A MILITARY PRIMER

FOR NEW MEN OF THE

UNITED STATES SCIENCE CORPS

INCLUDING

An Outline of the Duties and Responsibilities of the Military Profession

AND

An Elementary Discussion of the Principles and Practice of the Service of Security and Information



Prepared for the Cadets of the Fourth Class United States Military Academy

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PREFACE

HIS book is in no sense a text-book for advanced students of military science, but a book for the beginner, designed to teach the cadets of the Military Academy, at the very commencement of their military education, what the profession is for which they are preparing themselves; to show them the reason for the discipline to which they are subjected, and the more independent duties of subaltern officers, in time of war, in connection with the service of security and information.

In this service they must be trained, first, by thorough theoretical study of the general principles involved, and then by such practical applications of those principles as can be made when the enemy is imaginary, and all danger, save that of criticism, is absent.

Whether an officer so trained will prove valuable under the conditions attending actual hostilities, will always remain more or less of a problem, until tested by those conditions; but it can be asserted positively that in the present state of the military profession, no one can hope to really succeed, as an officer, who does not combine courage and loyalty with a thorough knowledge of the principles of strategy and tactics that can only come from exhaustive study.

The game of chess is the most complex game that is played with inanimate tools. The game of war possesses all the intricacies of chess, with the infinite added tangles caused by having the chess-men equipped with human minds, moved by the will, and not by the hand, of the master player, and replacing the smooth squares of the chessboard by the ever changing terrain of the theatre of operations, where the weather often conspires with the enemy to change, and often to defeat, the most carefully laid plans.

An appreciation of the difficulties of his profession should make clear to the military student that he should hasten to prepare himself for its duties, for there will be no time to do so when war is declared.

West Point, New York, March 2, 1917.

A MILITARY PRIMER

CHAPTER I.

The Objects of a Military Training

The prosecution of a war on land has for its object the destruction of on enemy's army or its expulsion front coveted or disputed territory. To accomplish this it is necessary for one force to overwhelm the other by a marked superiority. This superiority may be in strength, armament, supply, methods of attack, quality of the troops, or some combination of these elements, but a marked superiority there must be.

Any military establishment has for its object the training of a mass of enlisted men so that at a given moment their energy and intelligence can be concentrated to overwhelm the enemy. THE ENLISTED MEN ARE THE ARMY. In order to train them to use their strength and minds and wills together, they are united in small groups-companies of Infantry, troops of Cavalry, batteries of Field Artillery, and are commanded by non-commissioned officers, chosen from among their own numbers, and by commissioned officers, selected and educated, usually, elsewhere than among their ranks.

The functions of the non-commissioned officer are mainly executive. In his ordinary routine he originates nothing. His duties are carefully prescribed by his officers, and lie is not permitted to deviate from his instructions, or to allow the men in his charge to do so. He remains throughout his military life an enlisted man, except in those rare instances where, by his conspicuous merit, he is promoted to a commission. His education and training are limited to that necessary to carry out the orders of his officers, and to control the few men placed in his charge. As a rule, his term of service is a brief one.

The commissioned officer, on the contrary, in accepting his first appointment, enters upon a life's profession. He must prepare himself to fulfill every function of peace and war. In the ordinary course of his daily duties he must combine professional, commercial, and mechanical talents. He must instruct officers and enlisted men, both theoretically and practically, in their duties. He must be an engineer of a sort, a machinist, all electrician, a telegrapher. He must know how to instruct in the care, preparation, and preservation of foods. His knowledge of horses must be more than amateurish. He must possess a practical knowledge of sanitary science. He should be a good topographer and should possess an intimate knowledge of the scheme of nature and be able to traverse unknown country by day or night, without losing his direction, or overlooking, or failing to rightly interpret, the signs of travel. He frequently must perform services both executive and judicial. In time of war, or other great disturbance, when the ordinary functions of government are suspended, he must be able to step in and administer the civil affairs of his own or an alien people, justly, honestly, and intelligently.

