CHAPTER 8

SECURITY

GENERAL PRINCIPLES

■ 236. *Security* embraces all measures taken by a command to protect itself against annoyance, surprise, and observation by an enemy. It includes the special measures taken for protection against hostile aviation and mechanized units and against the risk of gas attack by the enemy.

■ 237. Adequate and timely information is the basis of all security measures. A continuous reconnaissance is therefore an essential part of security. When the security measures taken are directed primarily against hostile observation of our own dispositions, greater emphasis is placed upon counter-reconnaissance. (See pars. 168–175.)

■ 238. *Security* and *reconnaissance forces* operate in accordance with somewhat different principles. In general, security forces operate primarily with reference to the command to be secured; reconnaissance forces operate primarily with reference to the enemy.

■ 239. Security is always necessary, whether during rests, movement, or combat. When contact with the enemy is remote, especial attention is given to protection against hostile aviation. When contact is imminent, security measures against hostile ground forces are increased.

A command protects itself against hostile air attack and observation by the employment of combat aviation and anti-aircraft weapons, by night operations and movements, by measures taken for concealment and camouflage, and by distribution of troops into small units or groups.

A command protects itself against observation and surprise attack by hostile ground troops by reconnaissance, by employment of security detachments, by the skilful use of terrain, and by the increased readiness for action of its component units.

Readiness for action is facilitated by the distribution of troops in accordance with their probable tactical employment and by each unit making provision for prompt formation and movement. The degree of readiness for action required varies widely with the situation.

240. In proximity to the enemy, an advancing force secures itself by an advance guard; a retreating force by a rear guard; a resting force by an outpost. When necessary, flanks and rear are protected by security detachments. In combat, each unit provides for its own security by the employment of combat patrols.

241. *Security detachments* constitute a partial commitment to action of the command. Their strength should be sufficient to preserve the commander's freedom of action but should not exceed the requirements imposed by the situation, the terrain, and the proximity of the enemy. As far as practicable, tactical unity is respected in the detail of security detachments. It is desirable that security forces possess mobility at least equal to that of forces they are expected to oppose.

242. In general, the mission of a security detachment is to furnish the command with information relative to the enemy, to protect the command against surprise and observation by hostile ground forces, and to gain the time and space required for the command to make the necessary dispositions. The priority given to these missions of reconnaissance, counter-reconnaissance, and resistance varies with the situation and the expressed intentions of the commander.

243. There is a similarity in the formation of all security detachments. Each has its reconnaissance groups which send out patrols or sentry squads for observation. These reconnaissance groups are backed up by a support or security element which is the principal echelon of resistance of the security detachment. In the case of larger detachments, a reserve is provided. This reserve constitutes the principal maneuvering and reinforcing element for offensive or defensive action as determined by the mission of the security detachment and the requirements of the command which it is protecting.

■ 244. When a command is subdivided into separate columns or tactical groupings, each subordinate commander is responsible for the local security of his column or grouping. The superior commander may, however, prescribe security measures for the protection of the command as a whole or coordinate those adopted by subordinate commanders.

ANTIAIRCRAFT SECURITY

■ 245. Regardless of the effectiveness of the security measures taken by the higher command through the offensive action of its own combat aviation (see FM 100–15), all units within the range of hostile air operations must reckon with the probability of hostile air attack and reconnaissance.

The measures taken by ground troops for antiaircraft security vary with the situation, the degree of visibility, the cover offered by the terrain, and the capabilities of the enemy's aviation. In the order of their importance, the protective measures comprise *warning, concealment, dispersion,* and *fire.*

■ 246. The first requirement of antiaircraft security is an efficient *warning service.* Air scouts are detailed by all units at all times to give timely warning of the approach of hostile aviation. The air alarm signal is given on orders of company and similar unit commanders. Friendly airplanes when available are the most effective means of warning, the alarm being given by prearranged and distinctive movements of the airplane.

Upon hearing the air alarm signal, all elements cease movement if in the open. Foot troops on the road seek cover in the adjacent ditches, depressions, or shadows lining the road. Motorized and mounted elements clear the center of the road, halt and dismount, with vehicle brakes set. Troops in position, bivouac, or billets seek the nearest cover or concealment and remain motionless. At night, all lights are extinguished or shaded. Movement and operations are resumed on the signal "Forward march."

■ 247. In defended rear areas an *aircraft warning service* is organized to furnish early warning of the approach of hostile aircraft. The area covered by the observing stations of the

■ 251. At night special precautions must be taken against reconnaissance by hostile aviation using flares. When a unit is illuminated it halts and remains motionless. Shaded lights only are permitted to be used by troops and vehicles.

■ 252. In principle, the combatant arms take the necessary measures for immediate protection against low-flying hostile aircraft by using their own weapons suitable for *fire against aircraft*. Antiaircraft artillery reinforces the antiaircraft fire of other arms and units and operates especially against hostile aviation flying beyond the effective range of weapons of the other arms.

■ 253. In the forward area of the combat zone, *antiaircraft artillery* protects the principal troop concentrations and assembly positions, and covers the movement of troops through defiles and critical localities, and by driving hostile aviation to higher altitudes decreases the effectiveness of air attack. Since searchlights will seldom be available in forward areas, antiaircraft artillery will be handicapped in giving protection at night to troops in position. Therefore dependence must be placed on passive measures supplemented by the fire of organic weapons of troops in position. (See pars. 444 and 532.)

In the rear area, antiaircraft artillery cooperates with friendly aviation in protecting important establishments from air attack. The antiaircraft defense of an air base is the responsibility of the territorial commander, who utilizes for this purpose an antiaircraft defense command comprising an aircraft warning service and the necessary antiaircraft artillery supported by such defense aviation as may be assigned. (See pars. 49–51.)

PROTECTION AGAINST MECHANIZED UNITS

■ 254. All commanders provide for the protection of their commands against mechanized attacks. This includes the protection of the lines of communication of a command unless such protection is furnished by the higher commander.

■ 255. Terrain and the road net greatly influence the employment of mechanized forces. A *map study*, supplemented by air and ground reconnaissance, will disclose lines of

advance which favor and which impede mechanized operations.

Protection against mechanized units requires that all units organize an efficient *warning service*. Timely warning permits an increased readiness for action. Mechanized reconnaissance detachments operating well to the front and flanks are especially suitable for giving warning. All observation and reconnaissance agencies, both ground and air, are required to make an immediate report of a mechanized threat to the nearest commander.

■ 256. The means available for protection against mechanized attack are *active* and *passive*. The *active means* include antitank guns, artillery, combat aviation, armored vehicles, and mines. The *passive means* include all natural and artificial obstacles, demolitions, buildings, and organized localities. Usually active and passive means are used in combination.

■ 257. The utilization of natural barriers is an important consideration in any plan for security. During the march, if there is a choice, the routes having the best natural protection are used. When the enemy's approach is limited to a few routes crossing a natural barrier, a high degree of protection is obtained by blocking these crossings.

During halts or when in position, full use is made of terrain features which restrict hostile mechanized operations. Even those that merely slow up or impede the movement of mechanized vehicles are of great value for security and defense. Artificial obstacles may involve so much time, material, labor, and equipment that their construction is often impracticable. Road blocks require less time for construction, especially when materials can be obtained locally.

In general, obstacles, demolitions, mines, and persistent gas contaminations are located where the enemy will come upon them suddenly and be unable to avoid them. A barrier or obstacle loses its defensive value unless covered by fire of supporting troops.

■ 258. The antitank cannon is of first importance in antimechanized defense; small arms and machine gun fire has a limited effect, interfering primarily with the enemy's observa-

tion. Hand grenades have proved effective against some types of armored vehicles. Fire is withheld until the mechanized vehicles have come within effective range of the weapons used in the defense. Premature opening of fire is likely to cause early neutralization by hostile fire.

■ 259. Contact mines are an effective active means of defense against mechanization. Mines can be laid or buried without prohibitive expenditure of time and labor. They are usually laid in checker-board order, in two or more rows, avoiding any strictly geometrical pattern. The supply of a sufficient number of mines to establish a mine field involves no great transport difficulties.

Mines are useful for quickly blocking defiles and the principal avenues of hostile approach, thus releasing antimechanized weapons for use elsewhere. Mines constitute a means for canalizing a hostile mechanized attack. Like other obstacles, mine fields must be covered by fire to prevent their removal. To preserve the element of surprise they should be concealed; they should be supplemented by dummy mine fields to lend deception.

Buried mine fields, contaminated obstacles, and obstacles seeded with mines are unsafe for the passage of vehicles and troops. They also restrict the movement of the troops which they are designed to protect. Great care must therefore be taken that a record is made of the location and extent of such obstacles. The staff must keep itself informed of all mine fields laid so that the necessary precautions may be prescribed for the safety of our own troops.

■ 260. Security against mechanized attack must be organized from two standpoints—the *local protection* of the troops nearest the enemy and the *protection of the command* as a whole. The first is the mission of the antimechanized weapons organically assigned to regiments with which they fight in close cooperation. The second is the mission of the antimechanized units placed at the disposal of the higher commander; these units, because of their great mobility, are available for employment at a distance from the command or for concentration at the decisive locality.

261. Antimechanized weapons are habitually attached to all security detachments. When an antimechanized unit is given a distant security mission which will require separation from the command, the necessary supporting troops (engineers and infantry or cavalry) are attached to construct and protect the obstacles and to furnish protection for antimechanized weapons.

The coordination of the means of antimechanized protection is a command responsibility. Within the zone of his tactical responsibility the commander is usually the only person in a position to make a proper estimate of the situation which will comprehend all the factors and information. As a general rule, commanders of antimechanized units are given missions which are specific with respect to time, place, and purpose, and cooperation with other units, but which leave to them the details of execution.

262. Ordinarily, no special detachments for antimechanized protection are required in rear areas. When, however, a flank is vulnerable or an appreciable gap exists in the front of battle, as the result of a divergent maneuver or a hostile break-through, the protection of headquarters and important establishments in the rear area may require adequate measures and the detail of special detachments for antimechanized protection.

PROTECTION AGAINST CHEMICALS

263. Effective protection against chemical agents depends primarily on the training of the individual and the collective measures taken by a command to guard against the effects of such agents.

Details of protective equipment and the individual and collective protective measures to be taken are covered in chapter 8, BFM, volume I.

264. Good *gas discipline* is essential if casualties are to be minimized and undue interruption of operations prevented. The first requisite is that the individual be trained to use the equipment properly.

The danger of panic is reduced if the soldier is taught to look upon chemical agents as only another combat weapon

for which he should have due respect but no great fear. The individual must understand that if the protective equipment provided is properly used, chemical attacks can be met with relatively few casualties.

