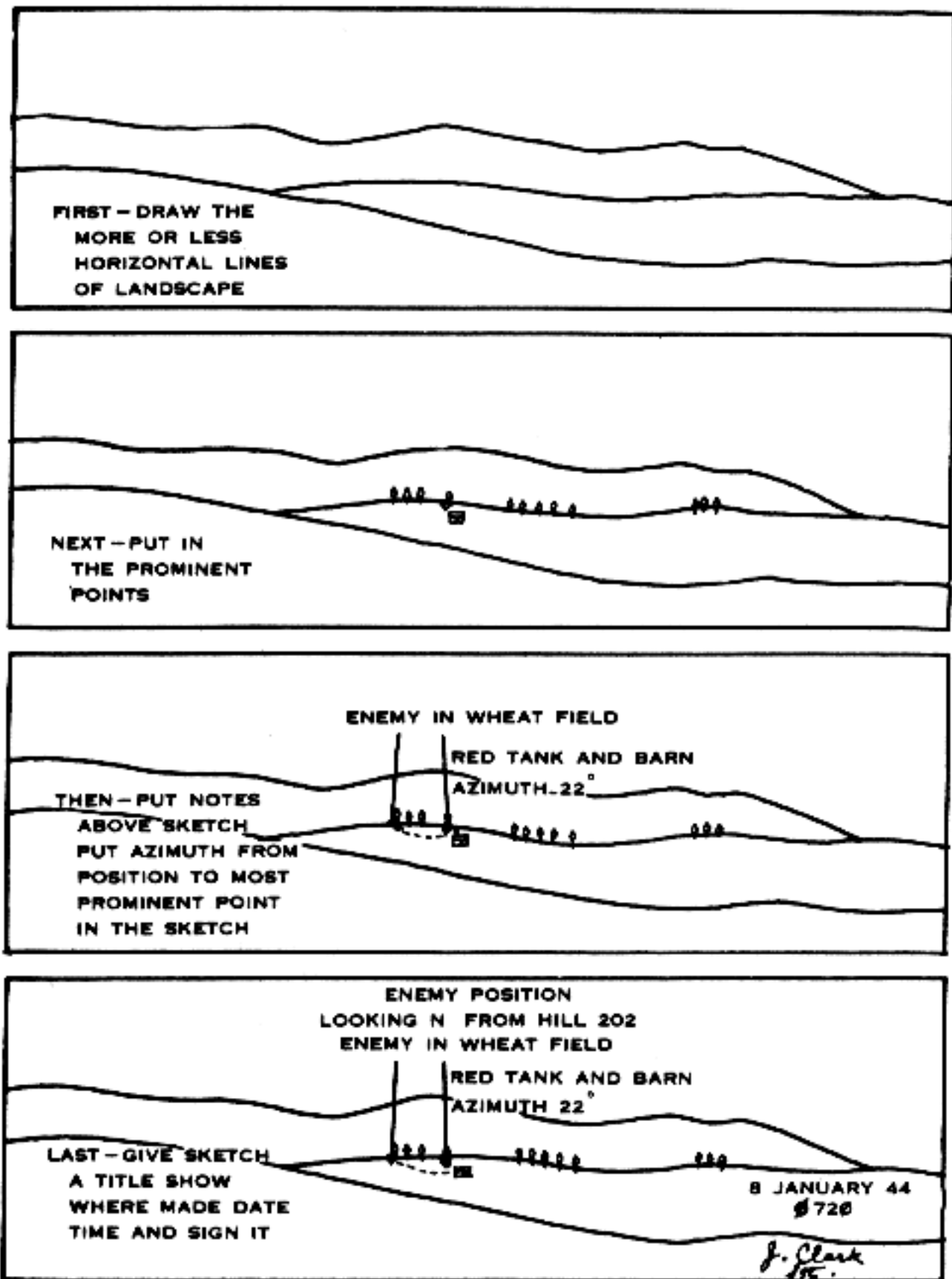


Figure 31. Method of making a panoramic sketch.

**a. Panoramic sketches.** A panoramic sketch is a picture of the terrain in elevation and perspective as seen from one point of observation. It conveys information of the terrain to the person to whom the sketch is sent. A panoramic sketch made by one scout will assist another scout in orienting himself, in getting the same view from the same position, and will enable him to pick up quickly the information conveyed by the sketch. The method of making a panoramic sketch (see fig. 31) is described below:

- (1) Determine what information it is desired to transmit.
- (2) Draw the more or less horizontal lines of the landscape. The scale normally used is:  $\frac{3}{4}$  inch equals 50 miles.
- (3) Put in the prominent points. Leave out unimportant details.
- (4) Do not show the foreground.
- (5) Indicate on the sketch the location of the information it is desired to transmit.
- (6) Place any explanatory notes above the sketch with arrows pointing to the features explained.
- (7) Indicate the azimuth to the most prominent point in the sketch, the reference point.
- (8) Place a title on the sketch, show where it was made, and indicate the date and time when it was made.
- (9) Sign the sketch.

**b. Topographic sketches.** A topographic sketch enables the person receiving the sketch to plot on a map the scout's position or the information that the scout desires to convey. The method of making a topographic sketch (see fig. 32) is described below:

- (1) Find the azimuth from the position to that of the object seen or of the information to be transmitted.
- (2) Estimate the distance.
- (3) Draw the azimuth line from observer to object; mark above it the azimuth and below it the distance.
- (4) At the proper end indicate the object, and at the other end the position of the scout.
- (5) Find the azimuth and the distance to some point on the map or to the position of the command post. Draw this

line on the sketch and indicate the azimuth, the distance, and the object to which drawn.

(6) Sign the sketch.

**30. OVERLAYS.** An overlay is a piece of cloth or transparent paper, for laying over a map or chart, upon which various locations, such as targets, enemy positions, etc., are shown. A map, similar to that used by the scout in preparing the overlay, must be in the possession of the receiver. The receiver places the overlay over his copy of the map and the information the scout is transmitting may be understood. Overlays may be made on any kind of transparent paper,

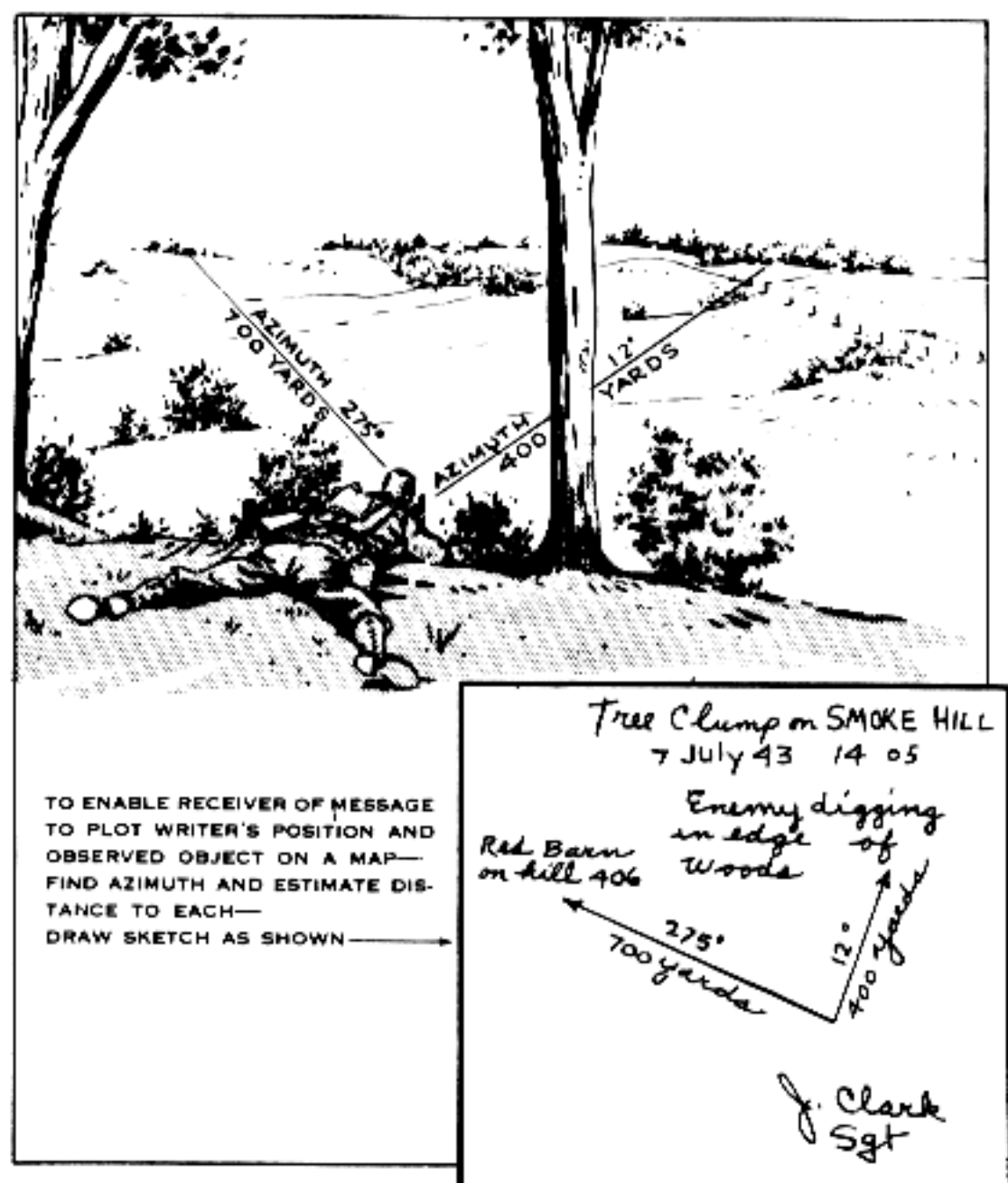
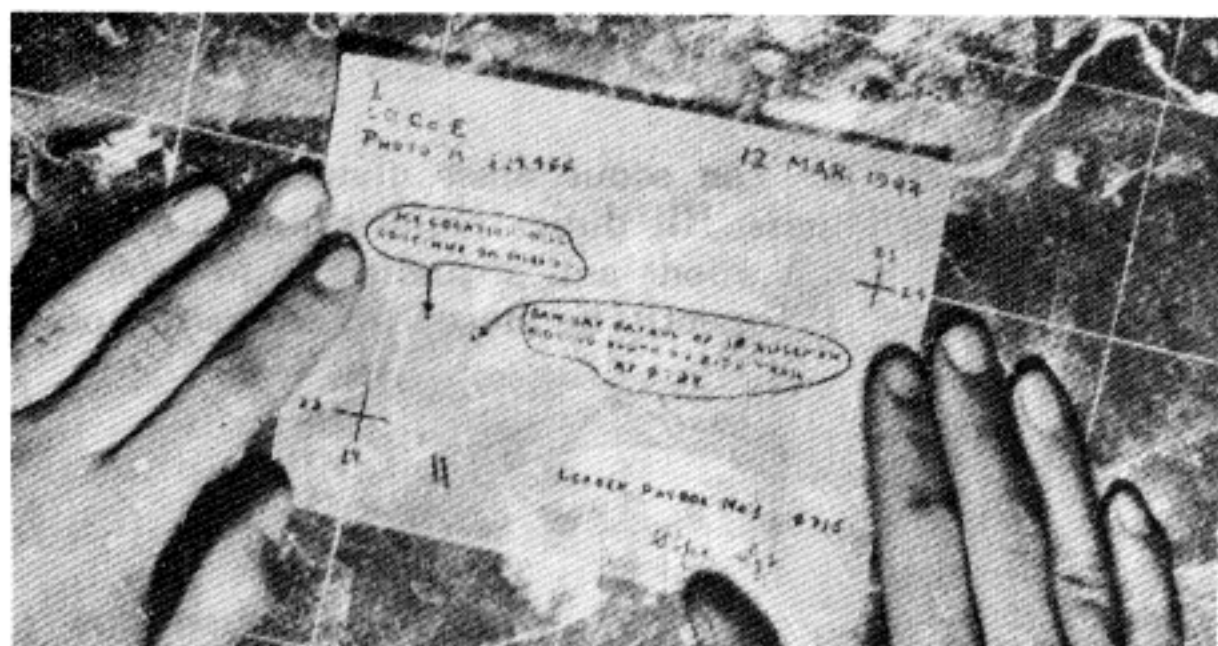


Figure 32. Method of making a topographic sketch.