In all of these varied duties he must, for the honor of his profession, be a gentleman; a man distinguished for fine sense of honor, strict regard for his obligations, and consideration for the rights and feelings of others.

The officer serves a long probation as a lieutenant, and another long period as a company commander. As a field officer-major, lieutenant-colonel, and colonel-he is removed from immediate contact with the enlisted men, and issues his orders to officers only.

From the field officers the general officers are usually chosen. They are still farther removed from the rank and file, and they deal, through their staff officers, only with the colonels of regiments, or commanders of brigades, divisions, or corps.

It is, therefore, to be seen that it is upon the officers and non-commissioned officers of the company that the real responsibility for the merit of the army rests. Their work is planned for them, and they are held to it, by the officers in higher grades, but it is only when they themselves are well equipped, industrious, and loyal that their men are well trained.

Equally important, in a very different way, to the efficiency of the army are the officers of the staff amid supply departments. It is their function to see to the organization and administration of the army, and that food, clothing, arms, ammunition, and transportation are at hand and available at the proper times for the use of the enlisted men, in order that they may confront the enemy, vigorous and well prepared, in every way, for the work before them.

An army properly composed includes in its organization all the elements necessary for its defense, offense, transportation, and maintenance: infantry, cavalry, field artillery of all sorts, engineers, signal corps, field and base hospitals, bridge trains, rail, water, wagon, and pack transportation, ammunition and supply trains. Stores of all sorts must be collected at depots convenient of access to the army, yet sufficiently remote from the actual scene of hostilities, or strongly enough defended, to guard against attack by any force less strong than the mass of the enemy's army itself. These depots are called bases of supply.

In the capital of the nation the directing head of the armies, and the chiefs of the various departments that have to do with the organizing, administering and supplying of the forces in the field, are located. These departments, in time of peace, besides administering the affairs of the army, lay plans and provide methods to meet the contingencies of hostile movements on the part of any nation. Combined, they form the War Department, whose head, the President, ex-officio the Commander-in-chief, directs and governs through the Secretary of War and the Chief of Staff.

When officers receive and accept their commissions in the Army, or non-commissioned officers their warrants, they are obligated to obey faithfully all lawful orders of their superiors. At the same time all persons in their commands are warned that they must be obeyed. The private soldier subscribes to a similar oath on his enlistment that he will serve honestly and faithfully the United States of America, and will obey the orders of the officers appointed over him.

The first lesson to be learned by any military person is that of obedience to legitimate authority. Not obedience because the thing ordered is right, but because it is ordered. This is discipline. No permanent system of discipline can be built up, however, that is not based upon a proper use of authority. An officer who is capricious, or unreasonable, or unjust, cannot maintain it.

The art of making war has kept pace with the progress of civilization since the earliest times, but as regards obedience to military superiors, its necessity and its battle value, the lesson was learned centuries ago, and there has been no progress since. Discipline is not solely the product of a system of rules for the government of soldiers; it is not necessary merely to control them, but also to instill into them the instinct of obedience so that an order received is executed at once, unhesitatingly, without pausing to reason out its propriety or its necessity.

An English officer aptly defines discipline to be "that long continued habit by which the very muscles of the soldier instinctively obey the word of command, so that under whatever stress of circumstances, danger, and death, he hears that word of command, even if his mind be too confused and astounded to attend, yet his muscles will obey."* There is no example of a successful general of the first rank in the world's history who was not a good disciplinarian.

In the character of an officer no quality is so important as loyalty. Without it he loses both the respect of his superiors and the confidence of his inferiors. Loyalty to the trust imposed upon him by his superiors and equal loyalty to support his subordinates while they are carrying out his orders are demanded of the officer who would be successful.