■ 265. All commanders are required to take effective measures to protect troops against chemical attacks. Measures to prevent surprise include a reconnaissance of suspected gassed areas and alternative routes, an efficient system of gas alarm, and a constant check on wind and weather conditions favorable for hostile chemical attack.

■ 266. Standing orders are usually issued by a command which set forth a standard and uniform procedure for protection against gas. The duties of *gas sentries* are laid down in chapter 8, BFM, volume I.

In the combat zone every unit must have prepared a *plan* for protection against chemical attack. The important provisions of such a plan are to avoid contaminated areas, expose as few men as possible to the effects of chemical agents, take prompt measures for decontamination, and give special attention to prevention and treatment of casualties.

Upon the detection of gas or the sound of the alarm, all men are required to adjust their gas masks promptly and to warn others within hearing. Masks are not removed until so ordered by proper authority. Good gas discipline implies the ability to war the gas mask continuously for 1 hour without undue fatigue while engaged in normal duties.

In the selection of bivouac areas, defensive positions, assembly areas, and positions for reserves, due consideration is given to the factors of gas drainage and prevailing winds. Alternative positions for supporting weapons are selected.

■ 267. Upon encountering an area contaminated by vesicant agents, the primary rule of security is to avoid the area by passing it upwind. Areas heavily contaminated by gas are marked and guarded by gas sentries who are instructed to warn unauthorized persons from entering such areas. Reconnaissance should be made to determine a route as free as possible from long grass and undergrowth. If time is avail-

nble, decontamination is performed by men specially detailed for such work and equipped with gas masks, decontaminating material, and protective clothing.

268. All troops must know how to protect supplies, equipment, and munitions from the contaminating effect of chemical agents and to use the equipment provided for decontaminating weapons, equipment, and vehicles.

Since rear areas are liable to chemical attacks by aircraft using chemical bombs or spray, adequate precautions against this form of attack must be taken for the protection of all important headquarters and establishments.

SECURITY ON THE MARCH

269. GENERAL.—In a large command, a certain amount of security is provided by the reconnaissance detachments or other covering troops operating between the enemy and the marching columns.

In proximity to the enemy, each march column provides its own security detachments, whether or not the front is covered by reconnaissance forces of larger units. If a command advances or retires in two or more columns, a general security detachment may be employed, or a separate security detachment may be detailed for each column and their action coordinated by the commander of troops.

Corps and divisional cavalry operating with an infantry division are usually employed on reconnaissance missions under the direct control of their respective superior commander. (See pars. 156 and 159.) In proximity to the enemy, a portion of their strength may be attached to subordinate units for purposes of local security.

270. Security detachments regulate their march so as to give the main body the protection required by the tactical situation and conditions of terrain. As a rule they move by bounds to successive important terrain lines, halting on each line until the main body has reached or cleared the previous terrain line, depending upon whether the column is advancing or retiring. Terrain lines which cover the passage of river crossings and other defiles are of especial importance.

Within an advance or rear guard, its several elements similarly move by shorter bounds; crests which afford observation and protection in the direction of the main body chiefly determine the length of the bounds.

A wholly motorized security detachment has a marked advantage over a dismounted or partially motorized detachment in that it can be made smaller and can operate at a greater distance from the main body. Superior mobility permits earlier contact with the enemy; radio communication expedites transmission of information. As a result, the commander has greater freedom of action, and the main body is afforded more time to prepare for combat.

■ 271. The security of a march column depends initially on the efficacy of the concealment in its last bivouac. During a movement, the most important periods during which antiaircraft security must be provided are the formation of the march column (see pars. 364–366), the passage of any defiles or crossings en route, and the movement into shelter or assembly positions at the end of the march. (See pars. 335, 339, 405, 406.)

When danger of an air attack exists, all units designated for antiaircraft defense march in a state of increased readiness for action. Elements of antiaircraft artillery advancing by bounds follow the advance guard or precede the rear guard as the case may be, or move on parallel roads when these are not occupied by adjacent columns, prepared to defend or reinforce the defense of elements most vulnerable to air attack.

When there is a good road net, the mobility of motorized units and the great radius of action and striking power of hostile mechanized units require that special measures be taken for antimechanized protection especially by exposed march columns. In general, both active and passive means are used in combination. (See pars. 257, 260–262.)

■ 272. The *march order* for a command includes all instructions relative to security as well as other details for the march. Definite provisions are made for close cooperation between the security detachments and the reconnaissance detachments operating under the control of the higher commander. (See SOFM.)

■ 273. When combat is in prospect, the commander marches with the commander of that security detachment with whose action he is most vitally concerned. From time to time he gives to the commanders of the security detachments additional instructions based on his knowledge of the situation.

■ 274. ADVANCE GUARDS.—The general mission of the advance guard is to prevent unnecessary delay in the advance of the main body and to protect it against surprise and observation by hostile ground forces. In proximity to strong hostile forces, the advance guard procures for the main body the time and space required for its deployment for action.

The advance guard accomplishes its mission by exploring the terrain to the front and on each side of the line of march, overcoming isolated hostile resistance, reconnoitering and preparing, so far as practicable, the route of advance for the movement of the troops (removal of obstacles, repair of bridges and roads, etc.). It directs its reconnaissance in particular against those points which afford extended observation into the dispositions of the main body or which provide concealment for hostile reconnoitering or harassing detachments. In proximity to the enemy, it seizes and holds important features of the terrain, particularly those that will cover the deployment of the main body from hostile observation and provide good observation and defilade for the employment of the artillery. According to circumstances, it pushes back hostile covering detachments, or it opposes an enemy advance in force long enough to permit the main body to make its dispositions.

■ 275. The *strength* and *composition* of an advance guard vary with the strength and mobility of the command, its mission, the situation, the terrain, and the time of day. It should be no stronger than is necessary for security, and for large commands may comprise components of all arms in varying proportion.

Greater strength is required as the distance from the enemy decreases. As a rule, antimechanized weapons and scout cars are attached. Motor transportation for organic foot troops is very advantageous.

When contact is imminent, light artillery is attached to support the probable combat action of the infantry. (See par. 276.) Elements of long-range medium artillery may be attached under conditions favoring their employment with a view to taking advantage of opportunities to open fire on favorable distant targets (e. g., hostile troops in column) and forcing the enemy to an early deployment.

A signal detachment with vehicular radio to provide for communication to the higher commander and reconnaissance detachments in front, and chemical troops to carry out any required decontamination are of special value.

Engineers are attached in accordance with the needs for bridge and road work, engineer reconnaissance, and the construction of antimechanized obstacles. When the negotiation of a river crossing is in prospect, a bridge train may be attached.

A medical detachment with one or more ambulances usually marches with the reserve.

■ 276. At night and under conditions of low visibility, an advance guard comprises only infantry with its heavy infantry weapons and engineers attached. If the night march is to be extended into hours of daylight, the march is organized as for a daylight march or the necessary measures are taken at daylight for reinforcing the advance guard. (See pars. 360–362.)

In case of a night march conducted under protection of a covering force or outpost in front of the command, a small infantry detachment will usually suffice for security.

■ 277. The *distance* between the advance guard and the main body is always sufficient to preserve for the commander his freedom of action with reference to the employment of the main body and to make his dispositions without serious interference from the enemy, but is never so great as to expose the advance guard to defeat before assistance can reach it. In general, distances are reduced at night, in close terrain, under conditions of low visibility and restricted observation, or when the advance guard is small.

278. The *formation* of the advance guard is, in general, such as to assure its own security and to provide sufficient distribution in depth and in width for its offensive and defensive maneuver.

The distribution in depth from front to rear of the troops of the advance guard usually comprises the *advance guard cavalry* or *motorized detachment*, *the support*, and the *reserve*.

The distribution in width of the advance guard increases with the proximity of the enemy. When necessary, this width is allocated to two or more subordinate elements and their action coordinated by the advance guard commander.

279. The *initial order* of the advance guard commander is based on the march order of the higher commander. It gives such available information relative to hostile and friendly forces as is necessary for the guidance of subordinates, including the zone or route and objective of the march; designates the troops for the several fractions of the advance guard; fixes the hour at which the support and, when necessary, the advance guard cavalry will reach or clear the initial point of the march; and gives such instructions to the several fractions and elements of the advance guard as may be required by the mission and the situation. For further details, see SOFM.

280. The *advance guard cavalry* or other reconnaissance detachment reconnoiters far enough to the front and flanks of the line of march to guard the column against surprise by hostile mechanized forces and artillery fire, and to secure timely information of the enemy and the terrain. If sufficient in strength and the situation so demands, it seizes and holds terrain points along the route of march (terrain features covering river crossings, town exits, defiles, etc.), advancing by bounds from position to position. It thus assures, as far as practicable, the continuous movement of the advance guard and the possession of ground facilitating its deployment. As proximity to the enemy increases, the necessity for the use of a mobile detachment on the more distant reconnaissance missions disappears, and the requirements of local security and the necessity for flank protection increase; it is then employed

in the exploration of the terrain on the immediate front and flanks of the advance guard. (See par. 159.)

■ 281. The *support* secures the march of the reserve and executes the necessary local reconnaissances on the front of the advance. It provides for the execution of reconnaissance and its own security by sending forward a small advance party. In the face of an enemy advance in force, it offers sufficient resistance to permit the reserve to prepare for action.

The support is given sufficient strength for the execution of its reconnaissance and security missions. When contact with enemy elements is probable, heavy infantry weapons are included in the composition of the support. An artillery liaison detachment habitually marches with the support. Messengers and motorcyclists are attached for the purposes of communication.

■ 282. The infantry strength of the advance party seldom exceeds a platoon; when practicable, transportation is furnished for carrying infantry packs. The attachment of antimechanized weapons and mechanized vehicles is of great importance.

■ 283. As soon as hostile resistance is encountered, the leading elements of the advance guard will have to move on a broader front. Prompt support of the leading elements in dealing with hostile resistance will be necessary, and provision must be made to prevent infiltration of hostile mechanized elements seeking to attack the main body or rearward subdivisions of the advance guard.

At the same time that the front is extended, the necessity for close support will generally require a reduction in the distances separating the elements of the advance guard.

■ 284. The *reserve* constitutes the principal maneuvering and offensive element of the advance guard. It therefore comprises as large a part of the strength of the advance guard as is consistent with its own security and the preservation of its maneuvering power. The artillery and other auxiliary troops assigned to the advance guard usually march with the reserve.

The reserve follows the support at a distance sufficient to enable it to deploy for action in an effective manner. As soon as the situation indicates the necessity for artillery support, the advance guard artillery marches in a state of increased readiness for action. One echelon of the artillery takes up a position in readiness or in observation, while the other moves forward to an advanced position.