*Figure 33. An overlay—brief and accurate.*

tracing paper, overlay sheets from a message book, or even toilet paper. The method of making a simple overlay (see fig. 33) is described below:

**a.** Orient the map on a hard, flat surface.

**b.** Place the transparent paper over the part of the map where the object it is desired to show, or the information to be transmitted, is located and fasten with paper clips, thumbtacks, or pins.

**c.** Register the overlay by tracing in the intersecting grid lines at two opposite corners of the overlay and give them their correct number designation. If there are no grid lines on the map, trace in at least two clearly defined map features, such as road junctions, towns, or streams. This enables the receiver to locate the exact area on the map covered by the overlay.

**d.** Sketch in the objects seen or the information to be transmitted, putting these data where they will be seen through the tracing paper if shown on the map itself.

**e.** Put all explanatory notes along the margin of the overlay with arrows pointing to the objects mentioned.

**f.** Indicate the position on the map from which you saw the object or obtained the information.

**g.** Indicate the title and scale of the map from which the overlay was made.

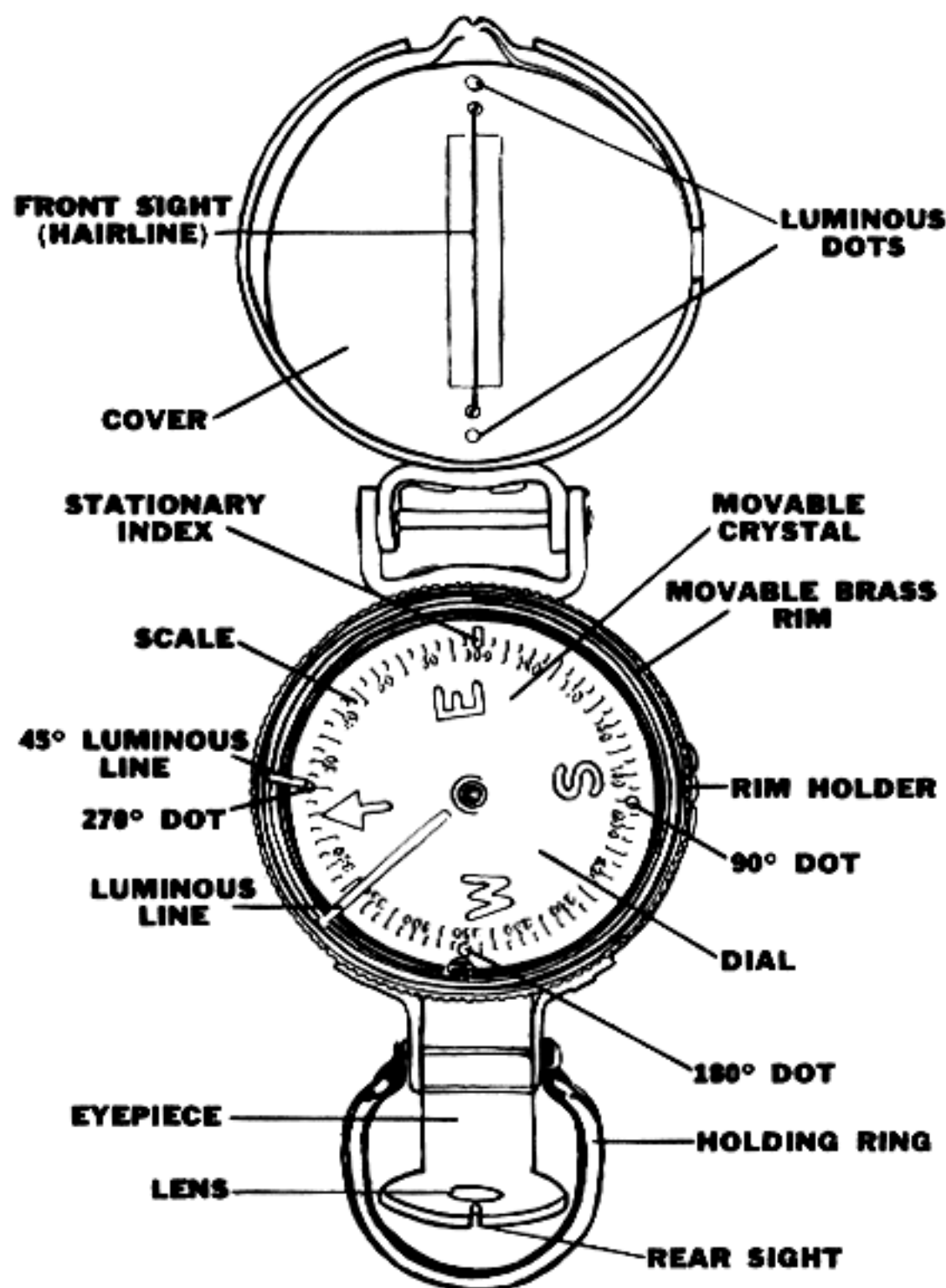
**h.** State the date and hour the information was obtained.

**i.** Sign the overlay.



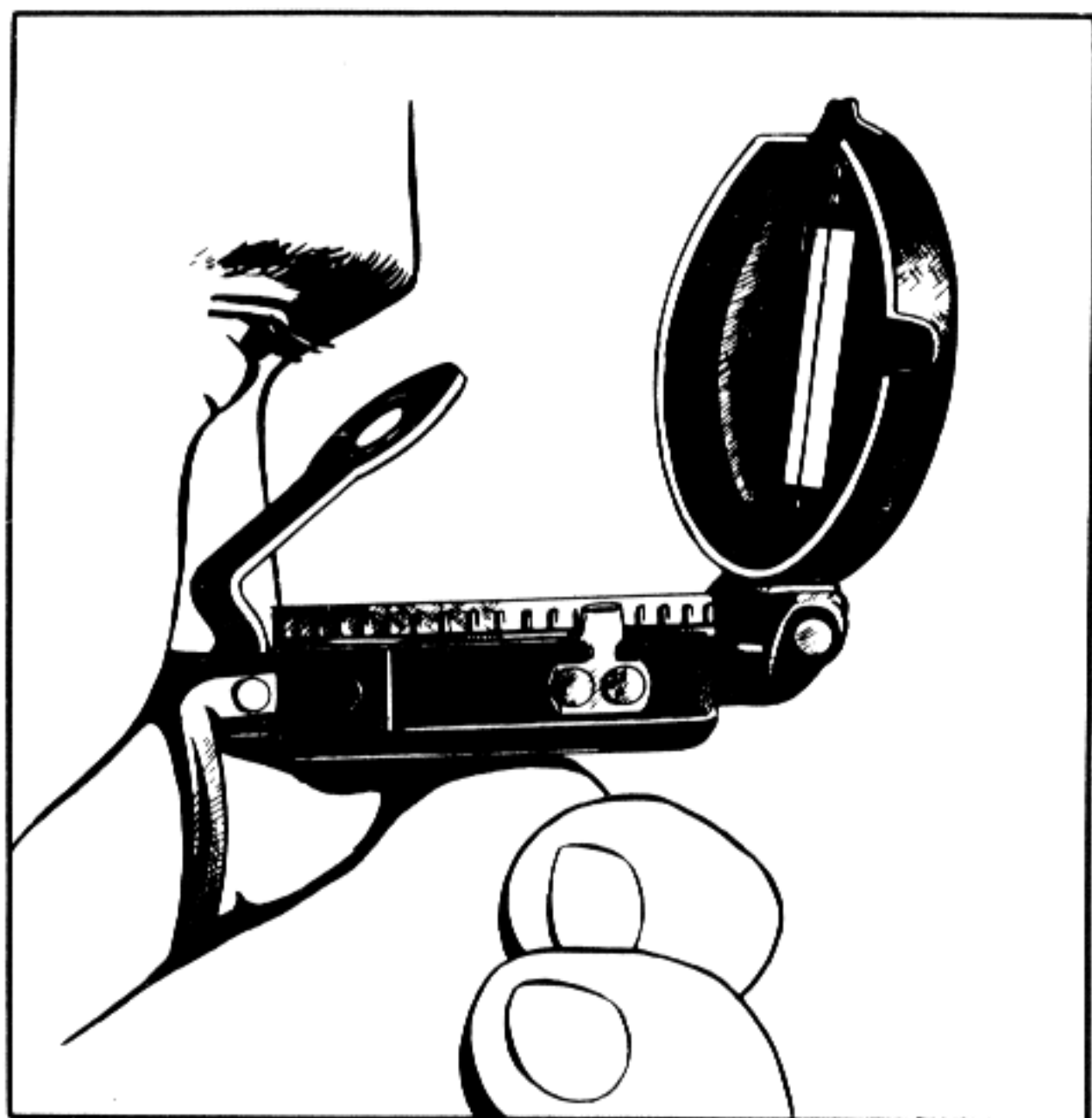
## Section II. COMPASS

**31. GENERAL.** a. The scout must understand and be able to use the compass. His duties require him to move to distant points through woods and at night and to designate objects discovered. Frequently he must lead others to points



*Figure 34. Nomenclature of compass.*





*Figure 35. A method of holding the compass.*

he has scouted. The compass is his surest guide. The scout must understand three uses of the compass, namely: how to determine the direction of an object on the ground; how to determine the direction of an object on a map; and how to march in a given direction either by day or night.

**b. Method of using** (1) The standard-type lensatic compass may be held with the thumb through the holding ring, supporting the compass with the first two fingers. (See fig. 35.)