Loyalty and discipline go hand in hand, and are the paramount military qualities. Without them, genius, high courage, ability to seize quickly and to take full advantage of opportunities, and thorough knowledge of the art of war, avail nothing in the career of an officer. Absolute loyalty and sympathy should be given to the company commander and to the commanding officer. It is rarely that their efforts are not honest and well directed and their intentions for the good of the service and in the interest of the United States Government. In active field service, not one officer in one hundred can succeed without the loyal and sympathetic support of his subordinates. There will come a time in the career of every officer when the

exact importance of this statement will be appreciated: that is when he himself becomes a commanding officer. Loyal and sympathetic support should always be given by subordinates to those in authority, so that when the time comes for the subordinate to become the commander he can demand the same of his own subordinates, strengthening his demand by his own example.

Discipline must be acquired; loyalty is an inherent quality. That tendency that leads an officer to disregard the orders of his superiors in minor matters, and to undermine his superior's authority by innuendo or disrespect, renders him an unsuitable person to command others. Such a quality in any person is disloyalty. It presents many aspects in different natures. In one it will be manifested by a grudging, sullen unwillingness to perform his ordinary duties. Nothing that he does is done cheerfully. He surrounds himself with an atmosphere of discontent and dissatisfaction. Instead of doing things, lie seeks excuses for not doing them. Another will display his disloyalty by open neglect of his duties, doing only so much as he is compelled to do, and so will instill a spirit of worthlessness and neglect into the command. Another will be defiant of authority, disobeying his superiors openly before his men. They take their cue from him, and are themselves defiant of him and of his authority.

Officers who are disloyal subalterns can never make efficient commanders. That flaw in their character that leads them to disobey or to give grudging service while in unimportant stations will, in after life, prevent them from taking full advantage of great crises. On the other hand, the officer or soldier who gives prompt, faithful, and enthusiastic service in all his duties, however small and unimportant they may be, may be sure that he will be sought to fill spheres of wider usefulness, up to the very limit of his powers.

From time moment an officer enters the service of time United States, his career is carefully and constantly watched. His manner of performing his duties, his abilities in special fields of work, his personal habits, are frequently reported on by his commanding officers. These reports are kept and consolidated in the War Department, and constitute what is termed the record of the officer. It is in the highest degree important to his career that this record should show him to be industrious, loyal, and faithful.

War is an abnormal situation. It is only through the arts of peace that nations are built up, but, to preserve that peace, armies are as necessary to nations as strength of character and courage to resent injury are to individuals to protect them from oppression at the hands of aggressive neighbors.

A good army commands respect and insures fair treatment for the nation possessing it. For this reason it is essential that the officers of any military establishment use every effort to keep in the highest state of efficiency the troops and material upon which the dignity and peace of the nation rest.

Not only are the officers of the army responsible for the instruction of the men of their command, but they are equally responsible for their health and comfort. Food must be of a suitable quality and well prepared. Camps and barracks

^{*}From *Discipline*, by Lieut. Stewart Murray, 1st Battalion Gordon Highlanders, British Army.

must be kept in a sanitary condition. To keep them so, cleanliness must be enforced among the enlisted men as to their persons, clothing, and quarters. In barracks, care must be taken as to their heating and ventilation, the distribution of the men in the squad-rooms without overcrowding, the handling of the company kitchens, the proper disposition of slops and refuse, the cleanliness of water-closets and bath-rooms.

In camp, the selection of the sites, their proper drainage, the location of kitchens and sinks, and their proper care, are sanitary points of even greater importance than in barracks. All of these duties are but few of the many which must be supervised by the company officers, and their details must be learned largely by experience. In times of peace, with trained non-commissioned officers in charge of the barracks, with the food supply bountiful, of good quality and never-failing, with clothing and equipment ample for every need, these duties become largely automatic, and the serious problem of supplying men in the field under war conditions is apt to be lost sight of.

The heavy loss from camp diseases at the outbreak of our wars is largely the result of the ignorance of the officers who are suddenly called from civil pursuits to take up the grave responsibilities attached to the care and command of men new to military life.