■ 285. The combat action of the advance guard is regulated with reference to the requirements of the main body. The mass of the advance guard is therefore put into action only for the purpose of gaining or retaining advantages which contribute to the tactical success or security of the main body. So far as practicable, endeavor is made to hold the principal advance guard forces well in hand for unified employment in the execution of missions of importance to the success of the main body and to avoid dissipating the advance guard strength in minor detachments. Forces will thus be available for the seizure of important points, the execution of reconnaissances in force, and finally for covering the development and deployment for action of the main body.

■ 286. The general principles governing the advance guard of a combined force of all arms also apply to the security of the more mobile forces—cavalry (horse and mechanized) and completely motorized units. The principal modifications result from superior mobility of these units. The advance guard operates at greater distances from the main body and with greater distances between its own elements. Mechanized vehicles are attached to the advance guard. The zone of reconnaissance is more extensive, both to the front and flanks. Terrain lines that cover the passage of streams and defiles are of especial importance, and must be so protected by the advance guard that the security of the passage of the main body is assured before it reaches the crossing or defile.

■ 287. During a retirement, when there is likelihood of hostile mechanized attack against the heads of the retreating columns, advance guards are detailed; they are composed of mobile troops reinforced by antimechanized and engineer detachments. If there is no threat against the heads of the columns, the principal mission of the advance guard will be

to clear routes of march, insure the uninterrupted movement of the main body, and regulate civilian and refugee traffic; in the latter case, military police are attached.

■ 288. REAR GUARDS.—The mission of the rear guard is to protect the main body from hostile surprise, harassment, and attack. By the successful execution of this mission a rear guard covering a retirement enables the main body to avoid accepting battle and regains for the commander of the force his freedom of action. The strength and composition of a rear guard are such as to permit the execution of its mission without the intervention of the main body. The rear guard cannot count upon the support of the main body but must be able to accomplish its mission with its own means.

■ 289. A rear guard covering the retirement of a combined force initially consists principally of infantry supported by artillery. Contingents of other arms are added in accordance with the requirements of the situation, including antimechanized weapons, tanks, and other mechanized units for counterattacks against hostile mechanized forces, signal troops for radio communication and removal of wire lines, chemical troops for interdicting abandoned areas, and engineers for the preparation of demolitions and obstacles.

■ 290. A rear guard is usually strong in artillery and heavy infantry weapons on account of their power to force the enemy to deploy at long range and delay his advance. The ability of cavalry to conduct delaying action makes it an especially important element of a rear guard when the main body has succeeded in gaining sufficient distance from the enemy; it may then constitute the principal element of the rear guard.

■ 291. The *formation* and the *method* of *operation* of the rear guard are adapted to the situation. Movement to the rear is made by bounds, based on the progress of the main body and the time limit set by the higher commander for holding designated terrain lines. The distance between the rear guard and the main body is determined accordingly. Delays in the retirement of the main body must be expected; to obviate this all available roads are used.

292. When in contact with the enemy, the rear guard distributes its forces in groups over a wide front and opens long range fire with its artillery and heavy infantry weapons with a view to forcing the enemy to deploy and thus delay his advance. Unless the security of the main body requires a stubborn resistance, the rear guard, as far as practicable, avoids close range combat and retires successively from position to position as the enemy approaches. Cavalry covers the retirement and maintains contact with the enemy. (See par. 568.)

The successsive positions of the rear guard are chosen at such distance from each other that the enemy is forced to renew his preparations for attack in front of each of them and that the changes of position by the artillery of the rear guard are reduced to a minimum. A position should also favor a withdrawal by affording a good line of retreat. Smoke screens may often be effectively employed to cover the movement of withdrawing troops.

293. When the enemy presses his pursuit closely, greater resistance is offered; advantage is taken of favorable opportunities to punish over-hasty pursuit by counteroffensive action. Cavalry attack against the flanks of pursuing columns is often an effective means of disorganizing the enemy's pursuit. The most favorable time for offering a determined resistance is during the late hours of the day which will permit of the withdrawal of the rear guard under the cover of darkness. When necessary for the security of the main body, the rear guard sacrifices itself in the execution of its mission.

294. When the distance from the enemy permits, the rear guard retires in march formation. Its distribution corresponds, in general, to that of an advance guard, and in order of march comprises the reserve, the support, and the rear guard cavalry or motorized detachment. The support detaches a rear party and the necessary flank patrols.

Because of the direction of march, infantry reconnaissance during the retirement is much more restricted than in the case of the advance guard; the chief reliance must be placed upon cavalry or motorized infantry for the execution

of the necessary reconnaissances. Cavalry especially observes and forestalls enemy atempts to pass the rear guard on the flanks. Infantry supports provide security by breadth of dispositions when contact with the enemy is probable.

■ 295. A rear guard may also be detailed in an advance if attack or harassing action, especially by hostile mechanized forces, is expected. Usually a detachment, strong in engineers, machine guns, and antimechanized weapons with a weak infantry escort will suffice.

■ 296. FLANK SECURITY.—In addition to the reconnaissance and security by the supports of advance and rear guards, it will sometimes be necessary for the reserve and the main body to send out patrols to the flanks of the line of march. Special flank reconnaissances are ordered by the commander of the advance guard and the commander of the troops.

In principle, the main body and the advance guard assure their own flank protection.

When the flanks of the command are not protected by adjacent units, it may become necessary to provide stronger flank protection by the detail of a flank guard.

■ 297. When the necessity for detaching a flank guard for the protection of the main body during the course of the march can be foreseen, it will be advantageous to attach the flank guard troops to the advance guard in order to give them the time required to reach their positions. When this necessity cannot be foreseen, it is usually more convenient to convert the advance guard into a flank guard and then detail a new advance guard.

■ 298. When the main body executes a flank march in proximity to the enemy, flank protection assumes great importance, and the detail of a strong flank guard is frequently necessary.

Flank security is also of especial importance during a retirement. Cavalry detachments march on adjacent parallel routes when these are not occupied by other columns.

■ 299. As a rule, flank guard duty requires a high degree of mobility. Greater distances must be marched than in the case of troops assigned to the main body, and equal distances

must often be covered in shorter periods of time. When practicable, flank guards consist principally of cavalry or motorized infantry with the necessary artillery and means for antimechanized defense attached. Cavalry is especially suitable to detail on flank guard duty on account of its ability to carry out extensive reconnaissance and effect rapid communication with the main body.

■ 300. The operations of flank guards are conducted with especial reference to the routes which give access to enemy attack against the flanks of the command. When the locality from which an enemy attack is to be apprehended is well defined, a flank guard occupies a position covering the routes of approach until the command has passed. Infantry detailed on a mission of this character must start its march in advance of the movement of the main body; on the completion of its mission, it joins the rear of the column.

When several such localities must be successively passed during the progress of a march, echelons of the flank guard move by bounds from one position to another. A mission of this character requires the detail of especially mobile troops.

When a route generally parallel to the line of march of the main body exists, and more or less continuous flank protection is required throughout the depth of the column during the march, the flank guard marches parallel to the main body, distributed in detachments over sufficient depth to be able to offer resistance to enemy attack at various points on the flank of the main body and to deal with the inroads of small hostile detachments.

■ 301. A flank guard makes the necessary provision for its own frontal and flank security.

OUTPOSTS

■ 302. GENERAL.—The provisions made by a resting command for its security vary widely with the situation.

When contact with the enemy is remote, the leading elements of a large unit provide security in the direction of the enemy by occupying the terrain features which control the routes leading from the enemy and afford facilities for observation. By holding the positions controlling the routes

of approach and making the necessary provisions for their own security, the leading units assure the general ground security of the command. (See pars. 391, 396.) Local security by the various units of the command is obtained by the detail of the necessary interior guards; in hostile territory, interior guards assume especial importance. (See pars. 404–407.)

As the distance from the enemy decreases, a higher state of readiness for action becomes necessary. In shelter, units are distributed with reference to their probable tactical employment and generally occupy a more extended frontage. Provision is made for the security of the command by the detail of an outpost, more or less completely organized, depending on the seriousness of the hostile threat. (See pars. 404–405, 409.)

■ 303. An *outpost* is a covering detachment detailed to secure a resting command or a defensive position against surprise and observation by hostile ground forces.

When the distance of the hostile forces from the main line of resistance of a defensive position is too reduced to permit of the establishment of a separate outpost, each battalion in the forward area covers its sector by the detail of outguards forming a *combat outpost*. (See pars. 329–331.)

When the command makes a long halt during the course of a march, the advance or rear guard establishes a *march outpost* usually formed by extending the support. Units of the support occupy critical terrain features controlling the approaches to the column, establish outguards or lookouts at commanding points, and when necessary send out patrols.

■ 304. A resting command provides for outpost protection in those directions which afford hostile forces access to the location of the main body. The control of roads and terrain features that afford facilities for extended observation, and of observation points which if in the possession of the enemy would permit him to direct the fire of long range artillery on the main body, are of especial importance. Special attention is given to measures for antimechanized security. (See pars. 254–262.)

Flank security is, when necessary, provided for by refusing the exposed flanks of the outpost position and by establishing detached posts on roads or at important observation points which lie outside the sector covered by the outpost.

■ 305. The decision of the commander relative to the location of the main body constitutes the basis for the position and nature of the outpost. Security requirements generally increase with the length of time a command remains in occupation of a locality.

Outposts conduct reconnaissance only so far as required by their security mission. The execution of more distant reconnaissance is regulated by the higher commander through reconnaissance agencies under his control.

■ 306. STRENGTH AND COMPOSITION.—The strength and composition of an outpost vary with the distance, mobility, and the attitude of the enemy, the terrain, the time of day, the size of the command to be secured, the degree of resistance, and other special duties expected of it. An outpost of a force of all arms may thus comprise varying proportions of all the combatant arms except aviation. It should be no stronger than is consistent with reasonable security. The most economical protection is furnished by keeping close contact with the enemy by means of patrols in conjunction with resisting detachments on the avenues of approach.

■ 307. Infantry ordinarily constitutes the principal element of an outpost.

Direct support of the outpost infantry is usually provided by the artillery with the main body or that assigned to the defense of the main position; if such support is impractical, artillery is attached to the outpost.

Engineers are attached to the outpost for the construction of obstacles, mine fields, and other barriers. If necessary, the local antimechanized weapons are reinforced by the attachment of antimechanized units at the disposal of the higher commander.

When cavalry is attached to the outpost, the zone of reconnaissance of the outpost is extended by cavalry patrols or reconnaissance detachments.

■ 308. In close terrain and during periods of darkness or low visibility, security forces are usually stronger and operate in closer proximity to the main body or defensive position.