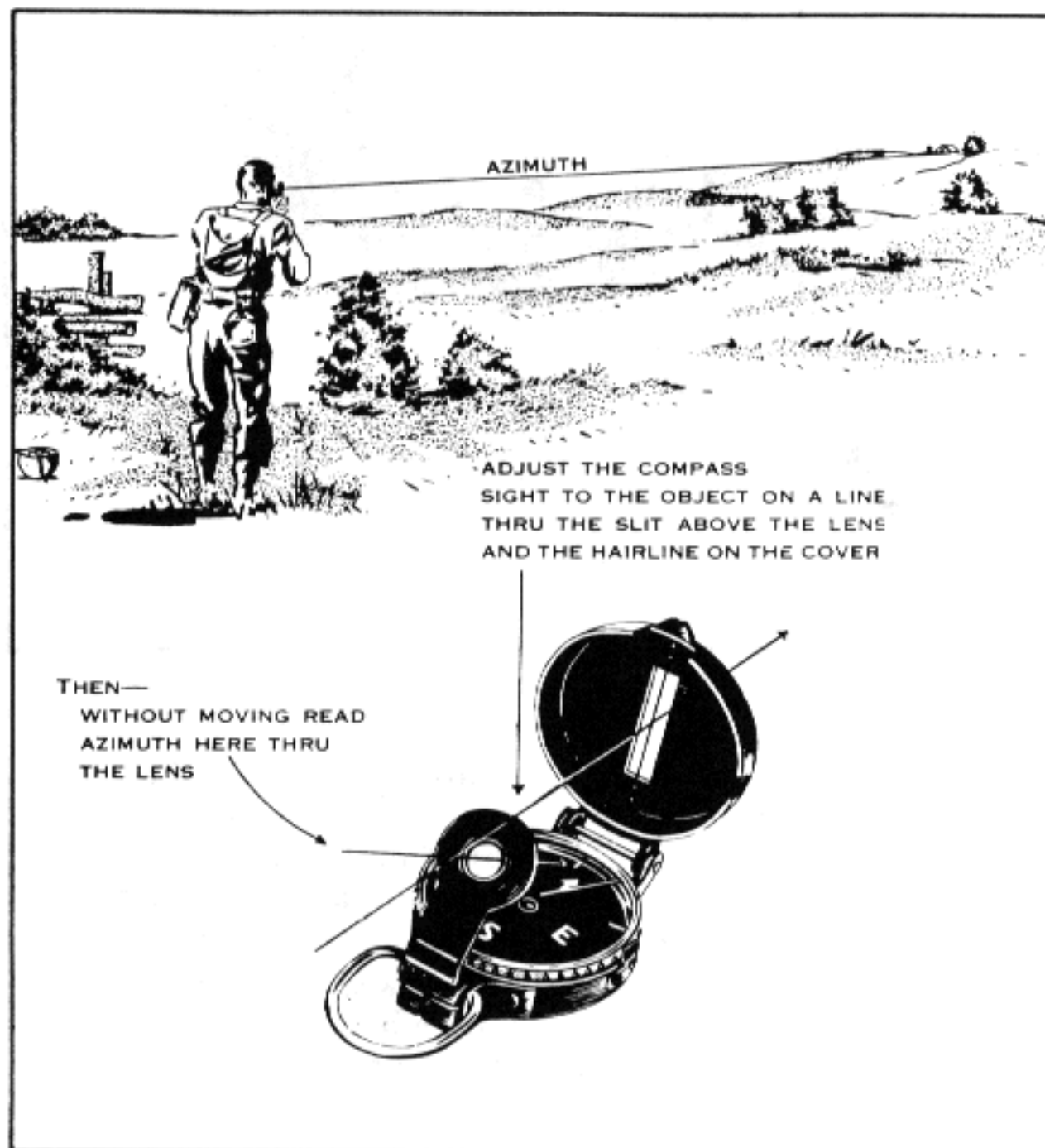
(2) Adjust the eyepiece until the figures of the dial can be read plainly through the lens.

(3) The arrow at rest points to the magnetic north. The

angle any line makes with the north line, measured clockwise from the north point, is the magnetic azimuth of that line.

(4) Hold the compass as directed in (1) and (2) above. Stand so that the arrow is under the stationary index. The line of sight is now magnetic north.

(5) Turn the body either to the right or left. The number now under the stationary index is the magnetic azimuth of the new line of sight.



*Figure 36. Method of determining azimuth of a visible object.*

**32. DETERMINING AZIMUTH.** **a. To object on ground.** To determine the azimuth of any object, align the rear sight (slit in the eyepiece) and the front sight (hair line in the compass cover) upon the object. Let the dial come to rest. Read the azimuth under the stationary index. (See fig. 36.)

**b. To object on map.** To determine the azimuth of an object on a map, draw a fine line on the map connecting your position and the object. Orient the map. Place the compass on the map, compass cover toward the object, with the hair line in the lid directly over the line drawn on the map. The reading at the stationary index now indicates the desired azimuth. (See fig. 37.)

**c. To march in given direction.** Look through the lens and turn the body until the required azimuth is read. Pick out a reference point in the line of sight. March to the reference point. Repeat with successive reference points as often as necessary.

**d. Offsets.** Frequently, while following a compass course, the scout will have to go around obstacles. In such cases he takes a  $90^{\circ}$  compass offset. (See fig. 38.)

**e. Back azimuth.** When a specific azimuth has been indicated, back azimuth is the opposite direction. Numerically it equals the original azimuth plus or minus  $180^{\circ}$ .

**33. USES OF COMPASS AT NIGHT.** **a. Necessity.** For night work, the scout must understand the use of the luminous compass. By it he may guide his platoon into position in the dark; he may visit adjoining elements of his own command, keep direction when on patrol, or locate gaps in the enemy wire, and enemy positions.

**b. Marching by compass.** In night marching, the scout first uses a map or some other source to determine the azimuth on which he is to march. He then raises the cover and eyepiece of his compass. He turns the compass until his predetermined azimuth is next to the stationary index. Next, he turns the glass face until the luminous line is di-

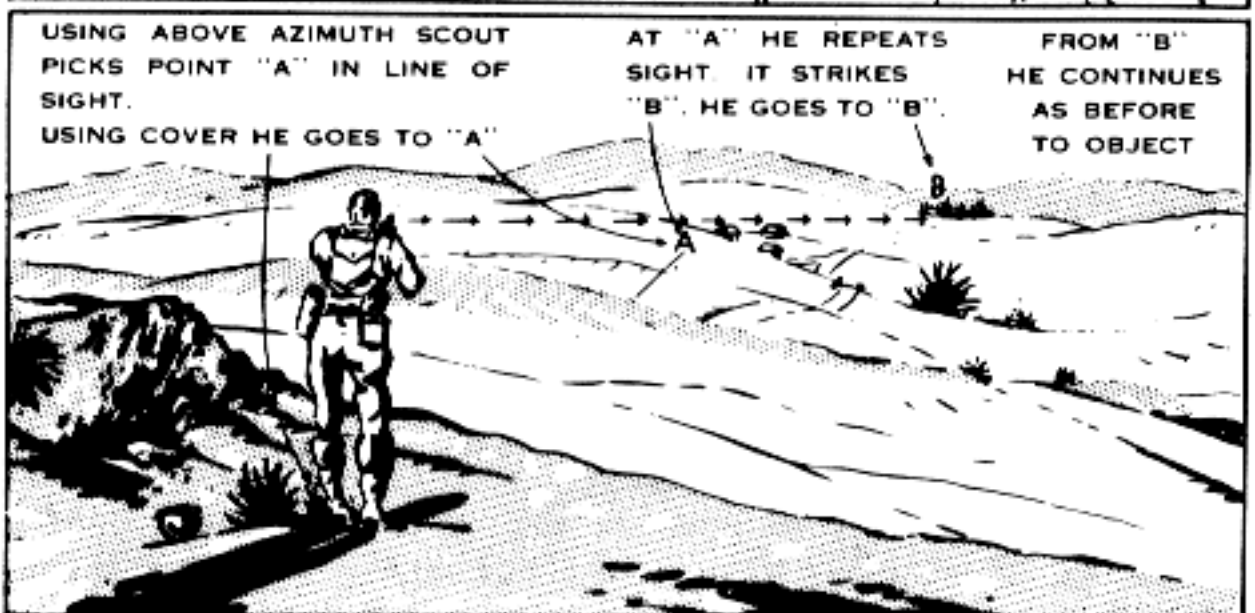
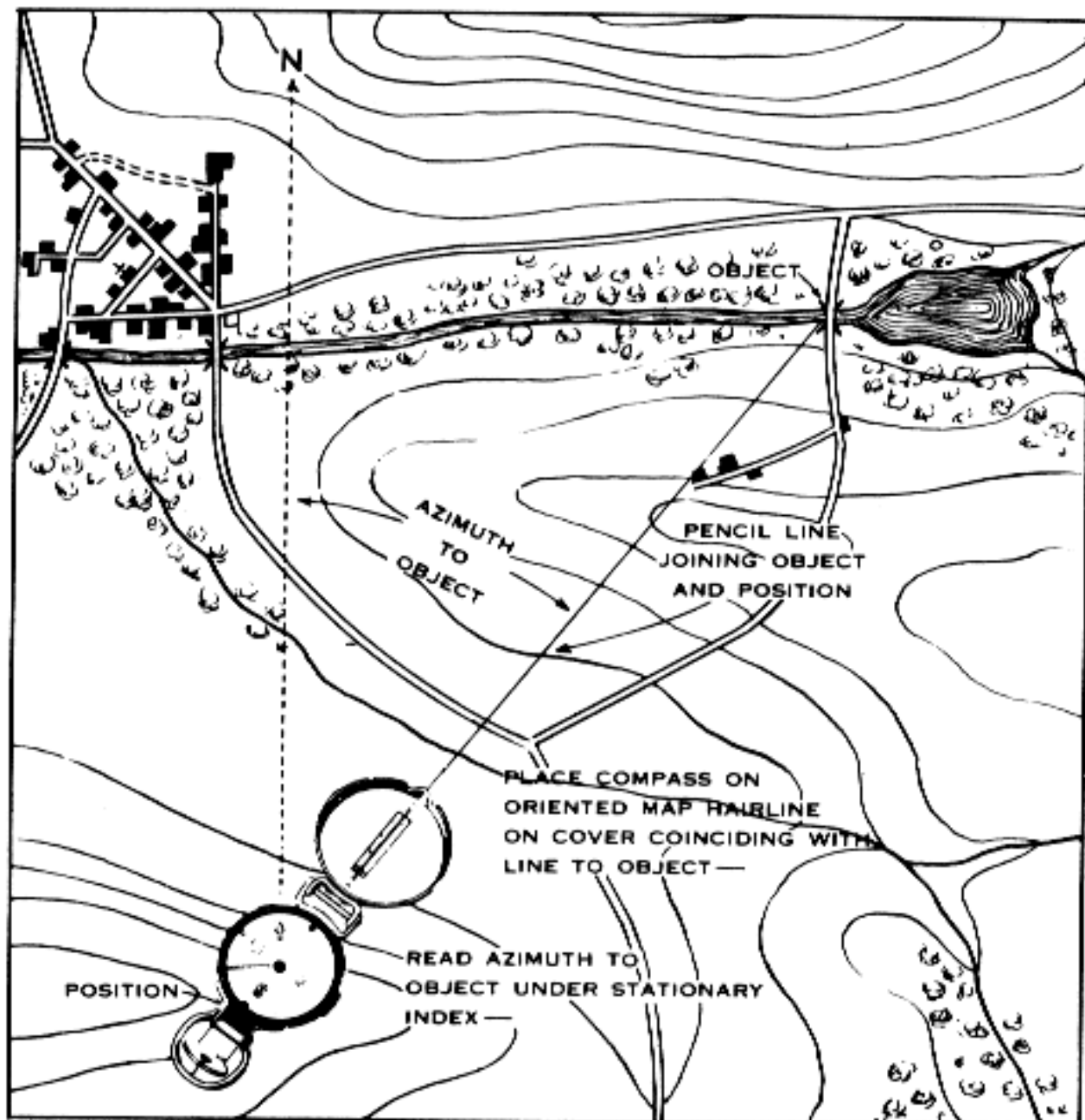


Figure 37. Method of obtaining azimuth, and marching by means of a compass.

rectly over the luminous arrow. The compass is then adjusted for marching on the predetermined azimuth, and can still be used for taking other azimuths, so long as the glass face is not disturbed. To march on the predetermined azimuth, the scout opens the cover of his adjusted compass, being careful to hold it level so that the dial will not bind. He raises the eyepiece and turns the compass until the luminous arrow comes to rest directly under the luminous line on the glass face. He then sights along the line of luminous dots and selects some point on the skyline which is in line with the luminous dots. He may use the rear sight to help align the luminous dots on the point. The scout marches to that point and repeats the process from there, selecting another point along the predetermined azimuth. (See fig. 39.)