To lose men in battle is necessary and expected; to lose them of disease, in large numbers, is due, in the vast majority of cases, to preventable causes. Discipline, sanitation, and good food are the preventives of disease. It is the duty of every officer, paramount to everything, to learn how to secure sanitary surroundings, and how to properly prepare food for troops in the field.

Milton says: "I call a complete and generous education one which fits a man to perform, justly, skillfully, and magnanimously, all the offices, both public and private, of peace and war." This is the education that the army officer should aim for; not for selfish reasons, but in order that he may reflect credit on that profession which has for its object the preservation of the nation's dignity, honor, and very existence.

In preparing himself for a military career, every young man should bear in mind, and strive to fulfill as his ideal, Alexander Hamilton's definition of a perfect officer: "He who combines the genius of the General with the patient endurance, both mental and physical, of the private; who inspires confidence in himself and in all under him; who is at all times the gentleman, courteous alike to inferior, equal, and superior; who is strong and firm in discipline, without arrogance or harshness, and never familiar towards subordinates, but to all is the soul of courtesy, kind, considerate and just."

At the outbreak of hostilities between two nations, troops are hastened towards some vulnerable frontier by both parties to the quarrel. This process of collecting and organizing the tactical units of large armies is called *mobilizing*. When the mobilization is completed, the army

is concentrated at suitable points and is moved towards its objective. This is usually the army of the enemy.

With the functions of the mass of the army, its maintenance and transportation, or the methods to be used to maneuver it in the presence of the enemy, this work does not deal. It is enough at this stage of the student's training to know that an army is a vast, complicated structure, slow-moving, enormously costly to keep in the field, and absolutely dependent upon an uninterrupted flow of food for man and beast.

The mass of the army, with its line of communications, must be kept covered by a cloud of men screening its operations from observation by small parties of the enemy, and giving warning of the approach of his larger forces. Other men must go beyond this screen to observe the enemy as far as possible, and to report on his strength, the disposition of his forces, his movements, and his probable intentions.

Men engaged in the former duties, the service of security, are called advance, rear, or flank guards, when on the march, —outposts, when in camp. Those engaged in the latter duties, the service of information, are known as spies, scouts, or patrols.

Until the enemy's army is encountered, the two services are more or less distinct; when he is met, the scouts and patrols merge with the guards or outposts, and their duties are, where contact is maintained, identical. Then, as the masses of the armies approach more nearly, the screening clouds of men on both sides merge with the lines of battle, and the struggle for the mastery goes on until one side gives way. In its withdrawal, unless the defeat is overwhelming, it immediately covers its movements and hides its condition behind its advance and rear guards. Scouts and patrols are sent out as before, to feel for the enemy, and to report its movements and probable plans. The armies are rested, recuperated, and strengthened in every possible way, to meet again on another battlefield, where the struggle is repeated.

This process goes on until one or the other, worn out, depleted of men, and exhausted of resources, gives up the struggle, and the war is ended.

All other things being equal, the advantage will lie with that general whose information, both concerning his enemy's army and the topography and resources of the field of operations, is most complete.

Much of the last named information can be obtained and made available in peace times, but not all of it, by any means. The greater portion of the information concerning the enemy must be obtained on the spot, and the commanding general must depend on the line of his army—especially on his cavalry and infantry—to obtain it.

Notes on the Organization of the Army of the United States.

During peace the regular Army of the United States consists of fifteen regiments of cavalry, six regiments of field artillery, one hundred and seventy companies of coast artillery, thirty regiments of infantry, and three battalions of engineers. These constitute the "line" of the Army, and form the nucleus of the nation's land forces. To administer the affairs of the line of the Army, to supply it with the necessary equipment, pay, food, clothing, transportation, shelter, and medical attendance, general officers and officers of the staff and supply departments are appointed and maintained.