■ 309. DETAIL OF THE OUTPOST.—The halt order of the commander of the troops, besides assigning locations to the various elements of the command and designating, when necessary, the position to be held in case of attack, contains instructions relative to security. Unless measures for security have been delegated to the several column commanders, these instructions detail the outpost troops, assign an outpost commander, and designate the outpost line of resistance and the limits of the sector to be covered by the outpost. According to circumstances, they indicate whether in case of hostile attack in force the outpost is to hold its position either definitely or for a prescribed period, or is to conduct a delaying action falling back on the main line of resistance. They outline special reconnaissances to be carried out and indicate the approaches which are to be especially guarded.

■ 310. During an advance, the outpost troops are usually furnished by the advance guard; relief from security duty is generally effected by the detail of a new advance guard when the movement is resumed. The outpost ordinarily stands relieved when the support of the advance guard has passed the outpost line of resistance.

During a retreat, the outpost usually furnishes the rear guard; relief from security duty is generally effected by the detail of a new outpost from the main body when the command goes into position or shelter.

When the command is in position or remains stationary for a prolonged period, the outpost is ordinarily relieved at intervals of several days. The frequency of reliefs is regulated according to the arduousness of the service. All reliefs are conducted so as to provide continuity of security.

■ 311. Instructions of higher commanders provide for the necessary coordination between the outposts of adjacent subordinate units. When necessary to insure close coordination between the dispositions of adjacent outposts, higher com-

manders designate a common outpost line of resistance and assign sections of the outpost line of resistance to each unit; they may further indicate the important areas to be held, fix the strength of the several outposts, and prescribe their conduct in case of hostile attack. They regulate the signal communications to be established between adjacent outposts, and the support to be given by the artillery under the control of the higher commander. If there are any gaps between adjacent units, the unit responsible for keeping them under observation is prescribed.

■ 312. Signal communication between the command posts of the commander of the troops and the outpost commander is established by the commander of the troops.

■ 313. DISTRIBUTION OF THE TROOPS.—The outpost of a large command is distributed into a *reserve*, *supports*, and, when cavalry is attached, the *outpost cavalry*. When important points to be secured lie outside the sectors of the supports, detached posts are detailed by the outpost.

The missions and the dispositions of the several fractions into which the outpost is distributed depend upon the mission assigned to the outpost and the situation.

■ 314. Against minor hostile enterprises and when the outpost is required to hold its position against hostile attack in force, the *supports* constitute the principal echelon of resistance of the outpost. They are usually placed at the more important points on or near the outpost line of resistance. As a general rule, roads exercise the greatest influence on the location of supports in open situations, and a support is generally placed on or near a road. Each support is assigned a sector which is clearly defined by means of tangible lines on the ground. Supports furnish the outguards and patrols required for the observation service of the outpost. Supports vary in strength from a platoon to a company. Machine guns and heavy infantry weapons are attached to supports as required. Supports are numbered consecutively from right to left.

■ 315. The mission of the *reserve* is to support the troops in front by reinforcement or by counterattack, or in case

the outpost is assigned a delaying mission, to hold a rallying position on which they may retire in event of a hostile attack in force. It is so located that it can readily occupy the line of resistance, and, when its mission requires delaying action, take up a position covering the retirement of the supports.

■ 316. ESTABLISHING THE OUTPOSTS.—Upon receipt of the orders for the establishment of the outpost, the outpost commander makes his dispositions with the least practicable delay. Until the leading outpost troops are able to assume their duties, temporary protection is afforded by march outposts established by the advance or rear guard.

In large commands it will frequently be necessary for the outpost commander to give his initial orders from the map. In proximity to the enemy, the *initial orders* insure the prompt execution of the most urgent measures to prepare the outpost to meet a hostile attack. These measures include the occupation of commanding terrain, instructions for reconnaissance, construction of obstacles blocking important roads, and preparations for the defense of the outpost position. Details and the rectification of preliminary dispositions are regulated by subsequent instructions.

Having made his reconnaissance, the outpost commander designates the *outpost line of resistance* in accordance with the instructions received from the commander of the troops. He fixes the distribution of the outpost troops; assigns to each support its location and the sector it is to cover; prescribes the location and disposition of the reserve, and its conduct in case of attack; provides for the necessary detached posts and connection with adjacent troops; issues instructions concerning organization of the ground, signal communication, and the measures to be taken for antiaircraft, antimechanized and gas defense. He prescribes the disposition of any trains with the outpost and gives the location of his command post.

■ 317. After issuing the initial orders, the outpost commander inspects the outpost position, coordinates the dispositions of the several supports, completes his arrangements by more detailed instructions where necessary, and sends

his superior a report of his dispositions. He prescribes the degree of readiness for action of the several elements of the outpost as required by the situation.

318. In occupying their positions and during the progress of a relief, the various subdivisions of the outpost conceal their movements as far as practicable against both ground and air observation, taking advantage of existing covered routes of approach. They prepare their positions for defense unless the situation renders such action unnecessary. As soon as practicable, the subdivision commanders make a report of their dispositions, accompanied, if practicable, by a sketch, to the outpost commander.

Prominent points within the outpost position in rear of the outguards which afford extensive view over the foreground are occupied as observation posts as directed by the commanders of the several subdivisions and the outpost commander.

319. When supports are to be furnished from more than one battalion, a sector of the outpost position is assigned to each battalion furnishing the supports. Battalions assigned to sectors of the outpost position usually hold out their own reserves. When battalions are assigned to sectors of the outpost position, the outpost commander issues his orders for the occupation of the line of resistance to battalion commanders.

320. SUPPORTS.—The *supports* are the principal agencies of security of the outpost. They constitute the strong points of the line of resistance and provide for their own security and the observation service of the outpost by establishing *outguards* and sending out *patrols*.

The support commander in posting his unit seeks to cover his sector in such manner that the enemy cannot reach the section of the line of resistance assigned to the support in dangerous numbers unobserved. On the other hand, he economizes in the number of men used on observation and patrol duty. He organizes the defense of the section of the line of resistance assigned to him as required by the situation. A unit detailed as a support is usually deployed on a frontage and in a depth corresponding to its deployment in

defensive combat. Each strong point on the line of resistance is so organized as to command an adequate field of fire to the front and to sweep with its fire the intervals between its position and those of adjacent supports. Suitable road blocks and obstacles are prepared for defense against mechanized attack.

321. As soon as the posting of the support is completed, the support commander inspects its dispositions, rectifies defects, and makes a report of his dispositions, preferably accompanied by a sketch, to his immediate superior. He indicates the spaces which are dead to the fire of infantry weapons and especially require artillery support. He renders subsequent reports covering additional developments and embodying the information collected by his patrols. He maintains connection with adjacent supports and keeps them informed as to his situation.

The support commander prescribes the degree of readiness for action of the support. Greater vigilance is required in case of fog and toward dawn; it may then be necessary to cause the entire support to stand to arms and to draw in the outguards closer to the support. At night, it will sometimes be advisable to place the outguards in positions different from those which they occupy during the day. Where an outpost occupies a position for a considerable length of time in close proximity to the enemy, provision must be made for frequent change in the position of outguards in order to avoid capture by hostile raiding parties.

322. An *outguard* varies in strength from four men to a platoon, depending on its location and the number of sentinels it is required to furnish. Posts at a short distance from the support may be held by weak outguards while important posts at a considerable distance must be more strongly held. Outguards are numbered consecutively from right to left in each support. Outguards comprise pickets, sentry squads, and cossack posts. (See FM 7–5, and Cav FM, vol. III.)

Outguards must be ready for action at all times. When in close contact with the hostile outpost, the establishment of listening posts at night in front of the general line of observation may become necessary.

■ 323. *Sentinels* are charged with the observation of a certain portion of the foreground of the outpost position, with the discovery of indications of hostile activity, and with giving the prescribed alarm or signal in case of hostile attack. Sentinels at the post of the support and the outguards repeat the signals given by the advanced sentinels.

The duties of sentinels are prescribed in special orders in which all sentinels are carefully instructed.

■ 324. The field of view held under observation by the outpost by means of sentinels is extended by *patrols* detailed by pickets and supports. Patrols execute reconnaissances in advance of the line of sentinels and especially reconnoiter positions of the foreground which are masked from the view of sentinels and observation points and are too distant to be included in the outpost lines. (See ch. 9, BFM, vol. I.)

Patrolling in front of the line of observation is increased during periods of low visibility and is of especial importance during the hour preceding dawn.

■ 325. When the situation requires strong support of the action of patrols, the outpost commander may detail a reconnaissance detachment (see pars. 153–155) for the execution of a specific mission.

When the outposts of opposing forces are in close contact, reconnaissance is largely restricted to night patrolling. Night patrolling requires systematic organization, careful preparation, and the cooperation of advanced outpost elements with the activity of the patrols.

■ 326. Within the outpost position, patrols are employed by supports and pickets to maintain contact with their advanced elements and with adjacent supports and pickets and to reconnoiter the ground between sentinel posts. Patrols are employed instead of sentinels to hold under observation ground which affords a limited field of view. In close country, patrols constitute the principal organs of observation of the outpost.

■ 327. When cavalry is attached to the outpost, it operates under orders of the outpost commander primarily on reconnaissance missions. It is also employed to maintain contact

between adjacent units and to establish detached posts at more distant points. In general, when not engaged in outpost duty, cavalry is withdrawn to a rearward echelon of the outpost for rest and care of animals.

■ 328. RESERVE.—The reserve sends out such detachments as have been ordered; at least one sentinel is stationed at the post of the reserve which remains at rest. Connection is maintained with the supports and nearby detached posts. Each unit of the reserve is informed as to its place of formation in case of hostile attack.

■ 329. COMBAT OUTPOSTS.—As a rule a combat outpost is established by each front line battalion or squadron in contact with the enemy. (See par. 303.) When battle is interrupted by nightfall, combat outposts are established by the leading battalions and squadrons; they push their patrols forward in close contact with the enemy (see par. 553). The action of the several outposts is coordinated by the commander of troops as described in paragraph 311.

When combat outposts are established during hours of darkness, temporary measures for security are immediately taken by initially occupying the more accessible points with outguards and patrols; the outpost is then completely organized at daylight.

■ 330. If the outpost position is at a considerable distance from the main battle position, the combat outposts of adjacent units are placed under a single outpost commander designated by the commander of troops. If the artillery with the main body is unable to support the outpost, some artillery is attached to the outpost in order to force the enemy to deploy his artillery prematurely for the attack of the outpost position. Under such circumstances the foreground of the main position is temporarily occupied by outguards (combat outposts) detailed from the front line units on the battle position who cover the withdrawal of the more distant outpost troops (see par. 543).