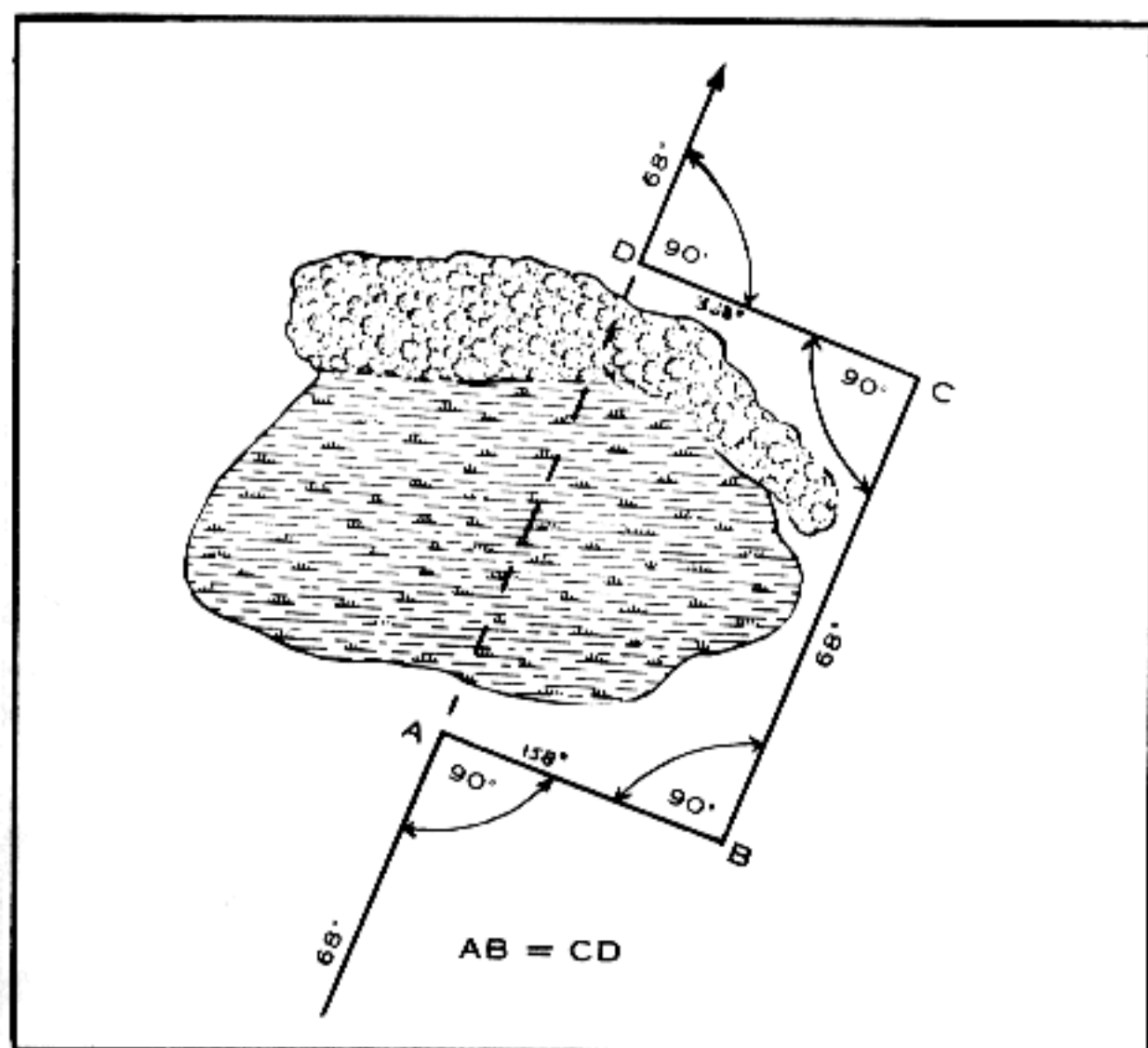


Figure 38. 90° method of offset.

**c. Location of points at night.** (1) *By azimuth.* Select a prominent object and estimate the distance to it. Align the two luminous dots in the cover upon the object. Allow the dial to come to rest. Rotate the movable crystal until the luminous line is over the north arrow. The azimuth of the line from the point to the object can then be obtained where light is available by simply rotating the compass (being careful not to move the movable ring) until the luminous line is again over the north arrow and then read-



WITH COVER TURNED DOWN AS SHOWN  
HOLD COMPASS AGAINST CHEST AND TURN  
BODY UNTIL LONGER LUMINOUS LINE IS  
OVER NORTH ARROW AS SHOWN—  
THE LUMINOUS DOTS ON COVER NOW  
POINT IN THE PROPER AZIMUTH DIRECTION.



*Figure 39. Method of keeping direction at night with compass.*



ing the figure beneath the stationary index. With this data—the azimuth and distance from a known object—the point can be plotted on a map.

(2) *By counting clicks.* Proceed as in (1) above until the luminous line is over the north arrow. Then rotate the movable crystal, counting the clicks until the luminous line points to the fixed index. Record the number of clicks (each click represents  $3^{\circ}$ ). Estimate and record the distance to the point. Any number of points may be similarly recorded. The luminous line must be set over the north arrow again when all the points have been so recorded.

**34. PRECAUTIONS IN USING COMPASS.** The compass is affected by iron and electrical fields. The rifle, pistol, and helmet must be laid aside when reading the compass. The following are the minimum safe distances for visible masses of iron and electrical fields.

	<i>Yards</i>
High tension lines .....	150
Heavy gun .....	60
Field gun or telegraph wires .....	40
Barbed wire .....	10

# OBSERVING AND REPORTING

---

### Section I. OBSERVATION

**35. OBSERVING. a. Principles.** When the enemy is encountered and his position is in sight, observation posts should be immediately established. Although such posts do not take the place of patrols in the early stages of an engagement, they greatly assist in determining hostile dispositions, the number and location of the supporting weapons, and the extent of enemy activity. As the two forces remain in contact, daylight patrolling becomes difficult, and observation must be carried on from commanding points behind the line of outguards. These observation posts should be so placed as to cover the entire front and all ground within the position itself, and, if possible, they should be entered only at night.

**b. Operation.** An observation post is manned by two scouts, an observer and a recorder, who change duties every 15 or 20 minutes, and who are relieved at the end of two hours. One man observes through a pair of field glasses. When he sees any sign of enemy activity, he takes a compass reading on it, estimates its distance, and gives this information to the other scout who records it together with the time, and telephones it back if it is important. (See fig. 40.) During the early stages of an engagement several men should be assigned to each post to act as messengers, if other communication fails. Later, if the situation becomes more stabilized, the information gained becomes of less immediate importance and may be turned in at the end of the tour of duty.

# GROUND OBSERVER'S REPORT

O. P. No. .... Location ..... Sheet No. ....

Unit ..... From ..... To .....  
 (Hour) (Hour)

..... in charge of O. P. Date .....

Map reference.....

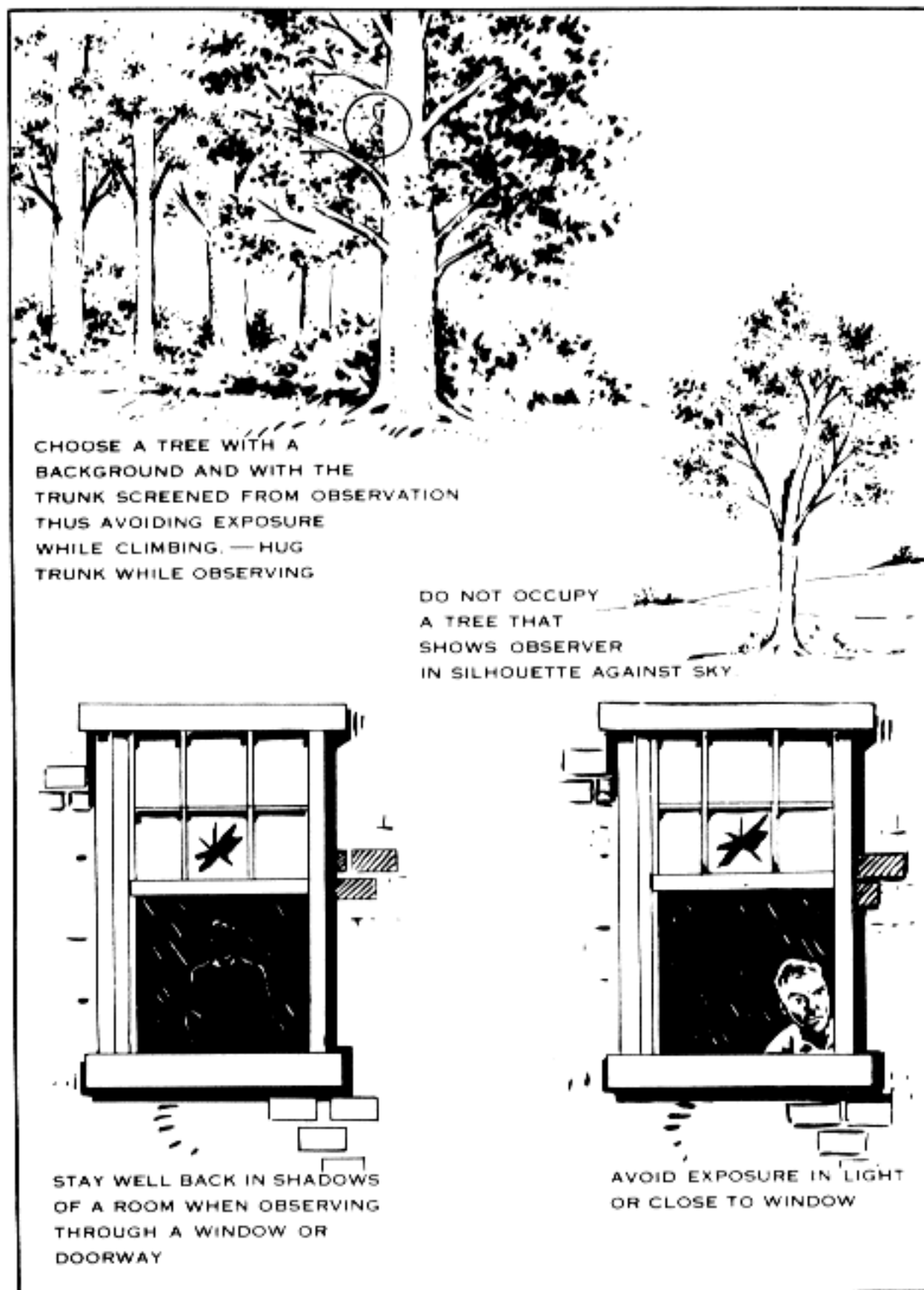
Item No.	Time	Location			Object observed—How many, what doing, what kind, direction of movement	Reported to—Whom? When? How?	Observer's name
		Deflection or magnetic azimuth	Range	Reference points			
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....