For purposes of administration and supply, the country, in time of peace, is divided into territorial departments, each in command of a major-general or a brigadier-general. Each department commander has a staff, composed of officers of the administrative departments, who issue his orders to the troops of his command, and who supply them with everything necessary for their efficiency.

The troops are quartered in Posts, scattered about the country, and their duties are limited to such as are necessary for their care, maintenance, and training.

The administrative and tactical unit, in time of peace, in the mobile part of the Army, is the regiment of cavalry, field artillery, and infantry, and the battalion of engineers.

The regiment of cavalry is commanded by a colonel, who has a commissioned staff composed of three captains, an adjutant, a quartermaster, and a commissary, and a non-commissioned staff consisting of a sergeant-major, a quartermaster sergeant, a commissary sergeant, and two color sergeants. The adjutant has charge of the records of the regiment and is the person through whom the colonel communicates his orders. The quartermaster has charge of the equipment of the regiment, as far as concerns everything except the feeding and armament of the men. The commissary has charge of the issue of food. The non-commissioned staff assist the staff officers in the performance of their duties.

The regiment of cavalry is divided into three squadrons, each in command of a major. He has a staff consisting of a squadron adjutant, of the rank of first lieutenant; and a squadron quartermaster and commissary, of the rank of second lieutenant. The major's functions are purely executive. He sees that the orders of the colonel are carried out, superintends the drill of the troops of his squadron, and is generally responsible for its condition of efficiency.

Each squadron has four troops, and each troop is composed of three officers—a captain, a first and a second lieutenant—and not more than one hundred enlisted men. The captain has entire control of the troop, its men and animals; and is responsible for their equipment, armament, discipline, and instruction. He is assisted by his lieutenants and by the non-commissioned officers of the troop.

A regiment of infantry has the same organization, except that the squadrons are called battalions, and the troops, companies. There may be a hundred and twenty-eight men in a company.

A regiment of field artillery has but two battalions of three batteries each. There are five staff captains in each regiment, making eleven captains in all. Each battery has a captain and two first and one second lieutenant.

A battalion of engineers is commanded by a major. An engineer battalion has four companies.

Organization of the United States Army Science Corps.

Brigadier General Joseph E. Kuhn, Chief of the War College Division, was directed by President Wilson to establish the United States Science Corps, under the auspices of the Army, to develop and deploy advanced technology. He was promoted to Major General and is the commanding officer of the Science Corps.

The Science Corps consists of the Major General, four brigadier generals, fourteen colonels, fourteen lieutenant colonels, forty-two majors, two hundred and ten captains, two hundred and ten first lieutenants, and two hundred and ten second lieutenants.

SCIENCE CORPS TABLE OF ORGANIZATION.

A company.		
1	captain.	
1	first lieutenant.	
1	second lieutenant.	
1	first sergeant.	
1	quartermaster sergeant.	
6	sergeants.	
10	corporals.	
2	cooks.	
2	musicians.	
6	technicians.	
52	privates, first class.	
52	privates, second class.	
132	total enlisted.	
	A battalion.	
1	major.	
1	adjutant (first lieutenant).	
1	quartermaster and commisary (second	
	lieutenant).	
1	sergeant-major.	
4	companies.	
529	total enlisted.	
	A regiment.	
1	colonel.	
1	lieutenant-colonel.	
1	adjutant (captain).	
1	quartermaster (captain).	
1	commisary (captain).	
1	sergeant-major.	
1	quartermaster sergeant.	
1	commisary sergeant.	
2	color sergeants.	
1	chief musician.	
1	primary musician. drum major. Band.	
1		
4 8	sergeants.	
8 1	corporals. J	
12		
14	privates.	

battalions.

total enlisted.

In time of war, the regular Army is supplemented by volunteer troops. These troops are raised and officered, usually, by the Governors of the various States, and, when accepted, are mustered formally into the service of the United States. They then form part of the Army of the United States, and are available for service wherever the President may send them.