■ 331. In general, combat outposts provide for the close security of the defensive position and are responsible for maintaining close contact with the enemy. For action taken

by outposts in the defense and in delaying action, see paragraphs 543 and 582.

If there are friendly troops or detachments in front of the outpost, the higher commander must clearly prescribe their mission and coordinate their combat activity with respect to the outpost.

■ 332. CAVALRY AND MOTORIZED UNITS.—Cavalry and motorized units secure themselves principally by a far-reaching reconnaissance and by greater depth of their dispositions in the bivouac area. Except when in close proximity to the enemy, a cavalry or motorized unit does not secure itself by a completely organized outpost. It sends out security detachments (troops, platoons) to hold critical points on the routes of approach from the front and flanks. These detachments are preferably posted along some protective terrain line that the enemy will be forced to pass in his advance (defiles, streams, crossings, etc.). They provide for their own security by posting outguards and sending out patrols, and oppose a hostile advance long enough to permit the security detachments to withdraw under protection of the natural obstacle and the main body to make its dispositions. Additional outguards are posted in the vicinity of the shelter of the main body.

■ 333. In closer proximity to the enemy, security measures approach a more continuous outpost organization. When the security troops occupy an extensive front, outpost sectors are assigned to the various security detachments. When necessary, portions of the main body are held in readiness for immediate action.

The speed with which a motorized or mechanized unit can move permits its main body to bivouac at some distance from the outpost. The number of vehicles with the outpost is reduced to the minimum necessary for patrolling and communications. All vehicles pertaining to the resting units are serviced and made ready for operation before dark. Motor parks are established under cover and located to avoid congestion and to expedite movement.

■ 334. In immediate proximity to the enemy, the outpost organization conforms to the general principles of an outpost

of all arms. An outpost commander is detailed and a reserve is constituted. Mounted outguards leave their horses with the rearward echelons of the outpost. When there is danger of surprise, increased readiness for action is obtained for outguards and supports by holding animals saddled and ready for movement.

SECURITY DURING DEVELOPMENT

■ 335. With the approach of a marching column to close contact with strong hostile forces, it becomes necessary to abandon the road and to develop the route column into a broader formation. Hostile artillery may effectively interdict daylight movement on roads at ranges up to 10 miles. Open terrain, extended hostile observation, and the threat of air attack may necessitate an earlier development. As a rule, time can be saved and losses avoided by detouring areas under hostile observation or fire.

The *development* of the route column is effected by breaking the single column into several roughly parallel columns, each of which is assigned a march objective. As contact with the enemy becomes imminent, these columns are themselves developed into smaller columns. In the development of a large unit a portion of its strength is held back until contact with the enemy has clarified the situation.

Time is generally gained in the execution of the development by assigning the longest routes to the leading units of the march column.

■ 336. The *advance guard* may be employed as a covering force to protect the development of the main body or it may cease to operate as a security detachment and be given a combat mission as a part of the whole force. In either case, each column into which the command is developed covers its advance with a security detachment.

■ 337. Each unit becomes responsible for *reconnaissance* of its objective and its own *local security* as soon as the next higher unit is developed. Orders for development frequently assign reconnaissance zones to subordinate units. Terrain features that afford an insight into the hostile dispositions

constitute especially important objectives of reconnaissance and of combat action with advanced enemy detachments. Heavy infantry weapons advancing by echelon and by bounds take up successive positions covering the advance of infantry units.

■ 338. When the objective is well defined, development of the command can be expedited by an advance in several columns in order to secure possession of essential terrain features which will facilitate an envelopment. Eventually, however, the several columns must be concentrated for battle. In case a wide envelopment is contemplated, special security measures are taken to protect the enveloping force.

■ 339. The development of an infantry division usually terminates in the occupation of an *assembly position* preliminary to deployment for attack or defense. Each of the units into which the division is developed occupies a section of the assembly position assigned to it in the order for the development of the division.

Assembly positions are so selected as to be, as far as practicable, screened from air and ground observation and reconnaissance. Special attention is given to terrain which provides turn-arounds for motor vehicles and natural protection against a mechanized attack. The general lie of the position should be such that the troops face in the general direction of their contemplated movement and have at their disposal favorable lines of advance to their deploying positions. When the terrain does not afford cover, the assembly position of an infantry division should be beyond the effective range of hostile artillery. The assembly position of the infantry is protected by antitank weapons and local security detachments. The artillery is so disposed that it can also protect the occupation of the assembly position.

The movement into an assembly position is usually executed by bounds. Massing of units in close formation in assembly positions is avoided. Units are separated by sufficient intervals and distances to insure that concentrated targets are not offered to the hostile air attack or artillery fire. Each unit makes its own provisions for local security.

■ 340. When a command is required to execute its development under cover of darkness, all preparations for the maneuver are completed, as far as practicable, before dark. A covering force is sent forward without delay to gain contact with the enemy; routes of advance are reconnoitered and marked beforehand; if necessary, artillery protects the occupation of the assembly position by occupying suitable firing positions before dark or completing its preparations for night firing. In general the provisions for night marches apply. (See pars. 360–362.)

CHAPTER 9

MARCHES

■ 341. GENERAL.—In the combat zone, troop movements are generally executed by marching or by a combination of marching and movement by motor transport. Motor transportation is employed whenever practicable for the purpose of increasing the operative mobility of foot troops and conserving their strength.

For the logistics of troop movements and the transportation of supplies in the theater of operations by various means of transport, see FM 100–10 and SOFM.

■ 342. The ability of a command to concentrate superior forces where required depends in large measure upon the march capacity of the troops. All elements of the command must be equally well-trained and accustomed to march exertions. In war, troops spend the greater part of their time in marching; therefore, from the first days of mobilization, advantage must be taken of every opportunity to perfect troops in this requisite for field service.

■ 343. A successful march is one that places the troops at their destination at the proper time and in effective condition for combat. It is the task of commanders to reconcile, as far as practicable, the conflicting requirements of rapidity of movement and conservation of fighting power by adapting their dispositions to the situation, making careful march preparations, enforcing strict march discipline and the observance of rules of march hygiene, and taking measures for the avoidance of unnecessary hardship.

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■ 344. CARE AND CONDITION.—Special attention to the care of troops and the means of transportation is essential to successful marching. Commanders take the necessary measures prior to a march to place men, animals, and transportation in the best possible condition and exercise the necessary supervision during the march to maintain them in that condition.

■ 345. *Hot weather* is one of the greatest sources of hardship on a march. Every precaution is taken to prevent suffering from this cause. Full use is made of available transportation to carry the packs of troops as well as the equipment and loads of animals in need of relief. Places for long halts are, when practicable, selected where there are shade and free circulation of air.

Care is exercised to prevent men from obtaining unwholesome food and beverages from local sources and from indulging in excessive eating and drinking. The rate of consumption of water during a march is largely a matter of habit and training. Men are encouraged to drink all the water they need before starting a march; they are cautioned to drink sparingly during the course of the march. Excessive perspiration deprives the body of essential salts, the loss of which predisposes to fatigue and heat exhaustion. The dangers of these two conditions can be minimized by the consumption of sodium chloride (common table salt). Cold coffee or tea is likewise beneficial. The eating of sweets greatly increases thirst and should be discouraged. Commanders are required to have all water for drinking and cooking purposes chlorinated unless procured from a source found to be safe by the medical service. They make the necessary arrangements for the replenishment of canteens in accordance with anticipated needs; they permit no straggling from the column for this purpose. In large commands, replenishment of canteens from local sources is often impracticable so that water must be transported in water carts or tank trucks. Troops exercise economy in the use of water in order to make the available supply suffice for the march. When combat is in prospect, the replenishment of water consumed during the march requires special attention.

Animals suffer more from lack of water than from lack of food. If insufficiently watered, they rapidly lose condition. The times of watering are largely dependent upon march conditions and available facilities.

■ 346. The hardships caused by *cold weather* can be mitigated by taking proper precautions and providing troops with suitable winter clothing. Ears, face, and hands must be protected. Mounted troops stimulate circulation by dismounting and leading. Foot troops sling their weapons over the shoulder to free their arms.

Snow and ice greatly reduce the rate of march. To equalize the exertion of breaking the way, leading elements of a column are frequently changed. In deep snow, it may be necessary to break the way for foot troops with a vehicular drag or a tractor plow.

■ 347. Troops are not kept in column or under arms any longer than necessary. Many of the discomforts, annoyances, and hardships of marching can be mitigated by the exercise of foresight and good judgment.

On going into shelter, the care of animals is given first consideration when the tactical situation permits. Transportation is kept in good condition by regular care on the road and thorough cleaning and overhauling in shelter.

■ 348. MARCH DISPOSITIONS.—The factor which exercises the greatest influence upon dispositions for marching are the proximity of the enemy and the activity of hostile aviation.

The use of motor transport in the movement of foot troops of a column must be fully exploited. If the available number of motor vehicles is insufficient to carry all the foot troops, the column commander resorts to *shuttling*, using the organic motor vehicles of the units. In shuttling, a part of the motor vehicles dumps its load to carry foot troops, returning later for its cargo; while the other part moves its cargo first and then returns to carry foot troops. While awaiting their motor transport, foot troops may move by marching. The column thus advances by bounds.

When contact with the enemy is remote, the principal object of march dispositions is to facilitate and expedite the

movement of troops and to conserve their energy. As far as practicable, march columns are composed of units having the same rate of march. In columns composed of foot and motorized troops, the proportion is such as to facilitate shuttling. Separate roads are assigned to the several columns thus constituted, or the movement of the columns by the same road is echeloned in time. In general, the longer the bound, the more expeditious is the movement. The necessary measures are taken to guard against air observation and attack.

When contact with the enemy is probable, tactical considerations govern march dispositions. March columns are constituted in accordance with their tactical missions. Adequate provision is made for security. Shuttling is by comparatively short bounds to avoid an undue elongation of the column. Ordinarily, certain tactical units, with a limited supply of ammunition, are moved by motor transport in order to cover the movement of the remainder of the column. Whether important cargo, such as ammunition, is transported before or after the foot troops are moved will depend upon the needs of combat. Service trains may be held in a protected area until moved forward under cover of darkness.

Certain elements are ordinarily not included in the march columns of other troops. For example: air base units move in long bounds of several days' march; antiaircraft artillery moves by echelon and by bounds.

■ 340. A *large unit* advancing against the enemy is assigned a march objective or direction of march, and a zone or route of march.

A large unit whose zone of march includes several routes distributes its zone to its component units on the basis of the available road net and its own plan of maneuver. Tactical unity is observed in the assignment of routes of march.

Considering the possibilities of hostile air attack, the length of any march column or serial should ordinarily not exceed that of a reinforced infantry regiment; the longer the column, the greater is the danger from air attack. (See par. 369.)