Suggested form. May be improvised if none available.

Figure 40. Suggested form for an observer's report.

**36. OBSERVATION POSITIONS. a. Choice.** In order to carry out his mission the scout must generally occupy one or more observation positions. Before starting he must study his mission and plan how to accomplish it. Then from a map he can choose the general area from which to observe. When he arrives near a selected position he should watch closely for 10 or 15 minutes to be sure it is not occupied by the enemy. He then decides upon the exact point from which to observe. Cover and concealment are important considerations in choosing a position.

**b. Occupation.** Having chosen the exact spot from which to observe, the scout moves to it cautiously along a covered route. If it is on a hill, he crawls to a place where the sky line is broken. If he observes from a building, he must keep back from doors and windows. If he climbs a tree, he must pick one with a background so that he will not be



*Figure 41. Observing positions, illustrating correct and incorrect occupation.*

silhouetted against the sky. He should hug the trunk closely at all times. While observing, the scout must avoid unnecessary movement. He should leave his position by a route different from that of his approach. Care must be taken to avoid making paths that would reveal the position. (See fig. 41.)

**37. SEARCHING TERRAIN. a. Principles.** The value of the scout depends largely on his ability to see things which the average soldier overlooks. He must be trained to observe systematically in order that he may be able to pick up indistinct and motionless objects as well as moving ones. The belief that the firing of an enemy discloses his position is a common mistake. Long periods of painstaking search are often required before his position is located. In this search a scout trained in patience is invaluable to his platoon leader.

**b. Searching in daylight.** The scout or observer looks first at the ground nearest him, for his most dangerous enemy will be there. He omits no portion of the dangerous area or place of concealment in his survey. He searches a narrow strip 50 yards or less close to him from right to left, parallel to his front. He then searches from left to right a second strip farther away but overlapping the first. He continues in this manner until the entire field of view is covered. If he thinks he sees something unusual, he looks a little to one side of the suspected spot, because movements are more readily noticed from the corners of the eye. In looking across a body of water when the sun is shining, he shades his eyes from below instead of from above. (See fig. 42.)

**c. Searching at night.** At night the scout, or observer, should search the horizon with short, jerky movements and short pauses. He should look a little to one side of an object and then to the other side in order to see best on a dark night. He should not use long, sweeping movements with long pauses when searching the ground nor should he look directly at a located object. By getting the eye close to the ground so that an object appears against the sky, the object can be seen more clearly. Low-powered field glasses also increase the range. Even when the eyes are adapted to the



dark, using a light, even for a short time, cuts down the distance the scout can see and may impair his night vision for another half hour. (See par. 13.) For this reason, the observer should look away from flares, flashes of firing, or similar lights, or cover one eye. When a flare goes up, the best time to observe is while the flare is in the air. If the scout has to look at luminous dials, he should take his readings as fast as possible.

**d. Visibility of men and objects.** Troops are visible at 2,000 yards, at which distance a mounted man looks like a mere speck.

At 1,200 yards infantry can be distinguished from cavalry.

At 1,000 yards a line of men looks like a broad belt.

At 600 yards the files of a squad can be counted.

At 400 yards the movements of the arms and legs can be plainly seen.

### **38. INTERPRETATION OF SIGNS. a. Tracking.**

(1) *Principles.* The greatest difference between a trained scout and an untrained scout lies in their powers of observation. A trained scout returning from a mission will be able to describe what sort of country he has passed through, all noticeable landmarks, and any indications of the enemy in the vicinity. This ability is acquired by constant practice in observing details. Such ability is valuable to the scout because the enemy in his movements leaves slight indications which show his strength, the character of his troops, their condition, and direction of march.

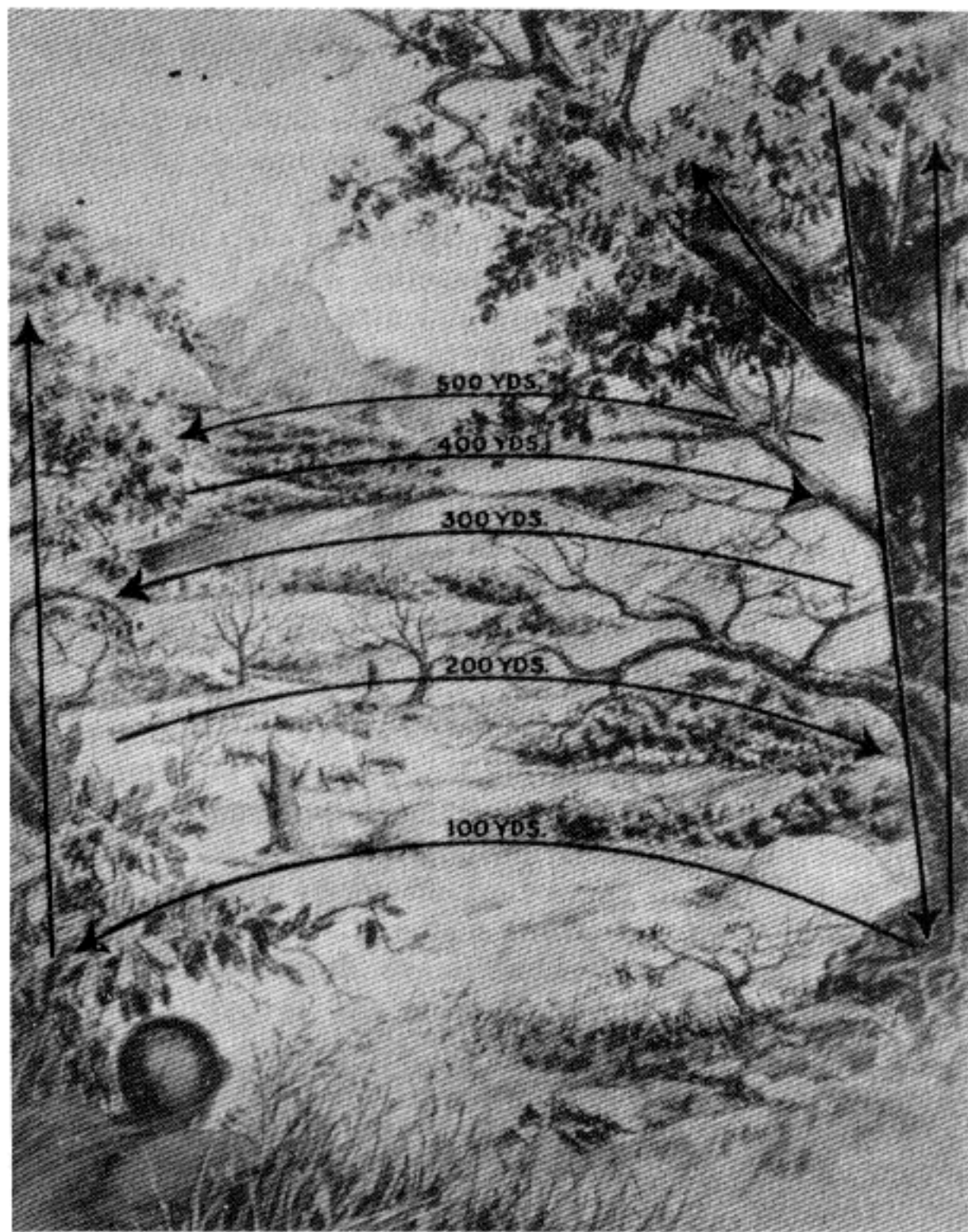
(2) *Indications.* (a) The extent of a bivouac area will ordinarily indicate the number of the enemy there. Laundry, ration tins, dumps, etc., furnish clues as to the size of the enemy force.

(b) Tracks on a road will show what kind of troops or vehicles are in the body and the direction of march.

(c) The state of his bivouac area and the amount of abandoned matériel indicates the enemy's condition.

(d) A freshly made track has sharp edges and ordinarily has signs of moisture which disappear in about 15 minutes.

(e) Hoof marks in pairs, overlapping or close together,



*Figure 42. Searching terrain.*

indicate a horse moving at a walk or trot. The tracks are deeper if the horse was trotting. The hoof prints made by a galloping horse will be separated about  $3\frac{1}{2}$  feet.

(f) A running man digs his toes into the ground. His walking footprint is fairly even.

(3) *Tracks. (a) Horse.*

1. A horse's hind feet are usually longer and narrower than the fore feet.
2. Tired horses and pack animals show irregularities in pace because they shuffle instead of picking up their feet.
3. Animals drawing heavily loaded carts uphill make tracks very close together with the toes of the front feet deeply indented.
4. Heavily loaded wagons going down hill often make the wheels slide when the brakes are on.
5. Mule tracks are longer and narrower than those of a horse.
6. The condition of droppings from horses helps to indicate the age of the tracks.
7. One hoof mark lighter than the other indicates that the animal making the tracks was lame in that foot.

(b) *Motors.*

1. The direction of travel of a car can be determined by the manner its tracks pass across ruts or track water from puddles.
2. The speed can be estimated by amount of mud splattered or dirt scattered.
3. Slow-moving wheels leave deep, smooth tracks. Faster moving wheels cut deeper.

**39. ESTIMATION OF TROOP STRENGTH AND COMPOSITION.** A commander, in making dispositions to meet situations which confront him, will act very often on his scout's information. The scout must therefore aim at absolute accuracy in reporting enemy activity. He should observe carefully units of different sizes in camp, on the

march, or deployed. The knowledge gained during maneuvers of the appearance of platoons, companies, and larger units will be invaluable. He can at these times learn to count distant objects and groups and to estimate the size of the force they indicate. If the troops cannot be counted, their strength may be estimated by the length of time the marching column consumes in passing a given point, by the area covered in camp, or by the front on which they are deployed. Infantry on the march raises a low thick cloud of dust, and cavalry a high thin cloud. A broken cloud indicates artillery or wagon trains. Automobiles or motor trucks raise a heavy rapidly moving cloud.