In time of peace a large body of reserve troops is constantly being trained, under the supervision of the Governors of the several States. These troops, called National Guards, are available for service, as such, tinder the Governor's orders, and within the limits of his State only. It is from these National Guard regiments that the volunteer regiments, in time of war, usually obtain their officers.

1	major.
1	adjutant (captain).
1	quartermaster and commissary.
1	sergeant-major.
1	quartermaster sergeant.
4	companies.
655	total enlisted.

In time of war the troops in the service of the United States, whether belonging to the Army of the United States or to the militia, will he organized into brigades, divisions, army corps, and armies.

A *brigade* consists of two or more regiments of infantry, three being the normal organization.

A *division* consists of:

3	brigades of infantry,
1	regiment of cavalry,
*9	batteries of field artillery,
1	battalion of engineers,
1	company of signal corps,
4	field hospitals,
1	ammunition column, composed of 3
	sections of 21 wagons each for small
	arms ammunition, and 2 sections of 21
	wagons each for artillery anununition
	and stores,
1	supply column composed of wagon trains

1 supply column, composed of wagon trains of 27 wagons each, and

1 pack train.

A cavalry brigade consists of two or three regiments, three being the normal organization; when acting independently two batteries of horse artillery are attached.

A *cavalry division* consists of:

3 cavalry brigades,

*6 batteries of horse artillery,

1 company of engineers (mounted),

1 company of signal corps (mounted),

1 ammunition column,

1 supply column, and

2 field hospitals (with light transportation).

An *army corps* is formed by the combination of two or three divisions and the assignment of the necessary military and administrative staffs. Depending upon

the nature of the operations, additional reserves of ammunition, stores, equipment, and food supplies may be formed and a balloon train and horse depot attached to the corps.

The horse batteries of the divisions may be combined into a separate command and as corps artillery remain under direct control of the corps commander.

When several army corps are united under the command of a single chief they constitute an *army*. One or more cavalry divisions usually form part of such an organization.

Additional artillery may be assigned to a division to the extent demanded by the nature of time operations in prospect.

Expeditionary forces in regions not permitting of wheeled transportation will be supplied with mountain batteries.

Advance guard and reserve bridge trains will he assigned to the engineer troops of divisions, army corps, and armies, as occasion may require.

Brigades in divisions and divisions in army corps receive numerical designations upon organization; for example, "first brigade, second division," "third division, fourth army corps."

Army corps are organized only by special authority from the President, and are numbered in the sequence of the dates of their organization.

Separate armies receive territorial designations.

The division is both a tactical and all administrative unit. In matters relating to courts-martial, the supply service, and money and property accountability, the administrative control vested in commanders of territorial departments devolves, in the field, upon division commanders, under the orders of time commanding general of time army or department.

Commanders of separate brigades base time powers of division commanders when time troops sunder their command have been officially designated in orders from department or army headquarters as constituting "a separate brigade."

The division forms the basis of army organization. It should he complete in all its parts and capable of acting independently at any time. When brigades are detached they will be supplied with the due proportion of the auxiliary arms and services corresponding to their independent functions and the nature of the special service expected.**

* At the time of going to press the *Field Service Regulations* have not been revised to agree with the recent—1907—re-organization of the Field Artillery. 9 batteries of field artillery are the equivalent of one and one-half regiments; 6 batteries of horse artillery are the equivalent of a regiment.

** From Paragraphs 4, 5, 6, and 7, Field Service Regulations, U. S. Army, 1905.



DISTINGUISHING MARKS

A HANDY REFERENCE GUIDE.

A quick visual reference of the insignia and patches likely to be found on the uniforms of members of the U.S. Army Science Corps, including officer and enlisted ranks. For comparison, the devices of the various branches of the Army are also presented here.