■ 350. The commander of a large unit preserves his freedom of action by echeloning his march columns to one or both flanks, by regulating their advance by bounds, and by the timely control and maneuver of his march columns during movement.

Echelonment of columns to a flank facilitates maneuver and deployment to that flank. An advance by bounds to successive terrain lines regulates the movement of the command. Control is insured by having column commanders report the position of the heads of their columns periodically, either geographically or by road distance from the initial point.

After a march has begun, the desired echelonment of columns may be obtained by halting certain columns as necessary. An advance by bounds can be regulated by halting each column when it arrives at an indicated terrain line. The route of a column may be changed if desired without interrupting its movement.

■ 351. *Communication* between columns and with the superior commander is regulated ordinarily by standing procedure, supplemented, if necessary, by special instructions issued before the march is begun. Ordinarily the means employed are motorcycle messenger and vehicular radio. In the daytime, liaison airplanes are used to maintain contact between columns and to report their arrival at successive march objectives.

■ 352. For a large command, changes in march dispositions after the march has started usually slow up the process of the march and lead to congestion of rear elements. As a rule, the prescribed march dispositions are taken at the beginning of the march. When changes must be made during the march, they are accomplished upon arrival at a suitable terrain line or after a halt. In an emergency, all subordinate commanders are expected to adopt temporarily such march dispositions as the tactical situation requires.

■ 353. As a rule, a *warning order* is issued for a march. The essential information is the hour of start of the march. Other items which may be included are the initial point,

the route, the order of march, and the probable length of the march.

A march by a large unit usually can be covered in a simple and brief order. A march of several days' duration made by a large unit marching in several serials may call for a march table. (See SOFM.)

■ 354. The routes are, when necessary, reconnoitered and marked prior to the commencement of the march; timely measures are taken for preparation of stream crossings and for the removal of obstacles and other possible causes of delay. Suitable rest areas along the route of march with cover from air reconnaissance are selected.

Careful examination is made of fords, bridges, ice, etc., before attempting a stream crossing.

Sources of water supply are examined and marked as good or bad. This measure is imperative in countries infected with water-borne diseases. If water is bad or water sources insufficient, potable water is supplied in the same manner as rations.

■ 355. When several elements of a command marching by different routes are to unite on a single road or when their routes of march cross each other, arrival at or clearing of the point of junction is so timed as to prevent collision between columns.

When a crossing of two columns cannot be avoided, the superior commander regulates the crossing so as to reduce to a minimum the delay in the march of both columns. Measures are taken to prevent congestion of the roads or the massing of troops in exposed terrain in the vicinity of the crossing.

When an unforeseen crossing of the routes of two columns occurs, the senior commander regulates the crossing, basing his action on the situation and the missions of the two columns.

When corps and army troops or other separate units follow closely in the zone of advance of a division, the necessary steps are taken to prevent friction between these units and the rear elements of the division.

■ 356. The distribution of the troops in a march column comprises the security detachments, the main body, and the trains. (See FM 100–10.) The formation and movement of each of these groupings are regulated by a designated commander in accordance with instructions of the column commander. Distance between the groupings is regulated by the column commander.

■ 357. In each arm and service, movement is based upon a *march unit* which moves and halts at the command or signal of its commander. A march unit is an effective subdivision for the regulation and supervision of marching. It comprises: in foot troops and mounted units, the battalion or squadron; in motorized and mechanized units, a group of approximately twenty-five vehicles or an equivalent tactical unit. Smaller separate units may be constituted as march units or attached to march units for march purposes.

In each march unit, the order of march of the several component units is changed daily. Alteration in the order of the march of larger units may also be ordered when permitted by the situation.

Foot troops usually march in platoon column; cavalry, mounted officers and men, and led horses march in column of twos; vehicles in section column.

■ 358. In a column composed of foot and mounted troops, regular distances are maintained between march units with a view to minimizing the effects of irregularity in the march. For motor columns the introduction of fixed distances between march units serves only to elongate the column without compensating advantages.

The normal distances may be increased for the purpose of decreasing the vulnerability of the column to air attack, increasing the comfort of the men, or for other special reasons.

■ 359. Cross-country marches may become a necessary incident to development and approach march preliminary to battle, or to the extension of a command for the purpose of diminishing its vulnerability to air attack. Basic factors in the reconnaissance and selection of routes are practicability

of the terrain and the location of cover, obstacles, and march objectives. Foot and mounted troops constitute the elements of a large unit most capable of cross-country movement. All units march with considerably increased distances.

360. NIGHT MARCHES.—The necessity for concealment of a movement from the hostile aviation and the importance of effecting an approach march under the cover of darkness frequently lead to the execution of a march by night. Night marches may also be made in connection with forced marches or for the purpose of avoiding the excessive heat of the day. Daylight marches are, however, frequently unavoidable in the approach to the battlefield.

361. Night marches are carefully prepared. The route is, whenever practicable, reconnoitered prior to the commencement of the march.

Special precautions are taken to insure the maintenance of direction and connection within the column, especially for motorized and mechanized units. Guides are furnished when available. Routes are marked; men are stationed at cross-roads and in towns to prevent the wrong route from being taken; numerous connecting groups are provided.

On good roads, foot and mounted troops can usually maintain the same rate of march as for a day march; on poor roads and very dark nights, the rate of march is considerably reduced. Motorized units must also reduce their speed at night, especially if traveling without lights.

In movement off roads, the routes are laid out and direction maintained by compass.

362. In night marches, when protection must be provided against hostile air reconnaissance or attack, special precautions are necessary. (See par. 251.) When troops are being concentrated by night marches, daybreak should find the troops either in position or in concealed localities (woods, villages), and the trains under cover.

When near the enemy, silence is maintained and measures are taken to suppress the noise made by vehicles, motors, and equipment.

■ 363. FORCED MARCHES.—Forced marches seriously impair the fighting power of even the best troops. They are undertaken only in cases of urgent necessity. Requirements for increased rates of march are met, wherever practicable, by the use of motor transportation. Troops should be informed why the march is necessary. The completion of the march must find the troops in condition to accomplish the object of the movement.

Ordinarily the march capacity of foot and mounted troops is increased by increasing the number of marching hours per day rather than by increasing the hourly rate of march. The march is broken into shorter stretches by halts of several hours' duration. A long forced march practically becomes a succession of daily marches of greater average length and with shorter intervals of rest.

The march dispositions adopted for a forced march are governed primarily by the prospect of early contact with the enemy's ground forces. (See par. 348.)

■ 364. FORMATION OF THE COLUMN.—A march column is ordinarily formed by the successive arrival of its component units at an initial point on the route of march.

Initial points are located in the direction of the march in order that no unit may be required to move to the rear in joining the column. They should be inconspicuous to hostile air observation and easy to identify on the ground through some natural or artificial feature; at night special provision for identification is frequently necessary (lanterns, lights).

■ 365. Initial points and hours of arrival or clearance of the several elements of a command are stated in the march order or in a march table accompanying it. The *hour of arrival* is the hour at which the head of the unit reaches the initial point; the *hour of clearance* is the hour at which the tail of the unit passes the initial point.

When a large unit marches in several columns, it may fix an initial point for the formation of each column, or designate an initial line to be passed at a prescribed hour by a specified element or elements of each column (e. g., support of advance guard, head in main body, etc.). When an *initial line* is designated, each column commander fixes an initial

point and hours of passage in such manner as to pass the initial line as prescribed in the orders of the higher commander.

Units which arrive at the initial point or line in advance of the scheduled time, halt off the route of march until the hour fixed for their inclusion in the march column.

When a large unit moves in several groupings echeloned on the same route, the superior commander regulates the start of each column by fixing its initial point and hour of passage, or by fixing the hour of its departure from the area which it occupies. In the latter case each column commander designates an initial point for the formation of his grouping.

¶ 366. Commanders of subordinate units of a march column consider the route to be followed in reaching the initial point, calculate the time required, and start their commands in such manner that there will be neither delay nor unnecessary waiting at the initial point or elsewhere. They designate an initial point for the formation of their commands in column of route or assemble their units in an appropriate preparatory formation.

Ordinarily, march units are the largest units which are assembled preparatory to a march; march groupings usually form route column by a successive passage of their subordinate units at an initial point. The assembly of such groupings in their bivouac area is, when practicable, avoided on account of the resulting exposure to hostile air attack and reconnaissance.

The necessary measures are taken to insure the clearance of routes for the formation of the column. When trains are sheltered with combat units and are to join the tail of the column on the march, they are kept off the roads until the troops have cleared the routes; their assembly on the route of march is so regulated as not to interfere with the movement of the troops.

¶ 367. THE START.—The hour to be fixed for the start of the march depends upon the situation, the length of the march, and the hour at which the troops must arrive at their destination.

When practicable, daylight marches begin at as early an hour as is consistent with allowing ample time after daybreak for the men to breakfast, animals to feed, and transportation to be loaded. An earlier hour is designated when the distance to be covered would otherwise make it necessary for the troops to go into shelter after dark at the end of the march. The repose of foot troops ordinarily ceases about one hour, that of mounted and motorized troops about two hours, before the start of the march. The repose of mounted and motorized troops does not commence as soon as that of foot troops on going into shelter.

Units of the command which start at an exceptionally early hour avoid disturbing the repose of other troops.

■ 368. ORDER OF MARCH.—The order of march of a column of all arms advancing against the enemy is dependent upon the terrain, the tactical situation, and the mission of the column. When contact with the enemy is possible, the order of march is adapted to the probable order of entry of units into action.

The order of march of security detachments is ordinarily prescribed by their respective commanders. The column commander prescribes the order of march of the main body, and assures himself of the proper and timely entry of its units into the march column at the initial point.

In arranging the order of march of a column and fixing the composition of the tactical groupings, careful consideration is given to the location of bivouacs of units and the distance each unit must cover to reach its march objective or next bivouac area.

■ 369. The column commander, his staff party, and the necessary signal communication troops ordinarily march near the head of the main body. The remainder of the signal unit is disposed so as to insure their availability when required.

When an infantry division advances in several columns, each column having a security function consists of a tactical grouping including infantry and artillery. Ordinarily the strength of the column should not exceed a reinforced infantry regiment; if greater than this, it is distributed in

depth preferably in several tactical groupings each composed of infantry and artillery. (See par. 350.)

The maintenance of roads and the removal of obstacles to the cross country movement require the presence of an engineer unit near the head of the principal columns.

Antimechanized weapons are attached to the security detachments and distributed within the march column at the head and tail of the principal march groupings.

Combat trains are so placed in the march column as to be readily available to their units. Service trains not immediately required are held in protected areas in rear and sent forward under cover of darkness.