**40. ESTIMATING DISTANCES.** The scout uses the unit-of-measure method in estimating distances. (See FM 23-5.)

**41. FIELD GLASSES.** For use and care of field glasses and binoculars see TM 9-575.

## **Section II. REPORTING**

**42. MESSAGES. a. General.** The primary purpose in sending messages in the field is to transmit information to a commander or to receive information from him. If this information is to be of value, the message must be accurate, clear, and complete; it must be transmitted and delivered in time to be acted upon. The message must answer the questions, what, where, and when. It may be either oral or written.

**b. Oral messages.** Messages should be oral when writing is impractical, when the information consists of one simple idea, or when the likelihood of enemy interception makes it unsafe to send a written one. Oral messages must be as simple and brief as possible; a series of numbers or names in them should be avoided. The message should be repeated by the messenger as SOP before he leaves.

**c. Written messages.** (1) *General.* Written messages are usually preferred to oral ones in the field. They should

be written on the issue message book blanks, if these are available; otherwise, any paper may be used. (See fig. 43.)

(2) *Writing the message.* (a) The body of the message should be brief, accurate, and clear. Distinguish between facts and opinions. If hearsay information is reported, mention its source; for example, FRIENDLY FARMER STATES 4-MAN CAVALRY PATROL CROSSED BRIDGE AT 365.4-427.3 AT 0930 TRAVELING SOUTH. The writer should include all information of value, first about the enemy and then about himself. Information about the enemy should cover—

1. Strength.
2. Composition as to arms.
3. Actions or directions in which he is moving.
4. Position at the time observed.
5. Time observed.

THREE SPACES FOR MESSAGE CENTER ONLY		
TIME FILED	MSG. CEN. NO.	HOW SENT
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <b>MESSAGE</b>  <small>(SUBMIT TO MESSAGE CENTER IN DUPLICATE)</small> </div> <div style="text-align: center;"> <small>(CLASSIFICATION)</small> </div> </div>		
No. <u>5</u> DATE <u>9 MAY 1944</u>		
To <u>CO CO B</u>		
<p><b>MSG NO 4 SENT TO CO CO A. SAW ENEMY PATROL OF 5 MEN ON ROAD 200 YARDS WEST OF RJ 303 MOVING NORTH AT 1205. WILL CONTINUE ON MISSION.</b></p>		
<b>CO 1ST PLAT CO B</b> <small>OFFICIAL DESIGNATION OF SENDER</small>		<u>1210</u> <small>TIME SIGNED</small>
<small>AUTHORIZED TO BE SENT IN CLEAR</small>	<div style="display: flex; justify-content: space-between;"> <div> <small>SIGNATURE OF OFFICER</small>  <i>Brown, Lt.</i> </div> <div> <small>SIGNATURE AND GRADE OF WRITER</small> </div> </div>	

Figure 43. Properly written message.



(b) Number and separate into paragraphs individual items of information; this helps clarify the message.

(c) If it is doubted whether a particular message has been received by the commander, a summary of its contents should be included in the next message sent.

(d) Indicate the place from which the message is being sent, if this is important. Locate the point by reference to an important terrain feature, by map coordinates, by the magnetic azimuth from each of two definitely located points, or the azimuth and distance from one known point. At times, the position may be better described by means of a simple sketch or overlay. (See FM 21-35.) A sketch or overlay may also clarify other information contained in the message. (See fig. 33.)

(e) Reread the message carefully, and if possible, have someone else read it to check that it is complete and easily understood.

(3) Information about writer should cover—

(a) His location when enemy was seen.

(b) Writer's intentions—will he remain in observation, continue on mission, or take other action. If there is danger of the message falling into enemy hands, this information may be transmitted orally by the messenger.

(4) *Messenger.* (a) Information is of value only if received in time to be acted upon. If in doubt about when to send a message, send it at once. In friendly territory and close to friendly troops, one messenger is sufficient. In hostile territory, or when it may be necessary to pass through heavy artillery concentrations, two messengers should be used if they can be spared. They should leave at different times and travel by separate routes.

(b) A messenger must know where the message is to be delivered and the route to take. He should locate himself on the ground and map, if one is available, selecting landmarks to help him find his way. He should travel light, taking only the necessary food and arms. If he is delayed or lost, the message should be shown to an officer, if possible, and his advice requested. The messenger should remember his mission. When there is danger of being captured, the message should be destroyed. Subject to camouflage disci-

pline, different routes should be used in entering and leaving a message center or command post. Information obtained along the route should be reported at the time the message is delivered. Messengers have the right of way and must be given all practicable assistance.

### OPERATING PROCEDURE

---

**43. EQUIPMENT.** a. The scout carries the minimum equipment consistent with the accomplishing of his mission. In the daytime no clothing or equipment should reflect light. At night no equipment should make a noise. The scout usually carries a compass, watch, wire cutters, gas mask, paper and pencil. He rarely carries a flashlight and then with the greatest precautions.

b. (1) Clothing for day scouting should blend with the background.

(2) Clothing for night scouting should be warm and comfortable and should not interfere with movement. Woolen clothing is preferable to cotton because it tears with less noise and permits more silent movement. Trousers are tied at the ankles. Tennis shoes, or jungle shoes, if available, are ideal for night scouting. If neither of these is available, well oiled service shoes with composition sole and rubber heel may be used. Leggings, or clothing that is stiff and causes a scratching noise, should not be worn. A rope may be worn as a belt; if a belt is worn the buckle should be worn on the side to prevent its scraping on the ground. The helmet is undesirable at night because of the characteristic noise it makes in scraping against wire or low hanging branches, and because it distorts sounds.

c. The scout on a night mission is usually armed with silent weapons such as a trench knife, a blackjack, brass knuckles, a garroting wire or a hand-axe. He may sometimes carry a rifle and bayonet, grenades, or sub-machine gun.

**44. ACTION IF LOST.** The scout is never lost although he may temporarily lose direction. When he loses direction,

he should not get excited or stray about or exhaust himself; he should mark the place at once and then sit down and think the situation over carefully. On cloudy, windless days, if he has no map or compass, the scout should climb the nearest tall tree, and try to locate landmarks already passed, and retrace his steps by this means. If he sees no landmarks such as rivers, lone trees or railway lines, he should look for villages or towns, where he could possibly be directed (if in an enemy's country, this might not be possible). The bend of trees, or grass, or sand-drifts may help in ascertaining the direction of the prevailing wind. If none of the above expedients is successful, he should go to very high ground and scan the country. If this is unsuccessful, he should retrace his own tracks, until he arrives at a point which is familiar to him. If the above efforts fail, he should wait for nightfall and the appearance of the stars and moon or prevailing wind.

**45. ACTION IF CAPTURED.** If the scout is taken prisoner, he should remember that by the international rules of warfare he is required to give *only* his name, grade, and serial number. He should answer no other questions and should not allow himself to be frightened by threats into giving any information. He should not give false answers but merely refuse to answer.

**46. BOOBY TRAPS.** For information on booby traps see FM 5-30.

**47. ANTIPERSONNEL MINES.** For information on anti-personnel mines see FM 5-30.

**48. AMBUSH.** The scout should be alert to avoid ambush. If seen, the scout should keep cool, pretend not to know he is seen, and instantly form some plan of offense or escape. If he is fired upon he can feign that he has been hit and seek cover; this may fool the enemy who may cease firing and try to find him. The scout fires only in self-defense.

# EXERCISES IN SCOUTING

---

## Section I. CONCEALMENT

**49. DEMONSTRATIONS. a.** The instructor illustrates concealment during observation by showing the contrast between men observing properly and improperly from behind a tree, ditch, fence, rock, and bush, and in the open. He has some of the men wear the sniper's suit.

**b.** The instructor next takes his unit to a field where men have been properly and improperly concealed in observing and firing positions behind trees, rocks, bushes, and fences, in ditches, and in the open, from 50 to 150 yards away. He has the individuals of his unit search the ground for 2 minutes and make notes, stating when and where they see any of the partially concealed men. At the end of this time he blows his whistle as a signal for the concealed men to withdraw their heads and then to expose them only enough for observation. This exercise is repeated every 30 seconds for 2 minutes. At the end of this period the instructor again blows his whistle to have the men behind the fence, in the ditch, and in the open raise their heads slowly until their shoulders are exposed. The men behind the rocks and trees take positions to fire around incorrect side of their cover. The man behind the bush kneels. Then the instructor carefully explains the reason for the discovery of these men. He should emphasize the danger of quick movements and exposure while in observation.

**50. PRACTICE. a.** After dividing his unit into groups the instructor has the men of one group take concealed positions. The other group then tries to locate them.

**b.** The unit is divided into four groups. While three of



the groups turn their backs the fourth scatters and runs to a distance of about 150 yards. At a whistle signal the men of the moving group stop and take cover. The other groups face about and attempt to discover all within 2 minutes. This exercise is repeated, each group taking cover in turn. Results are compared.

**51. CAMOUFLAGE. a.** The scout is required to camouflage his helmet. Wire, burlap, and mud are available to the student. The student is allowed to use whatever materials he feels would be best suited to the task.

**b.** The scout is required to conceal himself and his weapons at any point he may select in the near-by area. The scout is given an allotted time in which to select his position and apply personal camouflage.

## **Section II. INDIVIDUAL MOVEMENT BY DAY**

**52. DEMONSTRATION.** The instructor trains several scouts in the movements given below. These trained scouts then demonstrate while the instructor is explaining.

- a.** The prone position.
- b.** Preparing to change position.
- c.** Jumping up.
- d.** Running.
- e.** Dropping down.
- f.** Creeping.
- g.** Crawling.

**53. PRACTICE.** The instructor deploys his unit at 3-pace intervals and has the front rank face to the rear. He then has the members of each rank in turn practice each method of advance while the men of the other rank act as coaches.

**54. DEMONSTRATION.** The instructor demonstrates the proper use of cover and movement by taking his unit to a field and having the unit watch a man run across an open space from one piece of cover to another and a second man

crawl across the same open space. He has the unit watch a man move by rushes down a ditch and another man creep or crawl down the same ditch, so that the latter is constantly concealed.

**55. PRACTICE. a.** The instructor takes his unit to a field where there are two good observing positions 200 or more yards apart. At a point 200 yards from these he tells each man that he is a scout who has reached this point and asks him where he would expect to find the enemy in observation. The instructor next gives a direction of advance which passes between the two observation positions, and asks several men to point out the route for the next 200 yards, give reasons for their choice, and describe the method of moving in detail.

**b.** The instructor divides his units into four groups. He sends one group to each observation position with rifles and blank ammunition and orders its members to remain there in observation and fire at any man they see moving. The men of the other groups are permitted to select their own starting positions, are then required to move individually between the two observation positions, and re-form 100 yards beyond. When a shot is fired all halt. The firer points out the man he has discovered, who is ruled out by the instructor. At a designated time the groups change positions and the exercise is repeated.