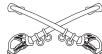
Officer's Hat Crest

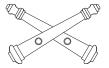


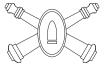
Collar Badge

Devices of the Various Arms of the Service





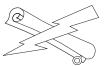








Air Service



Infantry

Corps of Engineers



Cavalry



Field Artillery

Adjutant General's Corps



Coast Artillery

Chemical Warfare Service



Ordnance Corps







Medical Corps

Army Science Corps Rank Insignia — Officers



First Lieutenant Lieutenant



Captain

Judge Advocate

General's Dept.



Major



Colonel



Colonel





Major General General

Sample Unit Insignia of the United States Science Corps

While unauthorised for use on uniforms, it is common to find unit insignia inscribed upon vehicles and materials belonging to individual USSC units, as well as at unit headquarters, and occasionally on doughboy helmets.



Unit Insignia Ist United States Science Corps Air Wing



Unit Insignia Materials & Tools Detachment



Karch Rifle Marksman Speciality Badge

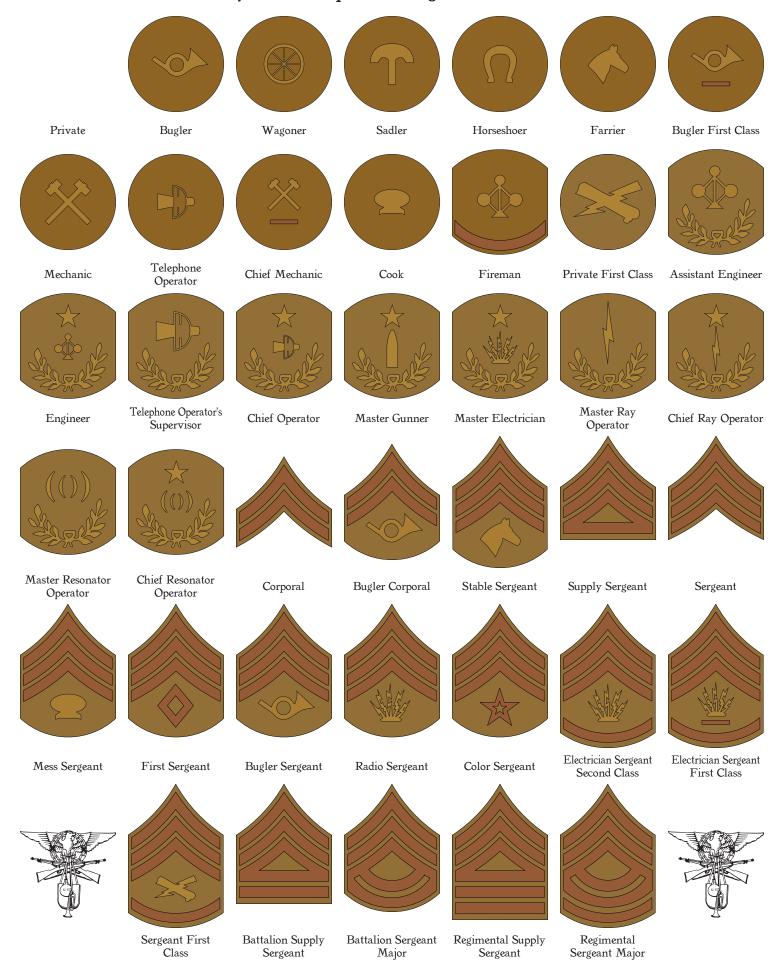


Aircraft Marking (common to all United States forces)



Unit Insignia Ist Ray & Resonator Battalion

Army Science Corps Rank Insignia — Enlisted Men





Below:

Military Policeman (background)

Enlisted Soldiers, Science Corps (background right)

Nurse, Medical Department

Lieutenant Colonel, Science Corps biological agents specialist

Above:

75mm Field Artillery Gun Crew (background)

First Sergeant, First Resonator and Ray Battalion, Science Corps

Lieutenant Colonel, Science Corps