■ 370. In a large unit, the motor elements not engaged in shuttling operations are organized into motor columns which follow the main body or the several march columns by bounds. These motor columns move continuously at the most favorable speed so as to arrive at their destination at the proper time.

Motor elements of the reserve of the advance or rear guard, and those motor vehicles required in the exercise of command and control of the column, ordinarily advance by bounds in the road interval between the main body and the security detachment. Other motor elements pertaining to staff parties march at the head of their units.

■ 371. The rates and lengths of march vary greatly with the weather, the time of day, the character of the roads, the condition of the troops, the nature of the terrain, and the obstacles that must be overcome. Average rates and lengths of march are given in SOFM and the field manuals of the separate arms.

The elongation of a column varies greatly with road conditions, weather, the condition of the troops, and the changes in march disposition adopted for antiaircraft protection.

In each march unit, the leading element under the direction of his commanding officer regulates the rate of march in accordance with instructions issued for the march.

Congestion is avoided by the timely report of the leading units of delays encountered in their movement. When an

unavoidable cause of delay is encountered, units in rear are notified as to the minimum length of the delay; they then conduct themselves as at regular halts.

372. In motor columns, the leading vehicle moves at a prescribed march speed which it does not exceed. The remaining vehicles keep closed up on the vehicle ahead to the limit of safety, regaining lost distance at an increased but safe speed.

Since greater distances are required between motor vehicles as their speed is increased, the time length of a large motor column is nearly constant. For practical purposes it may be taken as eight minutes per hundred motor vehicles regardless of their speed. This method is inapplicable when a column is elongated deliberately under the threat of an air attack.

In a daylight march the greater speed and distances permissible cause a motor column to offer a more dispersed target and diminish the risk of discovery as a troop movement.

In a night march the slower speed and closer distances facilitate control of the motor column and permit the column to be halted and protected more easily in case of an impending air attack.

Supply vehicles ordinarily move at increased distances in order to make them less conspicuous and to ease the strain on the drivers.

373. THE CONDUCT OF THE MARCH.—Ordinarily, troops keep to the right of the road, leaving the left free for passage of other traffic along the column. If the left of the road offers better concealment from hostile air observation, it may be used. On muddy, sandy, or very dusty roads, or when both sides of the road provide concealment from air observation, troops may be directed to march on both sides of the road; the middle of the road is kept clear for other traffic.

In the case of motor columns, the nature of the road may make it necessary for the vehicles to utilize the middle of the road. Motor cars and motorcycles seeking to pass the column move in the march distances between vehicles and take advantage of halts and favorable sections of the road to work their way along the column.

374. *Halts* are made at regular intervals to rest the men and animals, to service motors, to adjust equipment, and for other purposes. Regular halts are usually made according to standing procedure. Notification relative to halts not foreseen in the march order is conveyed to unit commanders during the course of the march with the least practicable delay.

A halt of fifteen minutes is usually made at the end of the first forty-five minutes of march for the purpose of permitting the troops to relieve themselves, adjust equipment, inspect motors, vehicles and loading.

After the first halt, columns including foot or mounted troops usually halt ten minutes each hour. The halts of motor columns are usually made every two or three hours and are regulated with reference to the location of facilities for servicing vehicles and making adjustments. The vehicles of each march unit close on the leading vehicle in order to facilitate inspection and supervision.

The march units of a column halt and resume marching simultaneously, regulating the time by the watch. At the signal for the halt, units bear to the side of the road and troops fall out or dismount to rest.

Shortly before the termination of the halt, the commander of each march unit gives the preparatory signal for the resumption of the march; foot troops fall in, mounted men remount, drivers resume their seats. Each unit moves out at the signal of execution of the march unit commander.

375. It is generaly desirable to finish the day's march as soon as practicable; long halts in the course of a daily march are not made unless special conditions require it. The length of the march or the desirability of avoiding excessive midday heat may, however, render it advantageous to make a long halt toward the middle of the day. Except for the purpose of avoiding excessive heat, long halts are not ordinarily made during marches of less than eight hours' duration for foot troops; ten hours' duration for mounted troops; and twelve hours' duration for motorized and mechanized columns.

Columns execute long halts by units or tactical groupings which decrease their march depth and extend their frontage.

Each unit or grouping moves to a previously reconnoitered location in proximity to the route of march. Mounted units are located near sources of water supply. Concealment from air reconnaissance and the comfort and security of troops are considered in selecting the locations for the halt. At night troops rest along the route of march.

■ 376. The omission of timely and adequate rest periods places a heavy responsibility upon a column commander. They facilitate increased readiness for combat and the continued march of rear elements of the column. Such halts can be omitted only at a critical juncture when it becomes necessary to reach an important locality with a fraction of the command.

■ 377. Men are not permitted to fall out during the march or to leave the immediate vicinity of their unit during halts without the specific authority of an officer of their unit. An officer marches at the tail of each march unit; he is charged with keeping the unit closed up and with preventing *straggling* from the column. He examines men who fall out on account of sickness or footsore condition; according to circumstances, he gives them a written permit to be presented to the surgeon or requires them to continue the march.

A small guard marches at the tail of each regiment and separate unit; it has charge of the march of stragglers not admitted to the ambulance by authority of the surgeon.

A detachment of military police marches at the tail of the combat troops of a division. It arrests all men found absent from their units without authority and, except in cases of men apprehended for serious offenses, turns them over to their units at the first opportunity with a statement of the circumstances of their apprehension. For organization and duties of military police, see Part Two, BFM, Vol. IX, and FM 100–10.

■ 378. The surgeon attached to a troop unit marches at the tail of the unit. He examines men authorized to await his passage by the officers of troop units; according to their condition, he gives them a permit admitting them to the ambulance or authorizing them to place arms and equipment (in whole or in part) on the ambulance or other trans-

portation provided for that purpose, or after treatment directs them to report to the guard at the tail of the regiment. One or more ambulances march at the tail of each regiment and similar unit for the transportation of men who become sick or disabled during the course of the march.

For instructions concerning collection and evacuation of casualties, see FM 100–10.

■ 379. A vehicle which for any reason is compelled to halt moves off the road or as far to one side of the road as practicable. Disabled vehicles are promptly removed from the road.

■ 380. Special precautions are taken to avoid congestion and delay during the *passage of obstacles and defiles* which compel the column to march on a reduced frontage or otherwise delay the movement. Provision is made promptly for antiaircraft protection; other measures to be adopted vary with the nature of the obstacle. It will frequently be advisable to detail an officer with such assistants as may be necessary to supervise the passage of the column, and coordinate the measures taken for antiaircraft defense. His instructions relative to formation, rate of march, use of bridges, cover, etc., are strictly obeyed.

In passing through a short defile requiring a temporary reduction of front, the leading unit increases its rate of march at a point sufficiently distant from the defile to avoid delaying the march of following units; the leading element of the unit maintains the increased rate and reduced frontage until the rear of the unit has cleared the exit of the defile; other elements until normal frontage has been resumed. Points where changes of rate and formation are to take place are indicated by the supervising officer.

■ 381. Fordable streams may be crossed at several points; if a unit becomes extended during the crossing, the head of the unit slackens pace or halts a short distance beyond the crossing until the entire unit has crossed and has closed up; it then regains its distance, increasing the rate if necessary.

In fording a deep stream with a strong current, foot troops cross on as broad a front as possible, the men marching

abreast and holding hands. They do not look at the water but at the opposite bank. If the ford is broad enough, mounted troops may cross at the same time on the upstream side, thus breaking the force of the current. The crossing of many animals or vehicles may deepen a ford and render it impassable; new crossings may thus become necessary.

When roads lead through swamps or quicksand or across streams with treacherous bottoms, the limits of the road are marked or warnings placed at dangerous points.

■ 382. In *crossing on a military bridge*, the column commander prescribes the order of crossing of the units. The engineer officer in charge of the bridge is responsible for the security of the bridge and the regulation of traffic on the bridge and its approaches. All instructions issued by the engineer officer and the engineer bridge guard relative to the use of the bridge are strictly obeyed.

The massing of troops and vehicles in the immediate vicinity of the bridge site is avoided. Ordinarily, march units will be given orders at their assembly positions to cross when their turn comes.

Every unit takes the prescribed formation for crossing not less than one hundred yards before reaching the bridge and maintains this formation for at least one hundred yards after the tail of the unit has cleared the bridge.

The maximum load capacity of the bridge is made known to all march unit commanders who are responsible that any vehicle exceeding this weight is cut out of the column for crossing at some heavier bridge or by ferry. The maximum load capacity of the bridge will be indicated on signs posted at the bridge approaches.

■ 383. Foot troops crossing bridges march without cadence. When necessary, heavy vehicles cross at increased distances. In crossing on a pontoon bridge, cavalry dismounts; in columns of twos, troopers march on the outside of the horses. Teams in front of the wheel pair of any vehicle are led by the bridle. Motor vehicles travel slowly, holding to the center of the bridge and maintain the distance prescribed by the bridge guard.

Having once entered on the bridge, troops do not halt thereon. The command to halt on the bridge may be given only in an emergency by the engineer officer in charge.

In case of an air attack during a crossing, all commanders of units en route to the bridge halt their troops to prevent jamming at the bridge approaches. Troops on the bridge and its approaches are evacuated in a quiet and orderly manner as directed by the engineer officer in charge.

During a crossing only engineers engaged in the service of the bridge are permitted to cross in the opposite direction.

384. For *ferrying operations*, troops are first assembled under cover in the vicinity of the embarkation points and there organized into tactical groupings corresponding to the capacity of the means for ferrying. From these assembly positions each tactical grouping is conducted at the proper time by an engineer guide to the point of embarkation. Instructions for embarking and disembarking and for conduct during the crossing are given at the assembly position prior to embarkation.

385. In crossing streams by ferry, men enter the ferry at the bow or stern and gradually move toward the stern or bow in a formation adapted to the size of the vessel (column of files or platoon column). They retain the places assigned to them so as not to interfere with the handling of the boat and stand or sit as directed. When there is room for a single row only, horses alternate heads and tails; if there is room for two rows, they face inward. Guns, caissons, wagons, and motor transport are usually loaded on small ferries by hand; if practicable, teams and prime movers are loaded on the same ferry with their carriages or trailers. Vehicles are blocked or secured by locking brakes. In unloading, points of debarkation are promptly cleared.

Infantry and cavalry may be ferried in pontons and small boats. Infantry removes equipment when there is danger of capsizing. Horses cross the stream by swimming.

When rafts are used, the center is occupied first, and the load is then uniformly distributed. Unloading takes place in reverse order, the center of the load being unloaded last.

CHAPTER 10

SHELTER

¶ 386. GENERAL.—In the theater of operations, troops are sheltered in billets, bivouac, camp, or cantonment.