**56. DETERMINING DIRECTION WITHOUT COMPASS.** The instructor gives a direction of advance and the men proceed individually to a point some distance away. As each man arrives at this point, he is started in a new direction at an angle of about  $90^{\circ}$ . At the end of about a mile an instructor tells each man to take the shortest route to the starting point.

**57. SELECTION OF ROUTES.** The instructor should give many indoor exercises with maps and airplane photographs in the selection of appropriate routes and in preparing the necessary notes before the start. The instructor should require actual practice in following at night two or more of the routes thus selected.

## **58. EXERCISES IN RECONNAISSANCE. a. Choice.**

The instructor gives his unit several simple reconnaissance missions, has each man assume that he is the scout responsible for these missions, and has each choose a route and the points to which he will go for observation.

**b. Occupation.** The instructor arranges one of the missions in reconnaissance to require observation from some point close at hand. He takes his unit in the field and shows them by demonstration the contrast between—

(1) A scout occupying a broken and an unbroken sky line.

(2) A scout moving in front of a door or window, one observing from the side of it, and one observing properly from a position back in the room.

(3) A scout not near the trunk of a tree that has a poor background and one properly concealed near trunk in a tree with a good background.

**c. Approach.** The instructor takes his unit to an observation position which the men have chosen from a map and has them answer the following questions:

(1) Where should one wait in observation before occupying the position?

(2) How long should he wait?

(3) How should the position be approached?

(4) How should the position be occupied?

The instructor now sends half his men to a point 100 yards beyond the position. He sends the other half, in pairs, to approach it and observe. Any men discovered are ruled out.

## **Section III. SCOUTING BY NIGHT**

**59. MOVEMENT AT NIGHT. a. Demonstration.** The instructor demonstrates how much noise an untrained man makes in walking improperly. He then has a trained scout show the proper methods of silent walking on soft ground, on hard ground, and through grass. He has a trained scout demonstrate how to creep and crawl at night. He then has the men practice each movement using the coach and pupil method until all can do them satisfactorily.

**b. Exercises.** (1) The instructor divides his men into groups well separated. He blindfolds one in each group, places him 50 yards from his group, and has the rest of the group try to approach him noiselessly. The blindfolded man points toward any man he hears moving, who is ruled out. Group results are then compared.

(2) The same exercise is repeated at night without blindfolds and with the use of flares.

(3) At night the instructor divides his unit, posts one half as outguards and has the other half try to pass through the defense. Men discovered are ruled out. The groups change places and repeat the exercise. Group results are then compared.

(4) (a) *Crossing a trench.* Explain the method of crossing a trench. Have a trained scout demonstrate (by daylight) how to cross a narrow trench, pointing out the details of his movements. Have each front rank man, coached by his rear rank file, practice the movement. Then have coach and pupil change places. This exercise should be carried out first by daylight, using very dark glasses, and later on a moderately dark night.

(b) *Crossing a wide trench.* Demonstrate and practice as in (a).

(c) *Crossing over wire.* Explain the method of crossing over wire. Have a trained scout demonstrate how to cross a wide band of low wire. Have each student, coached by his rear (front) rank file, practice the movement by daylight. Repeat the exercise with black glasses or blindfolded, and by night.

(d) *Crossing under wire.* Explain the method of crossing such an obstacle. Have a trained scout demonstrate how to cross under wire. Have each student, coached by his rear (front) rank file, cross under the band of wire. Repeat, wearing black glasses, blindfolded, or at night.

(e) *Cutting wire.* Have trained scouts demonstrate how to cut wire. Explain the details of the operation. Have each student and each pair of students cut a gap through a double apron fence.

(5) Place several blindfolded listeners 50 yards apart. Divide the class into several groups and let one man from

each group (wearing black glasses) approach each listener. Each listener will point out any man he hears approaching. If there is a man in the direction he points the referee will rule him out. Each man's score equals the number of paces he is from the listening observer when ruled out. Thus if he can reach the listener his grade is 0. If he is ruled out while twenty paces away his grade is 20. The group receiving the lowest score wins. Repeat with moving men blindfolded.

**60. DETERMINING DIRECTION.** The instructor shows the class *at night* how the North Star is indicated by the pointers of the dipper. Exercises should be held in which the scout is sent at night without a compass to a distant point and required to return, guiding his march by the stars or by prominent objects on the skyline.

**61. RECOGNITION AND LOCATION OF SOUNDS.** The instructor places his unit in position, listening. Certain sounds, like digging, cutting wire, whispering and coughing, are made at prearranged times. Each man is then required to estimate direction and distance and tell the character of the sound. This practice should be repeated in different kinds of weather.

## **Section IV. MAP READING**

**62. MAP READING.** Instruction in map reading is based on FM 21-25. For conventional signs used on our military maps, see FM 21-30.

**63. TERRAIN FEATURES. a.** Each scout must study figure 30 and visualize the meaning of the terms.

**b.** The instructor takes his unit outdoors and calls upon individuals to point out features named or to name features pointed out.

**64. SKETCHING. a.** The instructor draws model sketches on the blackboard. He follows the method outlined in paragraph 29, and explains each step as he proceeds.



b. The scouts copy the instructor's sketches.

c. The instructor takes his unit outdoors, indicates a point, and has sketches of each type drawn by the scouts.

**65. USE OF COMPASS FOR NIGHT MARCHES.** a. The instructor demonstrates and explains in detail the method outlined in paragraph 33, step by step. The men under instruction, each provided with a compass, execute each movement as it is explained.

b. The instructor indicates certain points and has the azimuth to each determined and set off. He inspects the compasses and indicates errors.

c. The instructor has the men march on a given direction at night.

## Section V. THE COMPASS

**66. READING AZIMUTHS.** a. The instructor gives the correct azimuths and distances to various objects. Each man is required to write a description of each object. All azimuths read by the compass are magnetic azimuths.

b. **Obtaining azimuths from map.** Each man is required by use of compass and map to find the azimuths of at least five points not visible from his position.

c. **Marching by compass.** The instructor gives various directions of advance and requires each man to point out the first point to which he would march in following that direction.

d. The instructor takes the azimuth of a distant object from the map. He has his men start at 3-minute intervals and march to the object.

## Section VI. OBSERVING

**67. SEARCHING GROUND.** The instructor takes his unit to a point overlooking a field where groups of men and individuals have been partially concealed. He has his men search the area described above. As each man locates one

of these he notes its compass direction and range on a sheet of paper which he turns in or compares with the correct data.

**68. ESTIMATING TROOP STRENGTH.** a. The instructor has a company or larger unit march in column of squads at a distance of 500 yards. The scouts observe and estimate its size. Two platoons deploy and advance in squad columns, in skirmish line, by rushes, and by infiltration. During the above advance another platoon appears on the flank and advances by rushes or infiltration. During the movement of all three platoons a group about 200 yards away from them springs up, advances at a run, and drops to cover after going 50 yards. The scouts are required to estimate the strength of the advancing forces.

b. The scouts should be shown how the dust clouds caused by cavalry, infantry, automobiles, and artillery differ.

**69. TRACKING.** a. The scouts are required to look in a certain direction for 1 minute, face about, and tell what they have seen; to describe some person who has just passed; to look at a building for a short time and then describe it; to tell how many houses have been passed on a march. For indoor work, drawings cut from magazines can be used. The scouts are permitted to look at the picture for 1 minute, and are then required to turn it over and describe it. Exercises such as the above are unlimited and should be held until every scout can take in all the details of an object at a glance.

b. The scouts are required to examine a road and tell the different kinds of animals and vehicles that have passed over it.

c. On an unused road or field the instructor has a man walk and run, a horse walk, trot, and gallop, and troops march at route step. The scouts should be present and examine the tracks immediately after they are made, again in 20 minutes, and once every day for 3 days.

**70. OBSERVATION POSTS.** The instructor has his scouts, working in pairs, choose observation posts overlooking an area in which men expose themselves at scheduled times, that is, fire a rifle, smoke a cigarette, flash a mirror

in the sun, etc. The scouts observe and note all indications of the assumed enemy. They should be cautioned to report exactly what they see, not what they think it may be. Their reports should be checked. Each should contain the time, the direction, the distance, and the event observed. For example: 0922, 65°, 700 yds., man running W. in draw.

**71. OBSERVATION AT NIGHT.** Exercises similar to those outlined in paragraphs 61 and 190 should be given after the exercises contained in section VII have been taken up. The men undergoing instruction should be required to identify and estimate the range to figures exposed on the skyline and to lights that are exposed for brief periods of time.

## **Section VII. NIGHT VISION**

**72. GENERAL.** In giving instruction in night vision the instructor must remember that it takes approximately an hour to attain full dark adaptation. The instructor must therefore arrange his presentation to maintain the interest of the class during this period. Demonstrations should be conducted under conditions of very low illumination. Bright, moonlight nights are not suitable for work of this nature. The site selected for demonstrations should offer prominent and easily distinguishable objects at such distances as can be distinguished when the eye is adapted and not before. Lights over one half mile away will not interfere but care must be taken to select a site where traffic or similar lights will not interfere with the demonstration. Trucks, tanks or men may be placed in the area for identification. The order in which the following exercises are presented should be followed to achieve satisfactory results.

**73. DARK ADAPTATION.** Expose class to a bright light for five minutes. This may be done indoors or outdoors using vehicle headlights. Have class direct attention to a certain part of the landscape. While the eyes are becoming adapted to the dark the instructor explains dark adaptation.

He asks if anyone has seen anything and points out the indefiniteness of any objects seen. He has the men give their impressions over a period of 5 minutes emphasizing the uncertainty of impressions before full adaptation. The instructor points out the great disadvantage a man has without adaptation compared to an observer who has full adaptation.

**74. FADING OF VISION.** The instructor discusses the fading out and coming back of objects and explains this as a normal part of seeing in the dark. He points out that some men take longer to attain night adaptation than others do.

**75. OBSERVING OBJECT.** The instructor has each man look directly at an object and then a little to either side of it. He explains why the object appears more plainly when observed from a side. He has each man practice correct searching. (See par. 37b.)

**76. DAZZLE PHENOMENA AND EYE STRAIN.** The instructor asks if anyone has noticed any stars or flashes of light spots in places where there are no stars. He explains that this is a natural phenomena and that care should be taken not to confuse them with actual stars and flares. He also explains that the eyes are subject to strain at night just as well as in daylight.

**77. PROTECTION OF NIGHT VISION.** The instructor emphasizes the importance of protecting the eyes at night from lights and luminous dials. He demonstrates the use of red light, red goggles and covering one eye. He discusses the importance of keeping windshields, glasses and binoculars clean to reduce eye strain.

## **Section VIII. MESSAGES**

**78. WRITING MESSAGES.** Point out any terrain object, such as a tree or a house, and direct the scout to write a

message to Lt. A. at some definite point a mile away, locating and describing the object. Require the scout to make a simple sketch to accompany the message. Correct mistakes. Repeat this as often as necessary, varying the situation to include various actions, until each scout can write a message quickly and accurately.

# PART TWO

## PATROLLING

---

### Chapter 8

### GENERAL

---

**79. DEFINITION.** A patrol is a detachment of troops sent out from a larger body on a mission of reconnaissance, security, or combat.

**80. TYPES OF PATROLS.** There are two general types of patrols, as determined by their assigned mission: reconnaissance patrols and combat patrols. Within these general classifications, patrols are named according to the specific mission assigned. For example, a combat patrol given the specific mission of raiding an enemy area or command post may be called a raiding patrol.

**a. Reconnaissance patrol.** Reconnaissance patrols are used primarily to secure information, maintain contact with the enemy, or observe terrain. They are frequently used to precede a leading platoon or company as it moves forward prior to, or during an actual attack. They avoid unnecessary combat and accomplish their mission by stealth. Reconnaissance patrols engage in fire fights only when necessary to accomplish their mission or to protect themselves. (See ch. 15.)



**b. Combat patrol.** A combat patrol executes missions which may require fighting to accomplish, or to help accomplish. It might well be termed a fighting patrol. Every combat patrol secures information as a secondary mission. It takes prisoners only if so ordered.

**81. NECESSITY FOR PATROLLING.** Commanders of ground troops depend to a great extent upon patrols to furnish them with accurate and timely information, to assist in carrying out the larger mission, and to perform limited combat operations. As our forces approach the enemy, the number of patrols and their activity increase. They are used for many types of missions. These include reconnoitering, carrying out limited offensive missions of destruction or capture, preventing the enemy from gaining information, clearing up a hazy situation, locating enemy lines and installations, destroying matériel and transportation, diverting enemy attention so that an attack or maneuver can be made by other forces, and covering the flanks of the main body in the offense or defense. When patrols are used in connection with covering security detachments, they are useful for such missions as determining whether woods or other terrain features are occupied and providing flank reconnaissance. When it does not interfere with their missions, all patrols assist artillery, mortars, machine guns, and other supporting weapons by reporting the location of targets.

**82. RELATION OF PATROLLING TO SCOUTING.** Every man in a patrol should be well versed in the principles of scouting. As a member of a patrol, however, he must consider himself as a member of a larger team. This requires additional training beyond that which is required to become a well-trained scout. A patrol member must respond quickly to the decisions and orders of his leader. There must be complete confidence between all members of the patrol and the confidence that they as a team will be successful in their mission.

# PREPARATIONS

---

## Section I. DUTIES OF HIGHER COMMANDER

**83. RESPONSIBILITIES.** The higher commander is responsible for—

- a. Selecting the patrol leader.
- b. Giving him all relevant information, pertaining to—
  - (1) Mission.
  - (2) General routes to be followed.
  - (3) Enemy dispositions.
  - (4) Location and activities of friendly troops.
  - (5) Outpost or other security elements through which the patrol is to pass.
  - (6) Terrain conditions.
  - (7) Missions and routes of other patrols.
  - (8) Time patrol is to return.
  - (9) Place where messages are to be sent or the patrol is to report.
  - (10) The challenge, password and reply to be used during the time the patrol is on its mission.
- c. Furnishing the patrol leader with the means for accomplishing the assigned mission.
- d. Detailing specialists and the unit to furnish the patrol, unless the patrol leader is permitted to select individual patrol members. (See par. 91.)
- e. Designating the size, composition, weapons, and equipment of the patrol.
- f. Giving the patrol leader special instructions, such as reports he will be required to make and areas to be avoided.
- g. Insuring that the patrol will be furnished promptly with food, drink, and rest upon its return.

**84. SELECTION OF PATROL LEADER.** **a.** The higher commander keeps the accomplishment of the mission in mind when he selects the patrol leader; the more important the mission, the more careful his selection must be. A good patrol leader should have judgment, initiative, courage, endurance, and be a highly skilled leader.

**b.** The patrol leader should be selected well in advance of the time scheduled for the patrol to leave. When possible, he should have time during daylight to plan the operation of his patrol and to make any necessary reconnaissance.

**c.** If a complete unit is designated as a patrol, the unit leader will normally be the patrol leader.

**85. MISSION.** The mission assigned by the higher commander to the patrol leader must be specific and unmistakable; indefinite missions invite confusion, casualties, and failure. One patrol cannot be expected to execute efficiently a number of involved missions. It is preferable to employ a number of patrols, each with a single mission. The patrol must never abandon the mission if there is the least possibility of accomplishing even a part of it.

**86. SIZE OF PATROL.** **a.** On some occasions, only a small patrol can best accomplish a mission; on other occasions, it may be necessary to send a strong combat patrol to fight for information or to take prisoners. The size of a patrol depends upon:

- (1) Its mission.
- (2) The terrain and visibility.
- (3) Its distance from friendly troops.
- (4) The time it will be out.
- (5) The number of messages it may be required to send back.
- (6) Whether prisoners are to be captured and sent back.

**b.** In general, a patrol should consist of the least number of men needed to accomplish the mission, with due regard to safety, the available time, and message requirements.

**c.** A patrol consists of two or more men. Three men, however, may be regarded as a basic team. This team provides a point, who observes to the front and flanks; a rear

point; and a leader, who observes tree targets, sees that direction is maintained, observes the point and rear point for signals, and selects the route from one terrain feature to the next.

**d.** Combat missions ordinarily require stronger patrols than reconnaissance missions, although the latter may have to fight at times in order to obtain their information and to get back with it.

**e.** Patrols operating at considerable distances from friendly troops must be stronger than those used for close-in work; there is greater danger from attacks and more need for equipment.

**f.** A patrol must include enough messengers to meet the requirements of the mission. If a message is required every hour during a 6-hour patrol mission, at least five messengers must be provided, plus one or two additional ones for emergencies.

**g.** Small patrols of three to six men can move rapidly and are readily concealed, but cannot return information by messenger.

**h.** Patrols larger than a squad are harder to control and to conceal, tend to be noisier, and usually make slower progress; but they can send frequent messengers without losing their effectiveness.

**i.** When an area is reached where detailed reconnaissance is required, a central base of operations can be established, and a number of two or three-man patrols sent out from there. This effective method for investigating a large area may determine the size of a patrol.

**87. TIME OF PATROL'S RETURN.** **a. Duration of mission.** Patrols should be allowed sufficient time to accomplish the mission. They should not be required to accomplish in a night what would require 24 hours or more of effort. Too many patrol leaders are inclined to be impatient and attempt to accomplish their mission in too short a time, thereby being insufficiently thorough and creating an unnecessary risk of detection.

**b. Hiding out.** Some patrols in order to complete their mission may be required to hide out during daylight hours

in the proximity or behind the enemy lines. At times the duration of the hiding out may be extended to several days. During this interval the patrol should move to a new bivouac each night. Hiding out may be necessary in order that the patrol may cross certain areas or return to friendly lines during the hours of darkness. Hiding out requires perfect discipline within the patrol.

**88. REHEARSALS.** If practicable, the higher commander prescribes rehearsals so that each patrol member becomes familiar with his duties in the forthcoming activity and the patrol learns to function as a team. The nature of some missions, particularly those of combat patrols operating at night, requires that rehearsals be conducted on an accurate reproduction of the terrain of the enemy installations or matériel to be encountered. Captured enemy equipment and armament may be used to add realism to rehearsals. Through repeated training, each member of a patrol learns to do his part correctly and unhesitatingly. Thus individual confidence in the ability of the patrol as a unit is gained.

**89. S-2. a. General.** The S-2 keeps the commander informed of the enemy's situation and capabilities. He not only has patrols sent out to collect information about the enemy and terrain, but also sees that all patrols about to go on missions are provided with the latest information about the enemy and terrain. Due to the nature of a particular mission, the S-2 may act for the commander and give the patrol leader the necessary orders and instructions. Sometimes the S-2 supplements the commander's orders with any special information bearing upon the patrol mission.

**b. Supplies maps.** The S-2 supervises mapping activities and the supply and distribution of maps, map substitutes, and aerial photographs. If the necessary map(s), aerial photographs or sketches required by the patrol have not been furnished, they should be secured from the S-2 by the patrol leader.

## Section II. PRELIMINARY DUTIES OF PATROL LEADER

**90. PRIOR TO WARNING ORDER. a. Duties.** If the patrol leader does not understand his assigned mission or any other point, he should ask questions until he understands all matters completely. After he receives his orders and instructions, the patrol leader plans his operation in sufficient detail to be able, when time permits, to issue a warning order. Prior to issuing this order, he does some or all of the following:

(1) Secures as much information as possible pertaining to his mission and the enemy situation. He consults S-2, if necessary.

(2) Makes a map study.

(3) Makes a preliminary estimate of the situation and decides upon—

(a) Chain of command.

(b) Rate of march.

(c) Equipment to be carried.

(4) Appoints his second-in-command and gives him (and any junior leaders) instructions.

(5) Formulates his warning order.

**b. Chain of command.** The patrol leader selects his second-in-command with care. The second-in-command is the patrol leader's first assistant in planning and carrying out the patrol mission. He must be designated in the patrol order to avoid confusion and loss of effectiveness in case the leader becomes a casualty. The chain of command should be extended so that there will never be a question as to who is in command. If a complete unit is to be the patrol, the second-in-command of the unit will normally be the second-in-command of the patrol.

**c. Rate of march.** A patrol leader should calculate how fast the patrol must travel in order to cover the route assigned in the allotted time, and in order to decide upon the equipment to be carried. Rates of movement will not be the same throughout but will vary between objectives, depending on differences in terrain, proximity of the enemy, the time



of day, and the amount of detailed observation required. The possibility of skirmishes and the necessity of circuitous routes to avoid enemy groups or installations must also be considered. The leader must look ahead and calculate the amount of time that will be required between intermediate objectives and plan to move accordingly.

**d. Equipment to be carried.** A patrol should travel light to reduce fatigue and to be able to use its weapons freely, but sufficient equipment must be carried to insure effective action. In the jungle, for example, machetes are needed to cut trails, and entrenching shovels are useful if combat develops. At least two compasses (one for the leader and one for his second-in-command) and a pair of field glasses should be carried by every patrol, regardless of terrain conditions. Rations are carried only on long missions, and then in minimum amounts. Tablets for chlorination of drinking water should be carried. A radio should be taken if it can be used to send back messages, direct artillery fire, or can otherwise assist in accomplishing the mission. (See par. 130b.)

**e. Weapons.** (1) *Fire arms.* The service rifle, automatic rifle, submachine gun, carbine and pistol are excellent patrol weapons. Hand grenades are valuable to supplement the fire of the flat-trajectory weapons. The antitank grenade and rocket are effective against armored vehicles, pillboxes, and grouped personnel. A 60-mm mortar may be used to dislodge enemy groups which are beyond the range of hand grenades and which cannot be reached by flat-trajectory weapons.

(2) *Silent weapons.* The bayonet is one of the patrol's principal weapons. Other silent weapons, such as black-jacks, clubs, pistol butts, knives, and brass knuckles, are necessary for patrols operating behind the enemy lines or at night. The small axe, machete, and trench knife or bayonet are excellent for cutting or stabbing. A cord or garrote is useful for strangling.

(3) *Choice.* The patrol leader decides which firearms will be used, depending upon the mission and the proficiency of the patrol members. He may leave the choice of silent weapons to the individual.