¶ 387. Troops are in *billets* when they occupy private or public buildings. In the United States and its oversea territories, billeting in private dwellings is limited by the third amendment to the Constitution. In hostile territory, billeting is resorted to when desirable. In the territory of an ally, the local laws and customs govern billeting. Billets are frequently combined with other forms of shelter in which case the area used for sheltering the unit is referred to as *close billets*.

Billets afford protection against inclement weather and screen troops from air observation. They provide, moreover, immediately available shelter and facilitate the proper care of men, animals, matériel, and equipment. Because they limit readiness for action, billets are usually undesirable in close proximity to the enemy. Under certain conditions, the danger of air attack or of long range artillery fire and the necessity for secrecy may make it inadvisable to occupy towns or villages.

¶ 388. When troops rest on the ground with no overhead cover or under shelter tents or improvised shelter, they are in *bivouac*. Although bivouacking facilitates tactical control and readiness for action, it is undesirable for reasons of comfort, rest, and protection from the weather. Therefore, it is resorted to only when dictated by the military situation or when better shelter is not available. These conditions generally apply in proximity to the enemy.

¶ 389. When troops are sheltered by heavy tentage (tent camps), they are in *camp;* when quartered in temporary structures especially constructed for military purposes, they are in *cantonment*. Camps and cantonments are more suitable for use in the communications zone than in the combat zone.

The portability of tentage makes tent camps advantageous for temporary shelter. Cantonments are generally more economical for prolonged occupancy because tents soon become unserviceable.

■ 390. ASSIGNMENT OF SHELTER AREAS.—The requirements of the situation and probable future action dictate the distribution of troops in shelter areas.

When contact with the enemy is remote, march considerations and comfort of the men govern. In large units, troops are sheltered as close to the route of march as practicable and are distributed in depth consistent with their march depth and in the order of march. Distribution in depth facilitates shelter and supply.

■ 391. When contact with the enemy is probable, tactical considerations govern the distribution of troops. Frontages are increased and units are echeloned in depth according to their disposition for battle. Units incapable of self-defense against surprise attacks by hostile ground troops are quartered in protected areas or with troops equipped for self-defense. Service trains are assembled under cover in a rear protected locality. Antiaircraft artillery units are assigned in accordance with the general plan of antiaircraft defense. Headquarters of regiments and higher units are under cover as close as possible to principal routes.

■ 392. When in close proximity to the main hostile force, combat requirements govern bivouacking. Unit commanders reconnoiter their assigned areas. During pauses in combat, troops rest in position on ground held and secure their front and exposed flanks.

■ 393. The commander announces the shelter areas in the march order or as soon as practicable after the march begins. Countermarching by any unit to reach its assigned shelter area indicates poor staff work.

■ 394. A *quartering party* composed of a staff officer, a medical officer, necessary assistants, and representatives of subordinate units makes preparations for quartering a command. The staff officer is the *chief quartering officer.*

Quartering arrangements are completed prior to the arrival of the troops. Quartering parties proceed separately to their assigned areas prior to the commencement of the march or from positions in the column, depending upon whether areas are assigned before or during the march.

■ 395. In general, quartering parties facilitate the occupation of a shelter area and insure that all agencies of command, administration, and supply function with minimum interruption. Subject to the approval of the area commander, quartering parties select the area unless it has already been selected; make detailed arrangements for its occupancy; apportion areas to subordinate units and allot to each the available facilities; and reserve those facilities essential for the administration and supply of the whole command (headquarters, infirmaries, message centers, etc.).

■ 396. As far as the tactical situation permits, security, supply, sanitation, administration, and the comfort of troops govern the *selection of bivouac sites*. A firm, dry, well-drained soil, concealment from air observation, and protection against the elements are important considerations. In hot weather, an area shaded by trees, free of underbrush and sufficiently high to get the prevailing breezes is desirable. In cold weather, a site sloping to the south, or with woods to break the north wind, is sought. A good road net and availability of wood and good water facilitate administration and supply. Marshy ground or areas near stagnant water courses may constitute sources of disease and be subject to mist or heavy dew. Narrow valleys and dry stream beds are subject to sudden freshet.

■ 397. A shelter area large enough to prevent crowding and to permit interior communication without intrusion into the area of other units promotes comfort of the troops.

■ 398. DUTIES OF THE AREA COMMANDER.—The senior officer of each shelter area is the *area commander*. He is responsible for the reallotment of the area to subordinate units its local security, counterespionage, police control of inhabitants, its administration, sanitation, use of the various

resources and utilities, establishment of signal communication within the area, and the quartering and readiness for action of his unit. He issues the necessary instructions and supervises their execution, paying particular attention that troops are established in shelter without delay and obtain the maximum amount of rest.

When the shelter area is in or near a town, the area commander regulates the use by the troops of local facilities and utilities by prompt and equitable allocation to subordinate units.

■ 399. When a town is occupied during the course of military operations, the senior commander of troops must take immediate steps to provide a suitable guard for *security and police protection*, deputizing, if necessary, a staff officer or subordinate commander as area commander. Among the initial measures to be taken by the area commander are the establishment of an interior guard for fire prevention, traffic regulation, and the protection of public utilities, captured matériel, food and water supply; and the employment of patrols for searching houses, locating gassed areas and prepared demolitions, and seizing weapons and communications.

■ 400. SANITATION.—The area commander protects the health of the command by promptly initiating and strictly enforcing adequate sanitary measures.

■ 401. Improper disposal of human excreta may cause serious epidemics. Adequate and suitable latrines are constructed in appropriate places *immediately* upon going into bivouac; in billets, additional latrines are generally necessary. Latrines for the men, usually one for each company, are always located on the opposite side of camp from the kitchens and so sited that their drainage cannot pollute the water supply of the area. Officer latrines are constructed on the basis of one per battalion or similar unit.

Areas are kept policed at all times. Refuse and garbage are burned or buried. Upon the evacuation of a shelter area, fires are extinguished, latrines and kitchen pits filled and marked, and the site left in thorough police.

■ 402. Troops will be informed where water for drinking and cooking, animals, bathing, and washing clothes may be obtained. If the water supply is a small stream, these places are designated in the sequence given, beginning upstream. Watering places are clearly marked and guards posted to insure proper use of the water supply. Unless water is known to be pure, it is chlorinated or boiled, then cooled and aerated.

■ 403. In billets, it may be necessary to designate medical and veterinary officers on the staff of the area commander as public health officers of the community to regulate all matters affecting public health and sanitation. Sources of drinking water are tested and marked; additional latrines are constructed; effective measures are taken for the disposal of refuse and garbage; good order and cleanliness are enforced on all persons in the shelter area; a dispensary is established; and, in general, all requisite measures are taken to protect the health of the command.

■ 404. LOCAL SECURITY.—In each shelter area, the commander establishes an interior guard in conformity with BFM, volume VI. These guards are also charged with giving warning in case of hostile attack, gas attack, approach of hostile aircraft or ground troops, and with the enforcement of regulations governing traffic control, police, use of lights, circulation of civilians, etc.

■ 405. Detachments of the main guard, armed with antimechanized and antiaircraft weapons and posted as outguards, cover all routes of possible approach by mechanized vehicles and provide antiaircraft and antimechanized security. When the superior commander has not established an outpost, commanders of the most advanced areas send outguards well to the front of their areas. (See par. 302.)

■ 406. In bivouac, protection against hostile air observation and air attack is afforded through the selection of wooded areas and the irregular distribution of units. Efficient camouflage and traffic control and blackouts aid concealment. Vehicles prepared for prompt movement are concealed or are parked irregularly and camouflaged. Trenches may be necessary to limit the effects of bombardment.

407. In hostile territory, stronger interior guards, special guards for bridges and railway stations, searching parties for telephone and radio installations, holding of hostages, closing roads to civilian traffic, and other special security measures are often necessary.

Peaceful inhabitants must be treated considerately. Troops must be restrained in their attitude toward the local population. Families will not be removed from their dwellings unless required by the military situation.

The misuse of arms, destruction of property, and acts of tyranny, looting, and pillage will be ruthlessly suppressed. (See pars. 106 and 109.) When necessary, local resorts will be closed or certain areas designated as "off limits."

408. The command post of the area commander is concealed, but is so located that it can be easily found. The route to it from the nearest road is indicated by direction signs; at night, a shaded lantern marks its position. All sentries are instructed as to its location and routes to it. To forestall air observation, traffic to and from it is rigidly controlled.

409. ALERTS.—At each headquarters and in each company or similar unit, one officer, and in each platoon, one noncommisisoned officer is constantly on duty.

The area commander designates a *rallying position* and the route thereto for each subordinate unit. Intermingling or crossing of units is avoided. Each subordinate commander designates an *assembly place* for his unit; in bivouac, the assembly place for a company or similar unit is its parade or park.

In proximity to the enemy, each unit must be prepared to move on the shortest possible notice. In a threatening situation, men sleep fully dressed, with arms and equipment close at hand; gun crews are at their pieces; horses are kept saddled, teams harnessed, and motors warmed.

410. To alert the troops, the call "To Arms" is blown on orders of the area commander or officer of the main guard; or the area commander may decide to alert only certain troops secretly and cause a still alarm to be transmitted to unit commanders by telephone or messengers.

Ordinarily, the main guard is notified of the approach of hostile aviation. If danger is imminent, the alarm is sounded. All troops take the prescribed antiaircraft measures. At night, a blackout is ordered.

■ 411. When alerted, each unit forms on its assembly place, reports to the area commander that it is ready to march, and awaits orders.

Outguards receive their orders from the officer of the day of the main guard; interior guards from their respective unit commanders.

In an alert, quiet and order are maintained by all. Each man must know where to go and what to do.

The area commander may issue special instructions for defense against chemical attack.

■ 412. CAMPS AND CANTONMENTS.—When areas in rear of the zone of active operations are occupied successively by different units, permanent administrative groups consisting of area and subarea commanders and necessary assistants are usually established. Under direction of the commander of the communications zone, they prepare standing orders governing the police and administration of their areas. Commanders of units occupying the camps and cantonments in these areas are subject to the standing orders of the area.

In stabilized situations, the rear shelter areas of large units may be similarly administered.

CHAPTER 11

THE OFFENSIVE

GENERAL PRINCIPLES

■ 413. An objective may sometimes be attained through maneuver alone; ordinarily, it must be gained through battle. A sound tactical maneuver, however, has a great influence on the successful outcome of battle.

Having determined on offensive action, a commander must decide whether to attain his objective by attack, or by an initial defense followed by an attack when the enemy has committed his forces. In the latter case the great difficulty lies in timing the attack. Whatever his decision, the com-

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